British Columbia Utilities Commission  
Sixth Floor, 900 Howe Street, Box 250  
Vancouver, BC V6Z 2N3  
Attention: Erica Hamilton, Commission Secretary

Ms. Diane Roy  
Director, Regulatory Affairs  
FortisBC Energy Inc.  
16705 Fraser Highway  
Surrey, BC V4N 0E8

Mr. Dennis Swanson  
Director, Regulatory Affairs  
Regulatory Affairs Department  
FortisBC Inc.  
Suite 100, 1975 Springfield Road  
Kelowna, BC V1Y 7V7

via courier

Dear Mesdames/Sirs:

RE: FortisBC Energy Inc. (FEI) Application for Approval of a Multi-Year Performance Based Ratemaking Plan for 2014 through 2018 ~ Project No.3698715

And

RE: FortisBC Inc. (FBC) Application for Approval of a Multi-Year Performance Based Ratemaking Plan for 2014 through 2018 ~ Project No. 3698719

Enclosed for filing please find the evidence of Ms Barbara Alexander, filed in these two proceedings on behalf of the Canadian Office and Professional Employees’ Union, Local 378.

Yours truly,

Jim Quail, Barrister & Solicitor  
Legal and Regulatory Director

cc: parties of record via email
BEFORE THE BRITISH COLUMBIA UTILITIES COMMISSION

Re: FortisBC Energy Inc.
Project No. 3698715/Order 99-13
Application for Approval of a Multi-Year Performance
Based Ratemaking Plan for 2014 through 2018

And re: FortisBC Energy Inc.
Project No. 3698715/Order 99-13
Application for Approval of a Multi-Year Performance
Based Ratemaking Plan for 2014 through 2018

Direct Testimony of

BARBARA R. ALEXANDER

on behalf of
Canadian Office and Professional Employee’s Union
Local 378

December 18, 2013
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I. INTRODUCTION / SUMMARY

Q: Please state your name and business address.
A: My name is Barbara R. Alexander. My office is located at 83 Wedgewood Dr.,
Winthrop, ME 04364.

Q: By whom are you employed and in what capacity?
A: I am a self-employed consultant. I use the title of Consumer Affairs Consultant.

Q: On whose behalf are you testifying?
A: I am testifying on behalf of the Canadian Office and Professional Employees
Union, Local 378 (COPE), an intervener in this proceeding.

Q: Please describe your professional qualifications.
A: I opened my consulting practice in 1996, after nearly ten years as the Director of
the Consumer Assistance Division of the Maine Public Utilities Commission.
While there, I managed the resolution of informal customer complaints for
electric, gas, telephone, and water utility services, and testified as an expert
witness on consumer protection, customer service and low-income issues in rate
cases and other investigations before the Commission. My current consulting
practice is directed to consumer protection, customer service and service quality
policies, and low-income policies and programs associated with both regulated
utilities and retail competition markets. My recent clients include the
Pennsylvania Office of Consumer Advocate, The Utility Reform Network
(TURN) in California, Massachusetts Department of Attorney General, and the
District of Columbia Department of Energy. In addition, I have provided
testimony and comments on behalf of AARP\(^1\) in numerous states on customer service, service quality, and related energy issues in New Jersey, Maryland, District of Columbia, Virginia, Montana, Ohio, Montana, and other states. I have prepared testimony on behalf of my clients before state utility regulatory commissions in over 15 U.S. states and the Canadian Radio-Television and Telecommunications Commission.

With respect to my experience relating to the design of service quality and reliability performance standards for electric and telecommunications utilities, I have appeared as an expert witness before the Washington Utilities and Transportation Commission, the Pennsylvania Public Utilities Commission, the Maryland Public Service Commission, the Maine Public Utilities Commission, and the Canadian Radio-Telecommunications Commission. I was the lead staff person in the design of the Service Quality Index approved by the Maine Commission for a performance based ratemaking plan implemented for Central Maine Power Co. (Maine’s largest electric utility) in 1996.

I am a graduate of the University of Michigan (1968) and the University of Maine School of Law (1976), but I do not practice law at this time.

My resume and list of publications and testimony are provided in Exhibit No.____ (BRA-1).

Q: What exhibits are you sponsoring in this proceeding?

A: I am sponsoring Exhibit No. ____ (BRA-1), which contains my qualifications and which lists my publications and formal testimony before state regulatory

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\(^1\) AARP (its legal name) is a U.S. national membership organization that advocates for individuals age 50+. Testimony of Barbara R. Alexander

On Behalf of COPR
commissions, Exhibit No. ____ (BRA-2), a presentation on U.S. service quality and
reliability regulatory approaches prepared for the National Association of
Regulatory Utility Commissioners in 2004, Exhibit No. ____ (BRA-3), historical
service quality performance for FBC, and Exhibit No. ____ (BRA-4), historical
service quality performance for FEI.

Q: Please describe the issues you will address in your testimony for this
proceeding.

A: The purpose of my testimony is to respond to the proposed filing of a Multi-year
Performance Based Ratemaking (PBR) Plan for 2014 through 2018 by FortisBC
Energy, Inc. (FEI), a natural gas utility, and by FortisBC, Inc. (FBC), an electric
utility. I will refer to the gas utility as FEI and the electric utility as FBC but on
occasion I will refer to “FortisBC” as the parent company that owns FBC and FEI
when I refer to both FEI and FBC. My testimony is directed to the portion of
these proposed PBR plans relating to customer service, safety, and service quality
performance, specifically the Service Quality Indicators (SQI) proposed by FEI
and FBC to accompany their respective plans. Since the overall approach with
respect to Service Quality Indicators recommended by FEI and FBC is the same,
my testimony is intended to be applicable to both FEI and FBC. Where there is
the need for discussion of indicators or policies that are unique to either the gas or
electric utility, I will identify those specific differences in my testimony.

Q: Do you offer an opinion on whether the Commission should approve the
Performance Based Ratemaking Plans and revenue requirement
recommendations submitted by FEI and FBC?
A: No. I have not reviewed and do not offer an opinion on the overall structure of the PBR plans submitted by FEI and FBC or their proposed revenue requirement determinations. Rather, my testimony is directed to how service quality, safety, and customer service performance should be reflected in any PBR plan should one be approved.

Q: Please summarize your conclusions and recommendations.

A: I recommend that the Commission reject the portion of the PBR plans relating to Service Quality Indicators as submitted by FEI and FBC since they are insufficient to achieve their intended purpose and fail to properly allocate the risk of degradation of service between shareholders and customers. I make the following recommendations for changes to the integration of customer service and service quality performance for any PBR plan approved by the Commission:

• FBC and FEI’s proposed approach for assuring customer service, reliability, and employee safety during the term of the proposed PBR is deficient;

• The proposed SQI by FBC and FEI fails to reflect any assumption of risk for deterioration of service quality performance during the term of the PBR;

• The SQI should be revised to reflect benchmark performance standards that are based on reasonable expectations, industry best practices, and historical performance;

• The SQI should include a customer compensation mechanism that risks up to 1% of retail revenues for the failure to maintain reasonable service quality, reliability, and employee safety performance standards;
• FBC and FEI should be required to compare their annual results with benchmark performance standards and pay a customer compensation penalty that reflects $50,000 for each percentage point deterioration for an FBC metric and $250,000 for each percentage point deterioration for an FEI metric; and

• FBC and FEI should report annually to its customers as to their actual performance compared to the benchmark performance standards and any penalty incurred.
II. DESCRIPTION OF THE SERVICE QUALITY INDICATORS AND HOW FORTISBC PROPOSED TO INTEGRATE SQIs INTO THE PROPOSED PBR PLANS

Q: Please describe how FEI and FBC have proposed to integrate customer service, safety, and service quality performance into their proposed PBR plans.

A: FEI and FBC have included a section entitled, “Service Quality Indicators” in their proposed PBR plans. [FBC Plan at 6.6; FEI Plan at 6.6] FBC describes a “strengthening customer focus,” and states that any PBR plan “should align the interests of customer and the utility company.” [FBC Plan at 4.2] Further, “Under PBR, the utility is provided an incentive to find efficiencies in its operations, while providing safe and reliable service, and maintaining (or improving) customer service levels. Customers benefit from the efficiency initiatives undertaken in PBR by having lower rates and the utility benefits from additional income deriving from superior performance as compared to the productivity levels embedded in rates.” [FBC Plan at 4.1] FEI’s PBR Application states that, “Service Quality Indicators (SQIs) are used in the context of PBR to ensure that the utility is encouraged to pursue efficiencies that do not sacrifice service quality.” [FEI Plan at 6.6]

Both FBC and FEI’s approach to establishing the proper incentives consists of proposing specific Service Quality Indicators for both gas and electric service that will be tracked and reported during the term of the Plan. However, only some of these indicators have specific performance standards or baselines.
against which actual annual performance will be compared. The balance of the 
indicators will be reported, but the Company will not be held to accomplish any 
specific result. Furthermore, in neither case has the Company proposed to link its 
actual performance for customer service and safety with any financial 
consequences to shareholders during the term of the PBR plans. Rather, both FEI 
and FBC recommend that the Commission review the actual performance in the 
context of receiving an annual report and a Mid-Term Assessment Review (after 
three years). If there is some undefined significant deterioration in one or more of 
the Indicators, FortisBC’s proposed PBR plans shift the burden to the 
Commission or other stakeholders to recommend regulatory actions or changes to 
the PBR plans.

**Q:** Please describe the specific Service Quality Indicators recommended by FEI.

**A:** FEI recommends the following SQIs:
## FEI'S PROPOSED SQI

<table>
<thead>
<tr>
<th>Performance measure</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency response time</td>
<td>Percent of calls responded to within one hour</td>
<td>95%</td>
</tr>
<tr>
<td>Meter exchange appointment</td>
<td>Percent of appointments met for meter exchanges</td>
<td>95%</td>
</tr>
<tr>
<td>Telephone service factor (Emergency)</td>
<td>Percent of emergency calls answered within 30 seconds or less</td>
<td>95%</td>
</tr>
<tr>
<td>Telephone service factor (Non Emergency)</td>
<td>Percent of non-emergency calls answered within 30 seconds or less</td>
<td>70%</td>
</tr>
<tr>
<td>First contact resolution</td>
<td>Percent of customers who achieved call resolution in one call</td>
<td>78%</td>
</tr>
<tr>
<td>Billing index</td>
<td>Measure of customer bills produced meeting performance criteria</td>
<td>5</td>
</tr>
<tr>
<td>Meter reading accuracy</td>
<td>Number of scheduled meters that were read</td>
<td>95%</td>
</tr>
<tr>
<td>All injury frequency rate</td>
<td>Informational indicator - 3 year rolling average of lost time injuries plus medical treatment injuries per 200,000 hours worked</td>
<td>---</td>
</tr>
<tr>
<td>Public contact with pipelines</td>
<td>Informational indicator - 3 year rolling average of number of line damages per 1,000 BC One Calls received</td>
<td>---</td>
</tr>
<tr>
<td>Customer satisfaction index</td>
<td>Informational indicator</td>
<td>---</td>
</tr>
</tbody>
</table>
Q: Please describe the specific SQIs recommended by FBC.

A: FBC recommends the following SQIs:

**FBC’S PROPOSED SQI**

<table>
<thead>
<tr>
<th>Performance measure</th>
<th>Indicator</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency response time</td>
<td>Percent of calls responded to within two hours</td>
<td>85%</td>
</tr>
<tr>
<td>Telephone service factor</td>
<td>Percent of calls answered within 30 seconds or less</td>
<td>70%</td>
</tr>
<tr>
<td>First contact resolution</td>
<td>Percent of customers who achieved call resolution in one call</td>
<td>78%</td>
</tr>
<tr>
<td>Billing index</td>
<td>Measure of customer bills produced meeting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>performance criteria</td>
<td>5</td>
</tr>
<tr>
<td>Meter reading accuracy</td>
<td>Number of scheduled meters that were read</td>
<td>97%</td>
</tr>
<tr>
<td>System Average Interruption</td>
<td>Informational indicator - 3 year rolling average of SAIDI (average cumulative customer outage time)</td>
<td>---</td>
</tr>
<tr>
<td>Duration Index</td>
<td>Informational indicator - 3 year rolling average of SAIFI (average customer outages)</td>
<td>---</td>
</tr>
<tr>
<td>System Average Interruption</td>
<td>All injury frequency rate</td>
<td>Informational indicator - 3 year rolling average of lost time injuries plus medical treatment injuries per 200,000 hours worked</td>
</tr>
<tr>
<td>Frequency Index</td>
<td>Customer satisfaction index</td>
<td>Informational indicator</td>
</tr>
</tbody>
</table>

Q: In your opinion, is the overall approach reflected in the FortisBC PBR proposals concerning the integration of customer service and safety performance in the proposed PBR plans reasonable or appropriate?

A: No. In my opinion, FortisBC has not followed its own stated intent to establish the proper incentives to balance the interests of the utility and its customers. Rather, the approach recommended by FBC and FEI shifts all the risks of degradation of performance to customers and there are no incentives in the recommended performance standards to improve performance during the term of the PBR Plans. Therefore, I will recommend significant reforms to the SQI portion of any PBR Plan that the Commission approves.

Testimony of Barbara R. Alexander
On Behalf of COPE
III. FORTISBC UNFAIRLY SHIFTS ALL RISKS TO CUSTOMERS THAT SERVICE QUALITY WILL DETERIORATE OR FAIL TO IMPROVE DURING THE PBR PLANS

Q: Do the FortisBC PBR plans include any specific commitments to improve service quality or customer service performance?

A: No. The proposed baseline standards for the SQIs either replicate historical performance or, compared to the prior PBR plans, eliminate a benchmark or specific performance objective. As a result, there is no incentive to improve customer service quality even though investments in customer services and information technologies have been recently made, or, in the case of FBC, will be made under the Commission’s approval of an advanced metering systems that will improve operational performance in a number of metering and billing service areas.²

Q: Do the FortisBC PBR plans include any incentive in the form of payments to customers to compensate for deterioration in service quality if any of the SQIs do not meet their annual performance standard?

A: No. Neither PBR plan proposes any compensation to its customers or penalty attached to the Company’s revenues or earnings if any of the SQIs are not meet during any annual period. Rather, FortisBC relies entirely on shifting the burden to the Commission to initiate a formal proceeding to require improvement in any

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² See, e.g., FBC Response to ICG IR 2-4.0, showing the incremental capital investments made in recent years. In its Response to COPE Supp. IR 1-9.15, FBC acknowledges that it has made “considerable capital investments to increase reliability, capacity and customer service...” In addition FEI has recently brought its customer call center in-house in order to improve customer service quality performance. Testimony of Barbara R. Alexander.
SQI measure, a process that is time-consuming, usually litigious, and without any means of imposing compensation to customers who have suffered the poor or degraded service quality performance.

Q: Do either FBC or FEI offer customers any credits if there is a service quality failure, such as not meeting a scheduled appointment or failing to install service on time?

A: No. Neither FBC nor FEI offer any individual customer credits for service quality failures.³

Q: Do you agree that the FortisBC approach to rely on the potential to terminate the entire PBR plan during the mid-term review process or re-litigate the design of the PBR if there is a serious degradation of service quality performance is reasonable?

A: No. The suggestion that the Commission could terminate the entire PBR plan if there is significant deterioration in service quality performance is a tool that operates like a nuclear bomb when a hammer is more effective and appropriate. Nor has Fortis BC proposed any meaningful definition of what level of degradation would trigger such a response.⁴ The approach recommended by Fortis BC is not a reasonable response to a situation in which one or more annual performance standards are not met for one or more years during the plan. While this recommended approach sounds like a significant risk to the Company, the actual potential for the Commission to cancel or order significant amendments to

⁴ FBC Response to COPE IR 1-3.9 and IR 1-3.10. The notion as stated in FBC’s response to 1-3.10 that “FBC will work co-operatively to ensure compliance with requirements,” does not reflect any regulatory enforcement authority or assurance that customers will be made whole for past failures should they occur. Testimony of Barbara R. Alexander On Behalf of COPE
an approved PBR plan during its term if one or more SQIs is not met is remote at best, particularly when it is likely that FortisBC would oppose any such step and litigate it at great expense to all parties.

Q: Please describe the risks and potential harms to customers that may result if the FBC and FEI approach to Service Quality Indicators in these PBR plans is approved.

A: The lack of any linkage to the performance under a set of SQIs during these PBR plan with the revenue requirement and other features of the PBR that protect the revenues and earnings for FEI and FBC is a significant defect. Such an approach shifts the risks of nonperformance and lack of improvement for service quality and customer service performance entirely to customers. Furthermore, any multi-year rate plan that eliminates regular base rate proceedings carries the risk that the utilities will allow modest degradation of service quality to occur to continue a stream of revenues and earnings under the construct of the plan, a risk that is more likely to occur if there is no linkage between service quality performance and earnings. The utility in such a plan will no doubt seek to attain the standards, but has no incentive to improve performance.

Finally, the risks I have described above can have particularly adverse consequences for low-income and other payment troubled customers. These customers rely heavily on the ability to reach customer service representatives in a timely manner, respond to threats of discontinuance of service, negotiate reasonable payment arrangements, and make use of their rights under the Commission’s credit and collection and consumer protection rules. More so than
other residential customers, low-income, vulnerable, and payment troubled customers rely on access to customer call centers to negotiate payment arrangements, respond to disconnection notices, and enroll in any low-income programs. Low-income customers are typically disconnected more frequently than non low-income customers and experience a higher rate of nonpayment. The receipt of timely and accurate bills and disconnection notices with a well-understood and efficient collection routine is crucial to such customers’ ability to manage their monthly payments and seek financial assistance. These activities are at risk when a utility with a historically “good” service quality is subjected to pressures to assure adequate profits during a multi-year rate plan.

Q: Both FBC and FEI have stated that they have routinely met prior SQIs during prior PBR plans, thus attempting to document that PBR plans do not necessarily result in degradation of customer service. Do you agree with their justification?

A: No, for several reasons. First, FBC and FEI have proposed changes to the SQIs in this plan that eliminate some previously required performance standards, thus eliminating their risk of failure in this proposed PBR. Second, FBC and FEI have proposed performance standards that are in some cases very weak and not reflective of any improvements that either should occur or that are likely to occur with other investments and improvements that both Companies have recently undertaken or that they will undertake during this five-year plan. Third, the protestations that degradation is unlikely and that the Companies are incented to perform as required ring hollow if there is no risk factor that accompanies their
promises. The Companies should not reject the notion of a potential compensation to customers if there are measurable service quality performance failures if their assumption that such failures are unlikely to occur is correct. Finally, I note that FBC and FEI use internal “scorecards” that reward managers for service quality performance that exceeds internal benchmarks and performance objectives⁵ and that failure to achieve the internal performance objectives may result in reduction or elimination of incentive payments. In 2012, the FPC Electric corporate scorecard presented in its annual report shows that the Company measures and compares performance to a Customer Service Index, SAIDI, All Injury Frequency Rate (AIFR), Recordable vehicle Incidents, Regulatory Performance, and Regulated Earnings, but missed the specific targets for the Customer Service Index and the AIFR. It appears that the “above target” results in other categories, particularly earnings, offset the poor customer service and safety performance. It is unfair and unreasonable for FortisBC to reward its managers for improvement in service quality performance and refuse to provide any compensation to its customers if service quality deteriorates. Furthermore, the fact that the Companies include performance standards to trigger incentive compensation, but are refusing to include such specific performance standards for these same metrics in its SQI is not defensible.

⁵ Some of the internal scorecard performance objectives reflect specific performance objectives on the same metrics that FortisBC recommends be eliminated as a benchmark for the SQI feature on the PBR plans. See, e.g., FBC Response to BCPSO IR 1-49.1.1 that describes the “balanced scorecard” requirement for a specific objective for Customer Satisfaction, employee safety, and SAIDI, none of which have a similar benchmark proposal for the SQI.

Testimony of Barbara R. Alexander
On Behalf of COPE

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IV. PRECEDENTS FOR A MORE ROBUST SERVICE QUALITY INDEX PLAN

Q: Please summarize some of the U.S. and Canadian regulatory commission service quality index plans with predetermined penalties that you recommend this Commission consider in this proceeding.

A: It is not my intent to provide a comprehensive review of how all the U.S. regulatory commissions regulate customer service and service quality. However, I attach a summary of U.S. service quality and reliability policies presented in 2004 by the National Regulatory Research Institute (NRRI) to a meeting of the National Association of Regulatory Utility Commissioners (NARUC) as Exhibit (BRA-2). Based on this presentation and my own experience, it is not uncommon for multi-year rate plans, whether due to a Performance Based Ratemaking Plan or a multi-year rate settlement as part of a merger or acquisition proceeding, to include a Service Quality Index or Performance Plan. I use this term to refer to a multi-year plan that requires annual performance for selected customer service, safety, and service quality performance metrics and that assigns predetermined penalties that result in customer compensation for failure to achieve an annual performance standard. Some of the most notable examples include:

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6 "Results of 2004 Survey on Electric Reliability and Service Quality: A Report to the NARUC Staff Subcommittee on Electric Reliability," Vivian Witkind Davis, Nov. 15, 2004. According to this survey nine states had Performance Based Ratemaking Plans in effect with an SQI. See, http://www.narucmeetings.org/Presentations/elecreldavis1104.pdf There are other states that have approved multi-year ratemaking settlements in the context of mergers and acquisitions that also include performance standards with penalties.

Testimony of Barbara R. Alexander
On Behalf of COPE
Central Maine Power Co., Maine: As the lead staff member at the Maine Public Utilities Commission, I assisted in the development of an SQI that was adopted as a condition of Central Maine Power Company’s Performance Based Rate Plan in 1996. While amended several times with the renewal of the various PBR plans since that time, the basic construct of the SQI remains the same. The most recent revision occurred in 2008 with a Stipulation that the Commission approved. With regard to the SQI portion of the PBR, the Commission approved performance standards for CAIDI, SAIFI, the Commission Complaint Ratio, Percent of Customer Calls Answered, Call Center Service Quality, and Meters Read. A total of $5 million in maximum penalties is attached to the failure to meet these standards. With regard to the changes in the SQI, the Commission stated:

We also note that the SQI’s have been strengthened which reflects the benefits to be received under ARP 2008’s reliability programs and should help to ensure that reliability not only will be maintained during ARP 2008 but will actually improve. Of particular importance is the SAIFI metric which is set at its current ARP 2000 level of 2.10 in 2009 and then is reduced to 2.08 in 2010, 2.00 in 2011, 1.92 in 2012, and 1.89 in 2013. The CAIDI is reduced from the ARP 2000 level of 2.32 to 2.18. In addition, the ARP 2008 SQI mechanism includes a new metric for number of meters read by CMP and provides for a follow-up proceeding to establish a metric for new service installations. The SQI mechanism also increases the penalty amounts for failure to meet the metrics with the maximum penalty increasing from $3.6 million in ARP 2000 to $5.0 million in ARP 2008. This increased penalty level should provide further assurance that service quality commitments are kept.\(^7\)

These penalty dollars, if incurred, are returned to customers in the form of a one-time bill credit.

Puget Sound Energy, Washington: The SQI was originally created in the stipulated settlement of the 1996 merger between Puget Sound Power & Light Co. and

Washington Natural Gas Co. The SQI was reviewed and modified in the Company’s General Rate Case in 2002 and in that proceeding the SQI was continued indefinitely beyond its original five-year term, some of the metrics were modified, and the total potential penalty amount was increased. There is a maximum penalty of $10 million that is applied in a predetermined formula when PSE fails to meet one or more standards. The utility must pay penalties to customers based on the degree of failure to meet the standards and issues a customer report card annually on its compliance or non-compliance with the standards.\(^8\)

- Massachusetts requires its electric and natural gas utilities to comply with specific service quality, safety, and customer service performance standards. A total of 2.5% of the utility’s retail distribution service revenues\(^9\) are subject to risk of penalty for failure to meet the required annual performance standards. While the performance standards are developed for each natural gas and electric utility, they generally include measurements of performance areas for Safety and Reliability (Response to Odor Calls for gas utilities, Lost Work time Due to Accidents for gas and electric utilities, SAIDI, SAIFI, Worst Circuits SAIDI and SAIFI), Customer Service and Billing (Telephone Service Factor, Service Appointments Met, On-Cycle Meter Readings), and Customer Satisfaction (Commission Complaints, Billing Adjustments). While the results of Customer Satisfaction surveys are reported, they are not part of the penalty scheme. In addition, the Massachusetts regulatory commission has routinely required that proposals for merger or acquisition include

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\(^9\) Massachusetts adopted retail electric and natural gas competition and, as a result, Massachusetts’s utilities have structurally separated the generation function from the retail distribution function. Testimony of Barbara R. Alexander On Behalf of COPE
specific provisions to track, report, and establish enforceable performance standards
to prevent the potential for service quality deterioration. See, e.g., Massachusetts
DTE, Joint Petition of Massachusetts Electric Co. and New England Power Co. and
Eastern Edison Co. for approval of Eastern Edison Company’s merger into
Massachusetts Electric Company and for other related approvals.¹⁰

- Public Service Company of Colorado (Xcel Energy), Colorado: This electric and gas
utility must pay customer compensation required under the Quality of Service
Monitoring and Reporting plan, which the Public Utilities Commission (PUC)
adopted in 2006 and has renewed and revised for several multi-year time periods. The
electric service plan directs bill credits to specific regions where reliability problems
occur, and in some cases to individual customers. Under the plan, a reliability
threshold is established for each of Xcel Energy’s nine operating regions, and bill
credits are payable to customers within an operating region if the company’s
performance fails to meet the standard for two consecutive years. The service quality
plan also measures the company’s telephone response times and PUC complaint
levels, and provides up to $1 million in each category if thresholds are exceeded.¹¹ In
its gas service areas, Xcel is required to meet performance measures for meter reading
errors and lead permanent repair time. A maximum of $1 million bill credit is
allocated between these two performance requirements, with additional bill credit
maximums that take effect if the prior year’s performance is not rectified in the

¹¹ Public Service Co. of Colorado, Electric Rates, Quality of Service Plan, Sheet 105, available at:
http://www.xcelenergy.com/staticfiles/xel/Regulatory/Regulatory%20PDFs/rates/CO/psco_elec_entir_tarif
f.pdf
Testimony of Barbara R. Alexander
On Behalf of COPE
following year. The bill credits, if triggered, are distributed to all customers on a per
customer basis.\textsuperscript{12}

- Northern State Power Co. (Xcel Energy), Minnesota: This combination gas and
electric utility is required to meet performance standards for Customer Complaints,
Telephone Response Time, SAIDI, SAIFI, Natural Gas Emergency Response,
Customer Outage Refunds, Accurate Invoices (bills), and Invoice Adjustment
Timeliness. Each performance metric carries a maximum "performance payment" of
$1 million.\textsuperscript{13}

- Central Vermont Public Service, Vermont: Central Vermont, an electric utility,
operates under a PBR that includes a Service Quality and Reliability Plan.\textsuperscript{14} In fact,
all the Vermont electric utilities have an approved Service Quality and Reliability
Plan. Each Service Quality and Reliability Plan also includes at least one "service
guarantee" – a specific credit or financial benefit to the affected individual retail
customers if the utility fails to meet one of its service commitments. Nearly all of the
Service Quality and Reliability Plans also include a service quality compensation
mechanism under which the utilities will pay a financial penalty if certain minimum
standards are not met. According to the Vermont Board of Public Utilities\textsuperscript{15}:

\begin{quote}
The Board has found that all the electric utility Service Quality and Reliability
Plans provide significant benefits to ratepayers. These benefits include:
\begin{itemize}
\item more comprehensive service monitoring;
\end{itemize}
\end{quote}

\textsuperscript{12} See, the tariffs of Public Service Co. of Colorado (owned by Xcel Energy), Gas Service Quality of
Service Plan, available at:
http://www.xcelenergy.com/staticfiles/xec/Corporate/Corporate%20PDFs/CO_gas_service_area.pdf
\textsuperscript{13} Northern States Power Co. (owned by Xcel Energy), Electric Rate Book, Section 6, available at:
\textsuperscript{14} The current alternative regulation plan is available at:
http://psb.vermont.gov/sites/psb/files/docket/7627CVPSAltRegAmend/PSModifiedPlanProposal-
Clean_Final_07-06-10_pdfs
\textsuperscript{15} http://psb.vermont.gov/utilityindustries/electric/backgroundinfo/sqrp
Testimony of Barbara R. Alexander
On Behalf of COPE
Do similar service compensation programs for service quality failures exist at the Canadian provincial level for electric and gas utility PBR plans?

It is my understanding that only one current PBR plan for Gaz Metro includes financial penalties or rewards as part of its SQI, but that the Ontario Energy Board is considering such an approach for future PBR plans. The Gaz Metro SQI allows the utility to obtain incentive payments if an “overall attainment percentage” of 85% or more occurs. If the maximum score of 85% is not obtained, the Company must provide customer credits between $100,000 for seven SQIs and $200,000 for two SQIs. In addition, it appears that the Ontario Energy Board (OEB) is going to consider the potential for a penalty-type scheme in its consideration of the next generation of PBR plans.

Is there any precedent in the Canadian regulation of telecommunications providers that is relevant to this issue?

Yes. A rate adjustment plan for the retail Quality of Service regime was established in 2002 for the incumbent local exchange companies subject to price cap regulation. The retail rate adjustment plan required that 13 of the 17 quality of service indicators be averaged over the year to arrive at an annual average.

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16 FBC Response to BCUC IR 1.8.1
performance result by indicator. If the average annual performance result was
below the established standard for a given indicator, a formula determined the
amount of rebate to be paid to all subscribers across the telecommunications
company’s operating territory. The maximum rebate payable was determined to
equal five percent of the provider’s total annual business and residential local
revenues. While this rate adjustment scheme has been severely limited in later
decisions, that approach was based on the notion that local exchange telephone
competition would substitute for a regulatory regime to impose penalties for
service quality failures, a policy consideration that is not applicable to either FBC
or FEI, both of whom remain responsible for the delivery of adequate service
quality and safety experiences for their customers.

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I was a witness for a public advocacy organization in the original 2002 proceeding that resulted in the mandated quality of service indicators and the customer compensation plan.
Testimony of Barbara R. Alexander
On Behalf of COPE
V. FBC AND FEI'S SERVICE QUALITY AND CUSTOMER SERVICE PERFORMANCE UNDER A PBR: PROPOSED CONDITIONS

Q: Please describe how you have organized your presentation of proposed changes to the SQI portion of the FBC and FEI PBR plans.

A: First, I will discuss the specific metrics and historical performance for the metrics proposed by FBC and FEI. Second, I will set forth the proposed metrics and baseline performance standards that I recommend be included in the propose SQI portion of the PBR plans. Third, I will describe a proposed customer compensation or penalty mechanism that should be included in the SQI. Finally, I will present reporting requirements to the Commission and customers.

Q: What is the underlying consideration in the development of the performance areas that you recommend be included in any SQI?

A: I recommend that the Commission focus on metrics that track FBC’s and FEI’s interactions with its customers and, with regard to safety, their employees in their performance of the duties as a regulated utility for retail services. While my recommendations are definitely designed to reflect the needs of residential customers, I do not limit the applicability of these metrics to those customer classes. Finally, my proposals do not include metrics that reflect generation supply performance, pipeline or transmission system performance (except insofar as that is reflected in the electric reliability metrics), or the interactions of the utilities with wholesale market regulators, wholesale service providers, or alternative retail service providers because those interactions should be the subject to specific requirements and performance regulations that are not related to the
proposed PBR plans that focus primarily on retail services and revenues. I do not mean to suggest that these excluded performance areas are not important or unworthy of the Commission’s attention, but it is my recommendation that any consideration of performance in these areas be handled outside the SQI portion of these PBR plans.

Q: Please explain the basis for your recommendations for benchmark performance standards in your proposed SQI.

A: Where current performance and the proposed benchmark by FBC or FEI are reasonable and reflect recent performance, I have retained those proposed benchmarks. Where the FBC or FEI proposed benchmarks do not reflect consideration of improvement in performance over the term of the PBR plan or that do not conform to reasonable expectations based on service quality performance based on my experience, I have proposed a stricter benchmark standard. Where FBC and FEI have failed to include any benchmark performance standard, I have proposed a standard that reflects a three-year rolling average to initiate the standard based on recent actual historical performance, an approach that allows for stricter standards to be in place during the PBR plan to reflect the likely improvement in performance that should occur.

Q: Please provide an overview of FEI’s and FBC’s actual service quality, safety, and reliability performance.

A: Exhibit No. _____ (BRA-3) sets forth the historical performance for the metrics that were approved in the prior PBR plan and the existing historical data provided by FBC. Exhibit No. _____ (BRA-4) presents historical performance for FEI. In
both spreadsheets I have replicated the FBC and FEI data and calculated annual and/or three-year averages in separate columns.

Q: Do you have any observations on the inclusion of these proposed metrics and historical performance that are important to consider at this time?

A: Yes. I offer comments and observations for the following performance areas:

- **Customer Satisfaction Index:** The CSI is a compilation of the answers to five service quality "attributes" that are weighted as follows:\(^{19}\):

<table>
<thead>
<tr>
<th>Service</th>
<th>Measure</th>
<th>Sample</th>
<th>Weight</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Satisfaction</td>
<td>Mean</td>
<td>All Respondents</td>
<td>30%</td>
<td>B1</td>
</tr>
<tr>
<td>Acc. of Meter Reading</td>
<td>Mean</td>
<td>All Respondents</td>
<td>10%</td>
<td>B3.2</td>
</tr>
<tr>
<td>Energy Conservation Info.</td>
<td>Mean</td>
<td>All Respondents</td>
<td>10%</td>
<td>B3.8</td>
</tr>
<tr>
<td>Contact Center</td>
<td>Mean</td>
<td>All Respondents</td>
<td>25%</td>
<td>C5</td>
</tr>
<tr>
<td>Field Services (includes four questions to evaluate meter reader, linesman, technician, and PowerSense rep. service quality)</td>
<td>Mean</td>
<td>All Respondents</td>
<td>25%</td>
<td>Sum(D3, D8, D13, D22)</td>
</tr>
</tbody>
</table>

As a result, the “index” combines responses to a variety of customer services provided by FEI and FBC to its customers and weights them differently (and the basis for deciding these differences on the weighting of the components of this index is not obvious to me). The resulting “number” is diluted and not particularly helpful in tracking customer satisfaction in any one particular area. While I reject the notion that these results “should be viewed as informational in natural because customer attitudes are often influenced by factors outside the Company’s control,”\(^{20}\) I recommend that a more specific measurement of customer satisfaction be tracked and that a baseline performance standard be established for the SQI. While overall

\(^{19}\) Provide in FBC Response to COPE Supp. IR 1-9.12.

\(^{20}\) FBC Response to BCPSO IR 1-56.2.

Testimony of Barbara R. Alexander.

C-Path, 9-COPE.
rate design decisions, the Company’s policies governing its interactions with its customers to explain and justify these events are within the Company’s control. To the extent that any deterioration reflects FBC or FEI failure to meet customer expectations, the Company remains responsible for that performance. I reject the use of responses to questions about generic customer satisfaction and focus on recent customer experiences. I also reject the composite index approach since it dilutes the impact of any one measurement. I recommend that the SQI should measure Customer Satisfaction with a Recent Call Center Transaction so that the customer’s view of a recent interaction with the Company’s call center is measured. This approach, coupled with my rejection of including the First Call Response metric proposed by FBC and FEI, is a more useful indicator of the customer’s satisfaction with how his/her issue was handled by the Company’s call center employees, as well as a reflection of the quality of the training and directives given to such employees by Company management. The historical results for this particular question indicate that a performance standard of 8.5 is routinely achieved for FBC and I recommend that FEI be held to the same result.\textsuperscript{21} I recommend that FBC and FEI be required to achieve a result of 8.5 for this survey response during the next PBR plan.

- **All Injury Frequency Rate (AIFR):** This metric is the sum of Lost Time Injuries and Medical Treatment Injuries. According to FortisBC, this metric sums both of these events (as opposed to weighting one factor more than another) and is a standard practice even though the Lost Time Injuries may reflect more serious events than

\textsuperscript{21} FBC Response to CEC IR 1-16.1. Customer satisfaction with the contact center has exceeded 80% and ranged from 8.2 to 8.5 from 2006-2012. Testimony of Barbara R. Alexander On Behalf of COPE
treatment of a medical injury. FortisBC also claims that including a specific benchmark for employee safety in the SQI is not appropriate because "AIFR can be influenced by events beyond the control of and external to Company operations." I disagree with this justification for not including a specific benchmark in the SQI.

Creating an environment for employee safety is crucial to management’s obligation to operate the public utility. Furthermore, both FEI and FBC measure this metric for the purposes of incentive payment to its managers. The fact that FBC failed to meet its internal “scorecard” target for this metric in 2012 and that the FBC AIFR results compared to the Canadian Composite AIFR shows a trend of increasing AIFR results compared to the clear trend elsewhere in Canada of a lower AIFR are red flags that should cause the Commission to insist that it remain as a measurable metric for any SQI and that a specific target should be included to properly incent the Company to implement safety policies and training programs. Finally, FBC’s AIFR has dramatically increased in the 2013 results to date, a matter that should be of significant concern to the Commission. I recommend that the performance standard reflect a rolling three-year average to accommodate the potential impact of a relatively small number of events in any year. With regard to the proposed FBC benchmark standard, I recommend that the initial and minimum standard should reflect the 2009-2011 actual results and not the higher 2012 results that failed to meet the internal target. Therefore, I recommend a performance standard of 1.54 for FBC.

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22 FBC Response to BCUC IR 1-69.1 and 69.2.
23 FBC Response to BCPSO IR 1-55.2.
24 FBC Response to BCUC IR 1-4.2. The Balanced Scorecard target was 1.54 but the actual result was 1.72 for AFIR.
25 FBC Response to BCUC IR 1.61.1c.
26 FBC/FEI Response to COPE IR 3.G15 (FEI) and E19 (FBC).
Testimony of Barbara R. Alexander
With regard to FEI, the rolling three year average (2010-2012) of 2.08 reflects gradual improvement from the relatively high 2010 result of 2.66 and I recommend a minimum and initial benchmark of 2.08 for FEI.

- **Telephone Service Factor**: FortisBC operates call centers at separate locations for FEI and FBC and tracks their customer call center performance separately. The FEI call center was recently brought in-house from a third party contractor. The measurement of time between a customer’s selection of the option to speak with a customer service representative on the voice response menu options and the answer of the call by the representative who is ready to respond to the customer’s question or concern is a typical SQI measurement. I recommend that the best practice standard of answering 80% of such calls within 30 seconds be required for calls from both FEI and FBC customers. The current TSP benchmark for non-emergency calls for FEI is 75% and the Company has routinely performed at or above that benchmark in recent years: 77.2% in 2010, 74.7% in 2011, and 76.2% in 2012. Yet, FEI proposes to lower the benchmark performance standard to 70% for this PBR plan. FBC’s TSP performance for non-emergency calls is exactly 70% for recent years. It appears that FBC manages its call center to achieve its applicable performance benchmark, no more and no less. When asked why the annual average results for its electric customer call center was 70% each year, the Company stated that it manages its staffing level to match the “desired average telephone service factor of 70% on a

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27 FEI Application, Appendix D.7.
28 FEI Application, Appendix D.7; FEI/FBC Response to COPE IR 3.G11.
Testimony of Barbara R. Alexander
On Behalf of COPE
monthly and annual basis.\footnote{FEI/FBC Response to COPE IR 3.E14.} This is not the response of a company that is focused on meeting customer needs.

FEI's proposal to lower its performance standard in this SQI proposal from the three-year average of 76% to 70% is excused "...in order to align the targets for the gas and electric operations and to more effectively balance cost and service levels."

In fact, FEI may already be aiming to achieve this lower performance level and reports that as of June 2013 this performance was at 70.5% year to date.\footnote{FEI Response to CEC IR 1-51.1.}

I recommend that the Commission establish a performance requirement for FBC and FEI that reflects the best practice in many industries and at several utilities that I have referenced in my testimony, that is, an annual average of answering 80% of calls within 30 seconds. In no case should the Commission establish a performance standard that reflects lower than actual performance, thus allowing deterioration of performance during the PBR plan. Any customer call center can vary the staffing levels based on predictable patterns of customer calls and I recognize that this annual average reflects the potential for diverse actual results in any one month, but to suggest, as FEI and FBC apparently do, that they are not going to provide an improved customer service because a benchmark that they have previously proposed would be exceeded is an excellent example of why an SQI with predetermined customer compensation mechanisms and requirements for improved performance over the term of the PBR is required in this proceeding.

• **Billing Index**: This metric is a blend of three components: accuracy, completion, and timeliness. As a result, the blending of these three components dilutes the value of
the resulting “index.” The Company’s actual performance for all three components of this metric is typically at 99-100%. Furthermore, FBC’s installation of AMI will positively impact this performance.\(^\text{31}\) With modern computerized billing and customer accounting systems, the potential for an inaccurate bill is lessened.\(^\text{32}\) Finally, the trend to e-billing (and avoiding the need to mail a bill) will improve this customer service function as well, as well as contribute operational savings to the Company.\(^\text{33}\) I recommend that this metric be deleted from the SQI since there is no evidence that either Company has failed to issue accurate or timely bills to its customers.

- **SAIDI and SAIFI:** These measurements for reliability of electric service are widely used and typical of service quality performance standards in many U.S. and Canadian jurisdictions.\(^\text{34}\) FBC’s SAIDI performance is significantly better (i.e., reflecting a lower average outage duration) than the Canadian Composite SAIDI results.\(^\text{35}\) The SAIFI results are lower (i.e., better) than the Canadian Composite SAIFI for each year except 2010. I do not know if this better than average performance is a reflection of FortisBC investments, weather, demographics, geography, or other indicia. Based on historical results, FBC has improved SAIFI and SAIDI in recent

\(^{31}\) FBC Response to BCUC IR 1-64.1.
\(^{32}\) It is possible of course for a programming error to result in incorrect bills (inserting the incorrect demand factor or tariffed charge), but this is rare. More common is the risk of billing errors when a utility seeks to install a new customer information software system and the implementation of such a changeover from the old billing system to a new one can cause significant errors and delays during the transition period. If the Commission is concerned about the potential implementation of such a system change during the term of this PBR I would recommend retaining the Billing Index in some form.
\(^{33}\) FBC Response to CEC IR 1-17.1, 17.2, and 17.3. E-bill participation rate is 19% per month for FBC.
\(^{34}\) See, e.g., FBC Response to BCUC IR 1-61.7, which shows that reliability metrics are established in Alberta and BCUC IR 1-61.7, which shows that specific reliability standards are proposed in Ontario Energy Board’s 4th Generation Incentive Regulation for Electricity.
\(^{35}\) FBC Response to BCUC IR 1-61.1

Testimony of Barbara R. Alexander
On Behalf of COPE
years. Whatever the cause, the Commission should take steps to ensure that this
generally positive trend continues. Yet, FBC proposes to eliminate any enforceable
performance standards from its SQI on the grounds that “there may be external
factors that can influence the results.”37 This is a specious argument. First, the major
storms events are excluded from the normalized results reported and relied upon for
the historical results and the benchmark that was in effect for the prior PBR plan.
Second, it is the duty and obligation of an electric utility to manage its distribution
systems and its response to routine outages so as to plan and respond properly to
known outage causation factors and events. The three-year rolling average results
reflect that outages will occur and its purpose is to measure the ongoing management
oversight and response to known causes of outages, such as trees in contact with
distribution equipment, defective equipment, and response to routine weather events
through staffing and other resources. Furthermore, the rolling average approach to
establishing this benchmark will naturally reflect the improved performance that
should be visible over time due to capital investments, such as distribution
automation and ongoing maintenance for replacement of aging equipment, as well as
operational expenses associated with tree trimming. I agree with the suggestion that
these metrics should be measured by a three-year rolling average to reduce the impact
of any 12-month performance, but I reject the notion that enforceable standards
should not be adopted in the SQI. The only risk to consumers with this approach is
the degradation of performance for several years will result in a degradation of the
performance standard. Therefore, I recommend that the performance standard not be

36 FBC Response to BCUC IR 1-70.1.
37 FBC Response to BCUC IR 1-68.9.
Testimony of Barbara R. Alexander
allowed to go below the current three-year average (2010-2012), but that a stricter standard may be in effect over time if improvement continues to occur during the term of the PBR plan. The three-year average for 2010-2012 is 2.22 (expressed as hours) for SAIDI, and is only slightly below the 2004-2012 average of 2.37 hours. I recommend that the benchmark performance standard for SAIFI be established at 1.64 (expressed as events), a significant improvement compared to the 2004-2012 average of 2.24. This improvement should be captured in the benchmark standard and required for the term of this PBR to capture customer benefits and prevent deterioration in recent performance.

I realize that FortisBC’s calculations of SAIDI and SAIFI rely on exclusion of major storm data using the IEEE 2.5 Beta method. This method is also used in several U.S. and Canadian jurisdictions, but the other method of excluding outages when 10% of the customers are impacted by a major weather event is also common. I don’t have a preference in this regard as long as the three-year rolling average standard is calculated in the same manner throughout the PBR plan. With regard to outage related data that is not normalized, I would suggest that that “raw” outage frequency and duration data that customers actually experience also be reported, but I do not propose a specific performance standard at this time.

- **Meter Reading Accuracy**: FBC acknowledges that the deployment of AMI will positively influence this metric because the AMI system will remotely and automatically obtain meter readings, thereby eliminating potential errors associated with manual meter reading.\(^{38}\) I see no reason to retain this performance area in the

\(^{38}\) FBC Response to BCUC IR 1-65.1
Testimony of Barbara R. Alexander
On Behalf of COPE
SQI for electric service. However, I do recommend that this metric be retained in FEI's SQI and that the current benchmark standard of 95% be continued on the assumption that the gas meters will continue to require manual meter reading.

- **Emergency Response Time:** FBC acknowledges that the AMI project will improve the accuracy of the Emergency Response Time performance because the system will automatically provide notification of outages rather than relying on customers to call and report an outage. While it may be appropriate for FBC to measure the arrival on site from the time the customer calls about an outage, the most important issue from a customer's point of view is not the arrival of the field personnel, but the repair time and the restoration of power. As a result, I do not view this metric as worthy of including it in the SQI for an electric utility. However, it remains a very important metric for the gas utility since the emergency calls that are being measured are typically a customer's reporting of a potential gas leak that has significant public safety implications. FEI proposes to change the historical benchmark for this metric to reflect the more typical Canadian (and U.S.) methodology of measuring all gas emergency calls based on the percentage of calls that the Company arrives on site within one hour. While FEI has actually performed at the 97-98% level in the past several years (based on the revised definition), the Company proposes a performance standard of 95%. I agree with the revised definition of this measurement. I do not have any issue with the proposed benchmark performance standard for this metric for FEI.

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39 FBC Response to BCUC IR 1.62.1. The suggestion in this response that such automatic notification may result in the reporting of more outages at an earlier time, thus negatively impacting other measurements in the SQI, is speculative.

40 FEI Application, Appendix D.7. The prior metric measured only "gas blowing" or pipeline leaks and evidently did not include customer calls alleging the smell of gas.

Testimony of Barbara R. Alexander
• First Contact Resolution: FBC and FEI want to include this metric in their SQI and propose a 78% performance standard. This metric measures whether the customer’s initial reason for the call was resolved at “first contact” and is derived from the results of an automated survey that asks the customer how many calls were made to resolve your initial inquiry. Those who press “1 call” on this telephonic survey are then assumed to meet the performance standard.\(^{41}\) I do not disagree with FBC or FEI’s emphasis on attempting to resolve issues and concerns with their customers with one call or the least amount of calls. However, there are several problems with including this in the SQI as a measurable performance area. First, unless customers are informed that the “answer” they receive can be disputed or informally appealed to upper level management or the Commission, customers who are given an “answer” that does not help the customer resolve their concern, the fact that one call was made is not particularly responsive to customer needs. Second, at the time of the asking of the survey question, it may not be possible for the customer to know if his or her problem was resolved with one call. The subsequent bill may raise the same issue and require another call. Finally, I note that the proposed 78% performance standard is a reflection of only one year of experience by FEI and does not reflect any potential improvement in performance for the five-year PBR plan.\(^{42}\) In conclusion, I recommend that the more important attribute to measure is whether the customer’s experience with their interaction with the call center was satisfactory and that measurement is separately proposed to be included in my revised SQI for FBC and FEI.

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\(^{41}\) FBC Response to COPE Supp. IR 1-9.17.
\(^{42}\) FBC Response to COPE Supp. IR 1-9.22.
Testimony of Barbara R. Alexander
On Behalf of COPE
• Kept Appointments: FortisBC does not track whether appointments are kept for work that requires a premise visit to the customer’s location, claiming, “...a number of factors can impact the timing of customer site visits.” I recommend that this policy be changed to require FBC and FEI to offer appointments within a 4-hour window and to track whether appointments are met by the Company or not met for Company related reasons. I agree that appointments cancelled by the customer or that result from the necessary diversion of field personnel due to an emergency or major storm should also not be included. Rather than develop a system-wide benchmark standard, this metric is one that is best suited to providing individual customer compensation for the failure to keep the appointment for Company related reasons, a common service quality performance requirement in other SQIs that I have identified in my testimony. My proposed $25 customer compensation credit is typical of U.S. jurisdictional utilities, but I defer to the Commission for a reasonable compensation amount for Canadian customers.

• Public Contact with Pipelines: FEI recommends that this performance metric be reported and that no performance standard be established. I disagree. Based on the historical performance, FEI has reported a decreasing level of such reported contacts, from 19 in 2010 to 13 in 2012. The rolling three year average of 16 should be included in the SQI for FEI. This metric is a reflection of FEI’s educational and outreach programs to prevent such incidents and is a useful indicator of public utility performance.

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44 FEI Application, Appendix D.7.
Testimony of Barbara R. Alexander
Q: What specific performance areas should be included in FBC’s SQI mechanism for a future PBR plan?

A: I recommend that FBC be required to meet the following performance requirements for any approved PBR plan:

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>FBC's Proposed Benchmark</th>
<th>COPE's Proposed Benchmark</th>
<th>Comments on Proposed Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone Service Factor (non-emergency calls)</td>
<td>70% of calls answered within 30 seconds or less</td>
<td>80% of calls answered within 30 seconds or less</td>
<td>FBC should be required to demonstrate improved performance over time; the 80% answer time is reasonable and reflects a best practice performance standard.</td>
</tr>
<tr>
<td>SAIDI</td>
<td>None</td>
<td>Three-year rolling average with 2012 as minimum: 2.22</td>
<td>FBC should be held accountable for actual reliability performance that reflects improved performance over time.</td>
</tr>
<tr>
<td>SAIFI</td>
<td>None</td>
<td>Three-year rolling average with 2012 as minimum: 1.64</td>
<td>FBC should be held accountable for actual reliability performance that reflects improved performance over time.</td>
</tr>
<tr>
<td>All Injury Frequency Rate</td>
<td>None</td>
<td>Three-year rolling average based on the initial average from 2009-2011: 1.54</td>
<td>FBC should be held accountable for employee safety performance with a three-year average benchmark, but excluding 2012 from this average due to deterioration.</td>
</tr>
<tr>
<td>Customer Satisfaction With Recent Transaction with Call Center</td>
<td>None</td>
<td>8.5</td>
<td>Eliminate the complicated index proposed by FBC, the response to the question about actual customer experience with a recent call center transaction should be included.</td>
</tr>
<tr>
<td>Field Appointments Kept</td>
<td>None</td>
<td>$25 to customer for failure to keep appointment for Company reasons</td>
<td>New. The Company should offer customers an appointment window and track whether the Company meets the appointment window. Appointments not met due to customer reasons should not be included.</td>
</tr>
<tr>
<td>Billing Index</td>
<td>5</td>
<td>None</td>
<td>Eliminate from SQI due to historical performance and impact of future AMI system.</td>
</tr>
<tr>
<td>Meter Reading Accuracy</td>
<td>97%</td>
<td>None</td>
<td>Eliminate from SQI due to historical performance and impact of future AMI system.</td>
</tr>
<tr>
<td>First Contact Resolution</td>
<td>78%</td>
<td>None</td>
<td>Eliminate due to reliance on customer satisfaction survey results on recent transaction, as well as concerns about the dubious nature of the measurement protocol.</td>
</tr>
<tr>
<td>Emergency Response Time</td>
<td>85% within two hours</td>
<td>None</td>
<td>Eliminate from SQI. This metric is not sufficiently important to include in the SQI since customers are more concerned with restoration time and not necessarily the arrival of the utility personnel at the trouble location for electric outage issues.</td>
</tr>
</tbody>
</table>

Testimony of Barbara R. Alexander
On Behalf of COPE
Q: Please describe the proposed SQI measures and benchmark performance standards that should accompany FEI's PBR plan.

A: I recommend that the FEI SQI plan include the following measures and performance standards:

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>FEI’s Proposed Benchmark</th>
<th>COPE’s Proposed Benchmark</th>
<th>Comments on Proposed Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Response Time</td>
<td>95% of Calls Responded to within 60 minutes</td>
<td>95% of Calls Responded to within 60 minutes</td>
<td>The proposed benchmark is appropriate.</td>
</tr>
<tr>
<td>Telephone Service Factor (emergency)</td>
<td>95% of emergency calls answered within 30 seconds</td>
<td>95% of emergency calls answered within 30 seconds</td>
<td>The proposed benchmark is appropriate.</td>
</tr>
<tr>
<td>Telephone Service Factor (non-emergency calls)</td>
<td>70% of non-emergency calls answered within 30 seconds</td>
<td>80% of non-emergency calls answered within 30 seconds</td>
<td>FEI should provide the same level of telephone call center performance as FBC.</td>
</tr>
<tr>
<td>Meter Reading Accuracy</td>
<td>95%</td>
<td>95%</td>
<td>Retain due to manual meter reading process for gas meters.</td>
</tr>
<tr>
<td>All Injury Frequency Rate</td>
<td>None</td>
<td>Rolling Three-year average with initial standard at 2.08 (2010-2012).</td>
<td>FEI should be held accountable for employee safety performance with a three-year rolling average benchmark.</td>
</tr>
<tr>
<td>Public Contact with Pipelines</td>
<td>None</td>
<td>Three year rolling average of number of line damages per 1,000 BC One Calls Received: 16 (2010-2012).</td>
<td>Retain with performance indicator due to public safety concerns and FEI’s obligation for customer education.</td>
</tr>
<tr>
<td>Customer Satisfaction with Recent Call Center Transaction</td>
<td>None</td>
<td>8.5</td>
<td>Rather than the complicated index proposed by FEI that reflects several questions, the response to the question about actual customer experience with a recent transaction is preferred.</td>
</tr>
<tr>
<td>Field Appointments Kept</td>
<td>None</td>
<td>$25 to customer for failure to keep appointment for Company reasons</td>
<td>New. The Company should offer customers an appointment window and track whether the Company meets the appointment window. Appointments not met due to customer reasons (cancellation; failure to show) or if there is a major storm event should not be included.</td>
</tr>
<tr>
<td>Meter Exchange Appointment</td>
<td>95%</td>
<td>None</td>
<td>Eliminate and substitute the “missed appointment” customer credit.</td>
</tr>
<tr>
<td>First Contact Resolution</td>
<td>78%</td>
<td>None</td>
<td>Eliminate due to reliance on customer satisfaction survey results on recent transaction and the dubious nature of the measurement protocol.</td>
</tr>
<tr>
<td>Billing Index</td>
<td>5</td>
<td>None</td>
<td>Eliminate due to historical performance.</td>
</tr>
</tbody>
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Testimony of Barbara R. Alexander
On Behalf of COPE
Q: Please describe the customer compensation structure that you recommend to accompany this proposed SQI portion of the PBR plan.

A: The purpose of the "compensation credits" is to make sure that the risk of deterioration in customer service and the risk that the promises made in this proposed PBR plan to improve or enhance service quality and customer service will not occur is transferred from FortisBC’s customers to its shareholders. I recommend that a total of $1,800,000 be at risk for service compensation dollars for FBC and $11,500,000 for FEI. This dollar amount represents approximately 1% of the projected retail jurisdictional revenues for each Company for the calendar year 2012. I have selected the 1% based on my experience with designing similar service quality performance mechanisms and the fact that the Massachusetts maximum customer compensation amount reflected this same level prior to the divestiture of generation supply assets and the implementation of restructuring.

Obviously, FBC’s electric revenues are significant lower than FEI’s natural gas service revenues. Therefore, the value attached to each percentage in deterioration of service (represented by the percentage deterioration in any of the performance benchmarks for an annual period) will be different for each company. In determining the dollar amount to attach to a 1% deterioration in performance, I then consider the conditions under which the full amount of the potential penalty could be triggered. The dollar amount must be significant.

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46 The maximum penalty amount was then raised from 1% to 2.5% of retail distribution service revenues for each natural gas and electric utility.
Testimony of Barbara R. Alexander
On Behalf of COPE
enough to have an impact on corporate priorities, but not so punitive such that minor deterioration results in too large a level of customer compensation and impact on earnings. This determination is a reflection of judgment and my experience with the proposed SQIs in other jurisdictions. As a result, I propose to attach $50,000 for each percentage point of deterioration in performance for any of the SQI metrics for FBC and $250,000 for each percentage point of deterioration for any of the SQI metrics for FEI. FBC’s performance would have to deteriorate 36% below the proposed performance standard spread over all the applicable performance standards to trigger this maximum compensation to customers. FEI’s performance would have to deteriorate 46% below the proposed performance standard spread over all the applicable performance standards to trigger this maximum compensation to customers. Therefore, the maximum amount of compensation credits is only triggered if there is a significant failure to achieve these standards in many indicators, an extremely unlikely event. By triggering compensation credits based on the percentage deterioration in annual performance, the mechanism I have proposed equitably links the level of deterioration with the level of compensation credits required to be paid to customers.

Where the performance area reflects interactions with residential customers, the compensation dollars should be returned to residential customers in the form of a one-time credit. Where the performance area reflects interactions with both residential and non-residential customers, the compensation dollars should be returned to all customers in a pro-rata method that reflects the degree to
which the residential and non-residential customer activity is reflected in the
performance area. The determination of the level of activity by residential and
non-residential customers in a particular performance area can be determined by a
simple analysis of a valid sample of underlying interactions for a representative
period.

Q: Please provide an example of how the service compensation dollars would be
calculated under your proposed mechanism.

A: The actual annual performance result should be compared to the Benchmark
Performance Standard. The deviation of the actual performance compared to the
Performance Standard is expressed as a percent deviation from the Standard. This
percent deviation should be expressed as points by multiplying the percent (as
expressed as a decimal) by 100 so that each point equals a one percent deviation
from the baseline. No points are assigned if FEI or FBC achieve results equal to
or better than the Performance Standard. When the Company performs worse
than the Performance Standard, the applicable points are calculated for each
Performance Area and totaled and then multiplied by $50,000 for FBC and
$250,000 for FEI to obtain the applicable service compensation credits. For
example, if FBC achieves a 75% Call Answer Performance Standard (annual
average of answering non-emergency calls within 30 seconds), this would
represent a deterioration of 6.25% from the Performance Standard of 80%.

47 By way of further explanation, if the standard is 80% and the Company achieves 75% there is an
apparent 5% reduction. However, we are interested in the deviation from that standard, not the simple
numerical reduction. The deviation is found by calculating what part of 80 (easier to think of as 1 or 100%)
is 75, or 75 ÷ 80 = .9375. The difference between 1 and .9375 is the deviation, here that is .0625, or 6.25%.
Testimony of Barbara R. Alexander
On Behalf of COPE
for a total of $312,500.\textsuperscript{48} If the same result occurred for FEI, the resulting service compensation credits would total $1,562,500.\textsuperscript{49} The failure to meet any of the performance areas should be calculated separately, but the compensation credits incurred for each performance area should be totaled in determining whether or how much will be returned to customers in the form of a one-time bill credit.

Q: What change in the SQI penalty structure do you recommend be implemented to respond to a repeated failure to meet one or more standards for two or more consecutive years?

A: I recommend that any failure to meet the annual performance standard for any metric should require the Company to submit an enforceable compliance plan that demonstrates how the Company will meet the standard the following year. This compliance plan should have specific milestones and reporting requirements to demonstrate progress in meeting the standard. Second, the penalty structure should reflect a higher level of penalty when the performance standard is not met for two consecutive years. I recommend that the otherwise applicable penalty dollars be doubled for the second consecutive failure. Any such penalty that is incurred pursuant to this proposal would be in addition to the maximum penalty at risk for either FEI or FBC.

Q: Should FortisBC be able to offset poor performance in one performance area with performance in other areas that meet the standard?

A: No. Each performance area has value and should be met without allowing the Company to offset poor performance in another area, thus seeking to avoid any

\textsuperscript{48} This amount is equal to 0.1778\% of FBC’s projected 2012 revenues of $1,757,440.

\textsuperscript{49} This amount is equal to 0.135\% of FEI’s projected 2012 revenues of $1,155,722,380.

Testimony of Barbara R. Alexander
compensation to customers for poor performance. Each of the proposed performance areas should be met and any annual failure should result in compensation to customers in the form of a bill credit that represents the degree of failure that has occurred. The company should not be able to “game” the mechanism and permit selected performance areas to deteriorate, while avoiding a penalty by directing resources to other selected areas. If the penalty mechanism results in a relatively small compensation amount such that the cost of issuing the customer credit is in excess of the credit amount itself, I recommend that the compensation amount be tracked until the following year and true-up with the next annual report. Alternatively, the Commission could direct the Company to allocate a relatively small compensation amount to a low-income program or assistance fund.

Q: Should FortisBC be able to earn additional incentive payments for performance that is better than or exceeds the required benchmark performance standards?

A: No. The purpose of the SQI with performance standards is to prevent deterioration in service and to incent the Company properly to deliver improved service quality, safety, and reliability performance over the term of the PBR plan. The standards reflect appropriate and reasonable expectations, the costs for which are also reflected in the Company’s revenue requirement embedded in the PBR plan. Shareholders do not deserve to receive additional incentive payments, which would result in rate increases for ratepayers, beyond those already built into the earnings potential of the PBR plan.
Q: How should FBC and FEI report the SQI results to customers?

A: In addition to the annual report to the Commission, I recommend that FBC and FEI issue a Service Quality Performance Report Card annually to its customers, similar to the one issued by Puget Sound Energy that I cited above in my testimony. This report card should list all the required service quality performance indicators and associated benchmark performance standard, the Company's actual annual performance, and inform customers of any service quality compensation penalties that were incurred.

Q: Does this complete your testimony at this time?

A: Yes.

Testimony of Barbara R. Alexander
Exhibit No. (BRA-1) Professional Qualifications of Barbara R. Alexander
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Recent Clients:
AARP (Montana, Maine, New Jersey, California, Vermont, District of Columbia, Maryland, Ohio, Delaware, Virginia, Mississippi)
Pennsylvania Office of Consumer Advocate
Washington Public Counsel
The Energy Project (Washington)
Delaware Public Service Commission
Maryland Office of People’s Counsel
Citizens’ Utility Board (Illinois)
UWUA (Michigan)
UWUA (California)
New Jersey Division of Ratepayer Advocate
Maine Office of Public Advocate
Ohio Consumers’ Counsel
Colorado Office of Consumer Counsel
Vermont Department of Public Service
Delaware Division of the Public Advocate
The Utility Reform Network (TURN) (California)
Oak Ridge National Laboratory, Department of Energy
Regulatory Assistance Project
Citizens’ Utility Board (Wisconsin)

Areas of Expertise:

• Default Service, Consumer Protection, Service Quality, and Universal Service policies and programs associated with the move to competition in the electric, natural gas, and telecommunications industries;

• Consumer Protection and Service Quality policies and programs associated with the regulation of competitive energy and telecommunications providers;

• The regulatory policies associated with the regulation of Credit, Collection, Consumer Protection, Low Income, and Service Quality programs and policies for public utilities;
• Rate design and pricing policies applicable to residential customers; and
• Advanced Metering Infrastructure costs and benefits and associated time-based pricing proposals.

Prior Employment

DIRECTOR
1986-96
Consumer Assistance Division
Maine Public Utilities Commission
Augusta, Maine

One of five division directors appointed by a three-member regulatory commission and part of commission management team. Direct supervision of 10 employees, oversight of public utility consumer complaint function, appearance as an expert witness on customer services, consumer protection, service quality and low income policy issues before the PUC. Chair, NARUC Staff Subcommittee on Consumer Affairs.

SUPERINTENDENT
1979-83
Bureau of Consumer Credit Protection
Department of Professional and Financial Regulation
Augusta, Maine

Director of an independent regulatory agency charged with the implementation of Maine Consumer Credit Code and Truth in Lending Act. Investigations and audits of financial institutions and retail creditors, enforcement activities, testimony before Maine Legislature and U.S. Congress.

Education

JURIS DOCTOR
1973-76
University of Maine School of Law
Portland, Maine

Admitted to the Bar of the State of Maine, September 1976. Currently registered as “inactive.”

B.A. (WITH DISTINCTION) IN POLITICAL SCIENCE
1964-68
University of Michigan
Ann Arbor, Michigan
Publications and Testimony

“How to Construct a Service Quality Index in Performance-Based Ratemaking”, The Electricity Journal, April, 1996


Direct Testimony on behalf of the Telecommunications Workers Union, Telecom Public Notice 96-8, Price Cap Regulation and Related Issues, Canadian Radio-Television and Telecommunications Commission, September, 1996. [Analysis of and recommendations concerning the need to regulate service quality in move to price cap regulation]

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Direct Testimony on behalf of AARP, Universal Service Programs and Funding of low-income programs for electric and natural gas service, before the New Jersey Board of Public Utilities, Docket No. EX000200091, July, 2000.

Comments (on behalf of NASUCA and AARP) on Uniform Business Practices Reports, May and September, 2000.


Direct and Surrerbuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate on consumer protection and service quality issues associated with the pending merger between GPU Energy and FirstEnergy, before the Pennsylvania PUC, Docket Nos. A-1103000F0095 and A-110400F.0040 (February and March, 2001)

Direct and Surrerbuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate on consumer protection, service quality, and universal service issues associated with the pending merger between GPU Energy and FirstEnergy, before the New Jersey Board of Public Utilities, Docket No. EM00110870 (April, 2001).

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Responsive Testimony on behalf of the New Jersey Division of Ratepayer Advocate on service quality issues associated with a Plan for Alternative Regulation by Verizon-New Jersey, before the New Jersey Board of Public Utilities, Docket No. To01020095 (May 2001).

Direct and Surrerbuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate on service quality, consumer protection, and universal service issues associated with the pending merger between Conectiv and Pepco, before the New Jersey Board of Public Utilities, BPU Docket No. EM101050308 (September and November 2001).

Direct Testimony on behalf of the Public Interest Advocacy Centre (and others) on service quality regulation in the context


Expert Witness Report, Sparks v. AT&T and Lucent Technologies, October 2001 [National class action lawsuit concerning the leasing of residential telephones]


Comments on behalf of the Pennsylvania Office of Consumer Advocate on consumer protection, disclosure, and education program Guidelines applicable to local exchange telephone competition, before the Pennsylvania PUC, January 2002.


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Direct Testimony on behalf of Consumer Groups before the Texas PUC on Notice and Request of Mutual Energy CPL and Mutual Energy WTU for Approval of Changes in Ownership and Affiliation, Docket No. 25957, October 15, 2002.

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of Ratepayer Advocate before the New Jersey BPU on Jersey Central Power & Light’s base rate case proceeding (service quality and reliability of service), Docket No. ER02080506, ERT02080507, and ER02070417, December 2002 and February 2003.


Comments and Reply Comments on behalf of New Jersey AARP before the New Jersey Board of Public Utilities on Basic Generation Service, Docket No. E003050394 (August and September 2003).

Direct and Surrebuttal Testimony on behalf of the New Jersey Division of the Ratepayer Advocate before the New Jersey BPU on rate case proceedings for New Jersey-American Water Co., Elizabethtown Water Co., and Mt. Holly Water Co. (service quality and low-income programs and policies), Dockets Nos. WR03070509-WR03070511 (December 2003).

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Comments and Reply Comments on behalf of the Colorado Office of Consumer Counsel before the Public Utilities Commission of Colorado, In the Matter of the Proposed Repeal and Reenactment of all Rules Regulating Gas Utilities (Docket No. 03R-520G) and Electric Utilities (Docket No. 03R-519E) (February and September 2004).

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Direct and Surrebuttal Testimony on behalf of Wisconsin Citizens’ Utility Board before the Wisconsin Public Service Commission, Application of Wisconsin Power and Light Co. for Authority to Increase Retail Electric, Natural Gas and Ripon Water Rates, Docket No. 6680-UR-114 [customer service, credit and collection programs and expenses, low income programs, fixed bill program] (April 2005).


Direct Testimony on behalf of The Utility Reform Network (TURN) before the California Public Utilities Commission, Order Instituting Rulemaking on the Commission’s Own Motion to Establish Consumer Rights and Consumer Protection Rules Applicable to All Telecommunications Utilities, Docket R-00-02-004 (August 2005).


Comments on behalf of Texas Office of Public Utility Counsel, Texas Legal Services Center, Texas Ratepayers’ Organization to Save Energy and AARP Texas, before the Texas PUC, Evaluation of Default Service for Residential Customers and Review of Rules Relating to the Price to Beat and Provider of Last Resort, Project No. 31416 (March 2006) [Default service policies]


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Direct and Rebuttal Testimony on behalf of the Maryland Office of People’s Counsel before the Maryland PSC, In The Matter of the Optimal Structure of the Electric Industry of Maryland, Case No. 9063 (October and November 2006). [Default service policies]

Comments on behalf of AARP Maine before the Maine PUC on various dockets and notices concerning the implementation of Standard Offer Service for residential customers, Docket Nos. 2006-314, 2006-557, and 2006-411 (July-November 2006). [Default service policies]


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Testimony before the House Least Cost Power Procurement Committee, Illinois General Assembly, on HB 1510, on behalf of AARP [March 22, 2007]
Rebuttal and Surrebuttal Testimony on behalf of Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Petition of Duquesne Light Co. for Approval of Default Service Plan for January 1, 2008 to December 31, 2010, Docket No. P-00072247 [April 2007] [Default Service policies]

Comments and Reply Comments on behalf of AARP New Jersey before the Board of Public Utilities BGS Working Group concerning BGS procurement policies and proposed demand response program, (March-May 2007) [Default Service policies]

Comments on behalf of AARP New Jersey to the New Jersey BPU Staff on draft proposed USF regulations (May 2007) [Low income program design and implementation]

Alexander, Barbara, Smart Meters, Real Time Pricing, And Demand Response Programs: Implications For Low Income Electric Customers (May 2007)

Direct and Surrebuttal Testimony on behalf of Maine Office of Public Advocate before the Maine Public Utilities Commission, Re: Joint Application for Approvals Related to Verizon’s Transfer of Property and Customer Relations to Company to be Merged with and into FairPoint Communications, Inc., Docket 2007-67 (July and September 2007) [Service Quality and Customer Service Conditions for Merger]

Testimony on behalf of AARP Montana before the Montana Public Service Commission, In the Matter of Montana Dakota Utilities Co., Public Service Commission Investigation and Direction on Electric and Natural Gas Universal System Benefits, Docket No. D2006.1.2 (July 30, 2007) [Design and funding for low income programs]


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Comments on behalf of AARP District of Columbia before the D.C. Public Service Commission, In the Matter of The Application Of Potomac Electric Power Co. For Authorization to Establish A Demand Side Management Surcharge and an Advanced Metering Infrastructure Surcharge And to Establish a DSM Collaborative and an AMI Advisory Group, Formal Case No. 1056 (August 10, September 10, November 13, 2007, April 2008) [Default Service policies; AMI deployment]

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Direct Testimony on behalf of Local 223, UWUA before the Michigan Public Service Commission, In the Matter of the application of Detroit Edison Co. for authority to increase its rates, Case No. U-15244 (July 2008) [Customer Service standards; Advanced Metering proposal]


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Reply, Surrebuttal, and Supplemental Testimony on behalf of Maryland Office of People’s Counsel before the Maryland Public Service Commission, In the Matter of Appropriate Forms of Regulating Telephone Companies, Case No. 9133 (August and October 2008; July 2009) [service quality performance conditions for alternative rate regulation of Verizon-MD]

Comments on behalf of AARP before the Idaho Public Utilities Commission, In the Matter of the Application Of Idaho Power Co. for a Certificate of Public Convenience and Necessity to Install Advanced Metering Infrastructure (“AMI”) Technology Throughout its Service Territory, Case No. IPC-E-08-16 (December 2008) [Smart Meter costs and benefits]
Direct and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission, Joint Application for the Authority and Necessary Certificates of Public Convenience to Transfer all of the Issued and Outstanding Shares of Capital Stock of the Peoples Natural Gas Co. d/b/a Dominion Peoples, Currently owned by Dominion Resources, Inc. to Peoples Hope Gas Companies LLC, an Indirect Subsidiary of Babcock & Brown Infrastructure Fund North America LP, and to Approve the Resulting Change in Control of the Peoples Natural Gas Co. d/b/a Dominion Peoples, Docket No. A-2008-2063737 (December 2008 and July 2009) [Proposed conditions relating to Service Quality and Universal Service programs]

Rebuttal Testimony on behalf of Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Petition of PPL Electric Utilities Corp. for Approval of a Default Service Program and Procurement Plan, Docket No. P-2008-2063009 (January 2009) [Retail Market Programs]

Rebuttal Testimony on behalf of Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Petition of PECO Energy Co. for Approval of its Default Service Program and Rate Mitigation Plan, Docket No. P-2008-2062739 (January 2009) [Retail Market Programs]


Co-Author of Comments on behalf of The Utility Reform Network (TURN) before the California Public Utilities Commission, Order Instituting Rulemaking to consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission’s own Motion to Actively Guide Policy in California’s Development of a Smart Grid System, Docket R. 08-12-009 (2009 and 2010) [Smart Grid policies]

Direct and Rebuttal Testimony on behalf of the Attorney General of the Commonwealth of Massachusetts before the Department of Public Utilities, Investigation by the Department of Public Utilities on its Own Motion into the Preparation and Response on Fitchburg Gas & Electric Co. d/b/a Unitil to the December 12, 2008 Winter Storm, D.P.U. 09-01-A (March and April 2009) [Investigation of storm restoration practices]

Testimony on behalf of UWUA Local 132 before the California Public Utilities Commission, Southern California Gas Co. Advanced Metering Infrastructure, Docket No. A.08-09-023 (April 2009) [Advanced metering deployment]

Direct and Rebuttal Testimony on behalf of the Delaware Public Service Commission Staff before the Delaware Public Service Commission, In the Matter of the Investigation into the Business and Marketing Practices of Horizon Power and Light, LLC, Docket No. 355-08 (April and June 2009) [Investigation into marketing and contract practices of licensed electricity supplier]

Testimony on behalf of AARP before the District of Columbia Public Service Commission, In the Matter of the Application of Potomac Electric Power Co. for Authority to Establish a Demand Side Management Surcharge and an Advanced Metering Infrastructure Surcharge and to Establish a DSM Collaborative and an AMI Advisory Group, Formal Case No. 1056 (June 2009) [Advanced Metering proposal]

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Direct Testimony on behalf of AARP before the Maryland Public Service Commission, Application of Baltimore Gas and Electric Company for Authorization to Deploy A Smart Grid Initiative and to Establish A Tracker Mechanism For the Recovery of Costs, Case No. 9208 (October 2009) [Advanced Metering deployment costs and benefits; dynamic pricing proposals]

Direct Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania PUC, Petition of PPL Electric Utilities Corporation Requesting Approval of a Voluntary Purchase of Accounts Receivables Program and Merchant Function Charge, Docket No. P-2009-2129502 (October 2009) [Retail competition policies: purchase of receivables programs]

Direct and Cross Reply Testimony on behalf of The Energy Project (Washington) before the Washington Utilities and Transportation Commission, In the Matter of the Petition of Avista Corporation, D/B/A Avista Utilities, For an Order Authorizing Implementation of a Natural Gas Decoupling Mechanism and to Record Accounting Entries Associated With the Mechanism. Docket No. UG-060518 (consolidated) (August and September 2009) [Natural gas decoupling proposal; impact on low income customers]

Direct Testimony on behalf of the Attorney General of the Commonwealth of Massachusetts before the Massachusetts Department of Public Utilities, NSTAR Electric Co. Smart Grid Pilot Proposal, Docket No. 09-33 (November 2009) [Advanced Metering pilot design]

Direct Testimony on behalf of Public Counsel Section, Attorney General of Washington, before the Washington Utilities and Transportation Commission, In the Matter of the Joint Application of Verizon Communications Inc. and Frontier Communications Corporation For an Order Declining to Assert Jurisdiction Over, or, in the Alternative, Approving the Indirect Transfer of Control of Verizon Northwest Inc., Docket No. UT-090842 (November 2009) [Service Quality Conditions]

Rebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of Duquesne Light Company for Approval of Default Service Plan for the Period January 1, 2011 through May 31, 201, Docket No. P-2009-2135500 (January 2010) [Retail Competition policies]


Direct and Surrebuttal Testimony on behalf of Maine Office of Consumer Advocate, before the Maine PUC, Central Maine Power Co., Petition Requesting That the Commission Issue an Order to Modify CMP's Service Quality Indicators by Eliminating Or Changing the Current MPUC Complaint Ratio and to Waive Penalties, Docket No. 2009-217 (February and July 2010) [Evaluation of Request for Waiver of Penalty]
Direct, Rebuttal and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of UGI Utilities, Inc.—Gas Division for Approval to Voluntarily Implement a Purchase of Receivables Program and Merchant Function Charge And Of a Potential Affiliated Interest Agreement Between UGI Utilities, Inc.—Gas Division And Affiliated Entities, Docket No. P-2009-2145498 (April and May 2010) [Purchase of Receivables Program Conditions]

Direct Testimony on behalf of the Massachusetts Attorney General, before the Massachusetts Department of Public Utilities, Western Massachusetts Electric Co. Smart Grid Pilot Proposal, Docket D.P.U. 09-34 (May 2010) [Smart Meter and Pricing Pilot evaluation and conditions]

Direct, Rebuttal and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of PECO Energy Company for Approval of its Natural Gas Supplier Purchase of Receivables Program, Docket No. P-2009-2143588 (March, April, and May 2010) [Purchase of Receivables Program Conditions]

Direct and Rebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of Columbia Gas of Pennsylvania, Inc. for Approval to Voluntarily Implement a Modified Purchase of Receivables Program Pursuant to SEARCH Filing Requirement and Interim Purchase of Receivables Guidelines, Docket No. P-2009-2099333 (February and March 2010) [Purchase of Receivables Program Conditions]

Direct, Rebuttal and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of PECO Energy Company for Approval of its Revised Electric Purchase of Receivables Program, Docket No. P-2009-2143607 (February and March 2010) [Purchase of Receivables Program Conditions]


Direct Testimony on behalf of the Pennsylvania Office of Consumer Advocate, before the Pennsylvania PUC, Petition of T.W. Phillips Gas and Oil Co. for Approval of Purchase of Receivables Program, Docket No. P-2009-2099192 (August 2010) [Purchase of Receivables Program Conditions]

Direct Testimony on behalf of AARP, before the Maryland PSC, Application of Baltimore Gas and Electric Company for Authorization to Deploy a Smart Grid Initiative and to Establish a Tracker Mechanism and For the Recovery of Costs, [Petition for Rehearing] Case No. 9208 (August 2010) [Smart Meter Costs and Benefits; Consumer Protections]


Direct Testimony on behalf of Consumer Advocate Division before the Public Service Commission of West Virginia, Monongahela Power Co. and the Potomac Edison Co., both doing business as Allegheny Power Co., and FirstEnergy Corp. and Trans-Allegheny Interstate Line, Case No. 10-0713-E-PC (October 14, 2010) [Merger: Service Quality, Customer Service, and Universal Service Program Conditions]
Rebuttal Testimony on behalf of the Office of People’s Counsel, before the Maryland Public Service Commission, In the Matter of the Merger of FirstEnergy Corp. and Allegheny Energy, Case No. 9233 (October 22, 2010) [Default Service Policies]

Direct Testimony on behalf of Consumer Advocate Division before the Public Service Commission of West Virginia, Appalachian Power Co. and Wheeling Power Co., Case No. 10-0699-E-42T (November 10, 2010) [Base Rate Case: reforms to ameliorate rate impacts on low income customers; remote disconnection tariff proposal]

Direct and Rebuttal Testimony on behalf of AARP, before the Illinois Commerce Commission, Commonwealth Edison Co. Petition for Approval of an Alternative Rate Regulation Plan, Docket No. 10-0257 (November and December 2010) [Analysis of consumer protections and risks in alternative rate plan]


Expert Report of Barbara Alexander on Behalf of Plaintiffs, Benjamin Berger, individually and on behalf of all other similarly situated and the general public, vs. The Home Depot USA, Inc, U.S. District Court, Central District of California, Western Division, Case SACV 10-678 SJO (PLAX), March 1, 2011 (Negative Option Sales Method for “tool rental protection”)

Direct Testimony on behalf of the Office of Consumer Advocate before the Pennsylvania Public Utility Commission, Joint Application for all the Authority and the Necessary Certificates of Public Convenience to Transfer All of the Issued and Outstanding Shares of Capital Stock of T.W. Phillips Gas and Oil Co., currently owned by TWP, Inc., to LDC Holdings II LLC, an indirect Subsidiary of SteelRiver Infrastructure Fund North America LP, and to Approve the Resulting Change in Control of T.W. Phillips Gas and Oil Co., Docket No. A-2010-2210326 (March 31, 2011) [Service Quality, Customer Service, and Universal Service Program Conditions]

Comments on behalf of AARP before the Public Service Commission of the District of Columbia, Pepco’s Proposed AMI Consumer Education Plan, Formal Case No. 1056 (March 30, 2011)

Comments on behalf of AARP before the Public Service Commission of the District of Columbia, Notice of Proposed Rulemaking, Reliability of Service, Formal Case No. 766, 982, 991, and 1002 (April 11, 2011) [Restoration of Service for Major Outage Events]

Direct and Rebuttal testimony on behalf of the Attorney General of Arkansas before the Arkansas Public Service Commission, In The Matter Of The Application Of Oklahoma Gas And Electric Company For Approval Of The Deployment Of Smart Grid Technology In Arkansas And Authorization Of A Recovery Rider And Regulatory Asset, Docket No. 10-109-U (May and June 2011) (Smart Grid costs and benefits; cost recovery; conditions)


Direct Testimony on behalf of AARP before the Maryland Public Service Commission, In the Matter of Potomac Electric Power Co and Delmarva Power and Light Co. Request for the Deployment of Advanced Meter Infrastructure, Case No. 9207 (June 16, 2011) (Analysis of amended AMI business case; costs and benefits; conditions)

Direct and Reply Comments on behalf of Citizens Utility Board of Oregon before the Public Utility Commission of Oregon, Docket No. UM 1415 (September and October 2011) (Rate Design; time-varying rates)

Direct Testimony on behalf of AARP before the Oklahoma Corporation Commission, In The Matter Of The Application of Oklahoma Gas And Electric Company, For An Order Of The Commission Authorizing Applicant To Modify Its Rates, Charges, And Tariffs For Retail Electric Service In Oklahoma, Cause No. PUD 201100087 (November 9, 2011 and November 16, 2011) (revenue requirement and rate design)


Direct Testimony on behalf of AARP before the Public Service Commission of the District of Columbia, In the Matter of The Application for Potomac Electric Power Co. for Authority to Increase Existing Retail Rates and Charges for Electric Distribution Service, Formal Case No. 1087 (December 14, 2011) (AMI cost recovery, Reliability Infrastructure Mechanism surcharge, customer care costs)

Direct Testimony on behalf of AARP and the People of the State of Illinois before the Illinois Commerce Commission, Commonwealth Edison Company, Approval of Multi-Year Performance Metrics Pursuant to Section 16-108(f) and (f-5) of the Public Utilities Act, Docket No. 11-0772 (January 30, 2012) (Performance Metrics relating to AMI deployment; remote disconnection of service)


Direct Testimony on behalf of the Massachusetts Office of the Attorney General before the Massachusetts Department of Public Utilities, Western Massachusetts Electric Co. 2011 Winter Storm Investigation, Docket No. D.P.U. 11-119-C (March 9, 2012) (Analysis of communications with customers and state and local officials in storm restoration)

Direct Testimony on behalf of AARP and the People of the State of Illinois before the Illinois Commerce Commission, Ameren Utilities, Approval of Multi-Year Performance Metrics Pursuant to Section 16-108(f) and (f-5) of the Public Utilities Act, Docket No. 12-0089 (March 19, 2012) (Performance Metrics for AMI Deployment; remote disconnection of service)

Direct and Rebuttal Testimony on behalf of the Massachusetts Office of the Attorney General before the Massachusetts Department of Public Utilities, National Grid 2012 Smart Grid Pilot Proposal, Docket No. D.P.U. 11-129 (April and May 2012) [Analysis of proposed smart meter and dynamic pricing pilot proposal]

Comments on behalf of AARP before the Maryland Public Service Commission, Dynamic Pricing Implementation Working Group Report, Case Nos. 9207 and 9208 (May 14, 2012) [Design and implementation of Peak Time Rebate programs for Pepco and BGE]

Comments on behalf of AARP before the Public Service Commission of the District of Columbia, Notice of Proposed Rulemaking, Major Event Outage Restoration Plans, Formal Case No. 766, 982, 991, and 1002 (May 29, 2012) [Regulatory reporting requirements for major event outage restoration plans]

Direct Testimony on behalf of The Utility Reform Network (TURN) before the Public Utilities Commission of the State of California, In the Matter of the Application of Pacific Gas and Electric Company Smart Grid Pilot Deployment Project, Application 11-11-017 (May 16, 2012) [Analysis of proposed customer education pilot]

Direct, Rebuttal, and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission, Petition of PECO Energy Co. for Approval of its Default Service Program, Docket No. P-2012-2283641 (April and May 2012) [Retail Opt-In Auction and Customer Referral Programs]

Direct, Rebuttal, and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission, Petition of PPL Electric Utilities, Inc. for Approval of a Default Service Program and Procurement Plan for the Period June 1, 2013 through May 31, 2015, Docket No. P-2012-2302074 (July and August 2012) [Retail Opt-In Auction and Customer Referral Programs]

Direct, Rebuttal, and Surrebuttal Testimony on behalf of the Pennsylvania Office of Consumer Advocate before the Pennsylvania Public Utility Commission, Petition of Duquesne Light Co. for Approval of Default Service Plan for the Period June 1, 2013 through May 31, 2015, Docket No. P-2012-2301664 (July, August, and September 2012) [Retail Opt-In Auction and Customer Referral Programs]


Direct Testimony on behalf of the Public Utility Law Project (New York) before the New York State Public Service Commission, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation For Electric and Gas Service, Case No. 12-E-0201 and 12-G-0202 (August 31, 2012) [Rate case: low income programs, credit and collection policies, service quality]

Comments on behalf of AARP before the Maryland Public Service Commission, In the Matter of the Electric Service Interruptions in the State of Maryland due to the June 29, 2012 Derecho Storm, Case No. 9298 (September 10, 2012) [Analysis of customer communications in major storm restoration for Pepco and BGE]

Comments on behalf of the Ohio Partners for Affordable Energy before the Ohio Public Utility Commission, In the Matter of the Commission’s Review of its Rules for Competitive Retail Natural gas Service, Case No. 12-925-GA-ORD, and In the Matter of the Commission’s Review of its Rules for Competitive Retail Electric Service, Case No. 12-1924-EL-ORD (January 2013) [retail market regulations, consumer protections, licensing, disclosures]

Direct and Cross Rebuttal Testimony on behalf of Texas Legal Services Center and Texas Ratepayers’ Organization to Save Energy before the Public Utility Commission of Texas, Petition by Homeowners United for Rate Fairness to Review Austin Rate Ordinance No. 20120607-055, PUC Docket No. 40627 (February 2013) [low income programs]

Testimony on behalf of AARP before the Connecticut Senate Finance Revenue and Bonding Committee in opposition to proposal for auction of electric customers to retail suppliers, SB 843 (March 4, 2013)

Comments and Reply Comments on behalf of AARP before the Ohio Public Utility Commission, In the Matter of the Commission’s Investigation of the Retail Electric Service Market, Case No. 12-3151-EL-COI (March and April 2013) [Retail market reforms, default service, and consumer protections]

Direct Testimony on behalf of the Government of the District of Columbia before the District of Columbia Public Service Commission, In the Matter of the Application of the Potomac Electric Power Co. for Authority to Increase Existing Retail Rates and Charges for Electric Distribution Service, Formal Case No. 1103 (August 2013) [low income discount program]

Comments and Reply Comments on behalf of AARP before the Arizona Corporation Commission, Generic, In The Matter of The Commission’s Inquiry Into Retail Electric Competition, Docket No. E-00000W-13-0135 (July and August 2013) [Implementation of retail electric competition]

Comments on behalf of AARP before the Delaware Public Service Commission, Rulemaking for Retail Electric Competition, PSC Regulation Docket No. 49 (September 2013) [Consumer protection regulations for retail electric competition]
Direct Testimony on behalf of AARP before the New Jersey Board of Public Service, In the Matter of the Petition of Public Service Electric and Gas Co. for Approval of the Energy Strong Program, Docket No. EO13020155 and GO13020156 (October 2013) [reliability programs; cost recovery mechanism]
Presentations and Training Programs:

- Presentation, Smart Grid Future, Brookings Institute, Washington, DC [July 2010]
- Participant, Fair Pricing Conference, Rutgers Business School, New Jersey [April 2010]
- Presentation on Smart Metering, National Regulatory Conference, Williamsburg, VA [May 2010]
- Presentation on Smart Metering, Energy Bar Association Annual Meeting, Washington, DC [November 2009]
- Presentation at Workshop on Smart Grid policies, California PUC [July 2009]
- National Energy Affordability and Energy Conference (NEAUC) Annual Conference
- NARUC
- NASUCA
- National Community Action Foundation’s Annual Energy and Community Economic Development Partnerships Conference
- Testimony and Presentations to State Legislatures: Virginia, New Jersey, Texas, Kentucky, Illinois, and Maine
- Training Programs for State Regulatory Commissions: Pennsylvania, Georgia, Kentucky, Illinois, New Jersey
- DOE-NARUC National Electricity Forum
- AIC Conference on Reliability of Electric Service
- Institute of Public Utilities, MSU (Camp NARUC) [Instructor 1996-2006]
- Training Programs on customer service and service quality regulation for international regulators (India and Brazil) on behalf of Regulatory Assistance Project
- Georgia Natural Gas Deregulation Task Force [December 2001]
- Mid Atlantic Assoc. of Regulatory Utility Commissioners [July 2003]
- Illinois Commerce Commission’s Post 2006 Initiative [April 2004]
- Delaware Public Service Commission’s Workshop on Standard Offer Service [August 2004]
Results of 2004 Survey on Electric Reliability and Service Quality

A Report to the NARUC Staff Subcommittee on Electric Reliability

Vivian Witkind Davis, Ph.D.

Associate Director

Davis.241@osu.edu

Nov. 15, 2004
Background and aegis of survey

- Bob Burns, Senior Institute Attorney, conducted the survey at the request of the NARUC Staff Subcommittee on Reliability
- Updates 2001 survey – one question was changed
- Survey was conducted between April and October 2004
- Forty-one states responded, one more than three years ago
- Survey is web-based
A lot has happened since the last survey

- A major blackout crippled the Northeastern United States and Canada Aug. 14, 2003
  - Joint U.S.-Canadian task force report
  - NERC report
- Hurricanes caused widespread outages in 2003 (and in 2004)
Areas covered by the survey

- Formal standards
- Use of IEEE guidelines
- Benchmarks for standards
- Tree trimming
- Outage reporting
- Power quality
- Service quality as a component of incentive ratemaking
Commissions that participated in the 2004 electric reliability survey

- Alabama
- Alaska
- Arkansas
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Louisiana
- Maine
- Massachusetts
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Virginia
- Washington
- West Virginia
- Wisconsin
Comparison of participants in 2001 and 2004

- 40 states participated in 2001 and 41 in 2004
  - No response '04: AZ, CA, HI, KY, MD, MI, NH, NV, VT, WY
  - If information was the same for 2001, a state which did not respond in 2001 could fill in the information in 2004
- Only states that participated in neither year are CA, NH and WY
Some states that reported new proceedings

- Oklahoma: rulemaking in 2004
- Delaware: interim standards through 2005
- Maryland: information supplied in the survey is based on working group conclusions; no order issued at time of the survey
- Virginia: requires reporting indices both inclusive and exclusive of impact of storms
Formal standards on reliability and service quality

- Reporting and monitoring: 24 states
- Performance standards: 21
- Penalties and/or rewards for meeting the standards: 15
- None of the above: 14
IEE P1366 trial use guide for electric power distribution indices

- Customer average interruption duration index (CAIDI): 21 states
- Customer average interruption frequency index (CAIFI): 2
- System average interruption duration index (SAIDI): 25
- System average interruption frequency index (SAIFI): 30
- Momentary average interruption frequency index (MAIFI):
IEEE 1366-2001 standard guide for power distribution reliability

- Yes: 16 states
- No: 24 states
Benchmarks for standards

- Nineteen states reported they have not set benchmarks for reliability standards: AL, AR, CT, GA, HI ('01), IN, IA, KS, MD, MT, NE, NV ('01), NC, SC, SD, TN, UT, WV, WI

- Most benchmarks are utility-specific: AK, CO, DE, FL, LA, ME, MN, MS, NY, ND, OH, OK, OR, PA, RI, TX, VT, WA, DC
Benchmarks, cont.

- Illinois and New Mexico reported uniform, statewide benchmarks
- Kansas said so far there is insufficient conforming data to establish meaningful standards
- Iowa has no benchmarks now, but the Board plans to gather five years of data and then review standards
- Typically, states using benchmarks rely on a historical average
Specific requirements for tree trimming

- Most states said they do not have specific requirements or cited adoption of National Electric Safety Code
- Iowa
  - Utilities required to have a vegetation management plan but not specific schedule or trimming methods
  - Board inspectors review adequacy of the plans in field inspections
- Oklahoma: Plan must be integrated part of reliability program
Outage reporting required

- Outage cause: 25 states
- Number of customers affected: 23
- Outage duration: 26
- Critical facilities or customers affected: 13
- Media coverage of outage: 3
- Other: 10
FOR STEADY STATE VOLTAGE
POWER QUALITY: ANSI C84.1-1977

NO: 24
YES: 13
Service quality incentives

- Seven states said “yes,” they do account for service quality in performance-based or incentive ratemaking mechanisms, with no change from 2001: CO, ME, MA, MS, NY, ND, and OR
- Two states that said “no” in 2001 said “yes” in 2004: IA and MN
Service quality added to incentives

- Maine
  - Specific service quality indices set based on historical performance
  - Penalties not yet directly refunded to electricity customers

- Minnesota
  - Rules do not spell out the details
  - Could be company earnings docked in rate case, fines, or customer refunds

- Iowa
  - Case by case, with everything from managerial efficiency reward to mandated requirements on investments
How to find the survey results

- Commissioners and staff, go to the members' center of the NRRI website [www.nrri.ohio-state.edu](http://www.nrri.ohio-state.edu)
- Click on the summary information or state by state information
- Select the year from which you want to see data (2001 or 2004)
- Click on the state you want and hit “submit”
- Enjoy
Next steps

- Summarize results of the survey on state electric reliability programs
- New project: the value of electric reliability from the customer’s point of view
  - We would like to proceed with an Internet survey
  - The methodology would be the same as our Consumer Utility Benchmark Survey (CUBS)
  - We will work with the Staff Subcommittee on Reliability to see if this project is desirable and feasible
Summary

- More state activity
- More use of performance standards
- More states, though still a minority, with penalties and/or rewards for meeting standards
Exhibit No. (BRA-3) Historical Service Quality Results for FBC
<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Billing Index</strong></td>
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<tr>
<td>Billing Completion - % of accounts billed within 2 days of billing date</td>
<td>99.48%</td>
<td>99.50%</td>
<td>99.41%</td>
<td>99.11%</td>
<td>99.99%</td>
<td>99.98%</td>
<td>99.99%</td>
<td>99.98%</td>
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<tr>
<td>Billing Accuracy - % of bills without a production issue</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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</tr>
<tr>
<td>Billing Timeliness - % of invoices delivered to Canada Post within 2 days of file creation</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td><strong>First Call Resolution</strong></td>
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<tr>
<td>2013</td>
<td>83.14%</td>
<td>83.15%</td>
<td>83.28%</td>
<td>84.01%</td>
<td>84.56%</td>
<td>82.63%</td>
<td>82.36%</td>
<td>85.69%</td>
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Exhibit No. (BRA-4) Historical Service Quality Results for FEI
## Performance Indicator

<table>
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<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1 Emergency Response Time (minutes) Time Dispatched to Site - Emergency - Blowing Gas</td>
<td>20.6</td>
<td>20.7</td>
<td>22.7</td>
<td>22.5</td>
<td>23.4</td>
<td>23.8</td>
<td>24.1</td>
</tr>
<tr>
<td>2 Speed of Answer – Emergency (% of calls answered within 30 sec.)</td>
<td>98.4%</td>
<td>98.3%</td>
<td>98.3%</td>
<td>99.2%</td>
<td>96.5%</td>
<td>96.5%</td>
<td>95.5%</td>
</tr>
<tr>
<td>3 Speed of Answer – Non-Emergency (% of calls answered within 30 sec.)</td>
<td>76.9%</td>
<td>73.8%</td>
<td>76.7%</td>
<td>77.2%</td>
<td>74.7%</td>
<td>76.2%</td>
<td>71.9%</td>
</tr>
<tr>
<td>4 Transmission Reportable Incidents</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td></td>
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<tr>
<td>5(a) Index of Customer Bills Not Meeting Criteria</td>
<td>2.30</td>
<td>7.53</td>
<td>3.75</td>
<td>2.40</td>
<td>0.24</td>
<td>3.01</td>
<td>1.64</td>
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<tr>
<td>5(b) Percent of Transportation Customer Bills Accurate</td>
<td>99.5%</td>
<td>94.3%</td>
<td>96.0%</td>
<td>99.9%</td>
<td>100.0%</td>
<td>99.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>6 Meter Exchange Appointment Activity</td>
<td>93.5%</td>
<td>94.5%</td>
<td>94.7%</td>
<td>94.2%</td>
<td>96.5%</td>
<td>96.5%</td>
<td>96.9%</td>
</tr>
<tr>
<td>7 Accuracy of Transportation Meter Measurement First Report</td>
<td>98.9%</td>
<td>96.2%</td>
<td>98.7%</td>
<td>97.6%</td>
<td>98.1%</td>
<td>98.4%</td>
<td>98.5%</td>
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<tr>
<td>8 Independent Customer Satisfaction Survey</td>
<td>79.3%</td>
<td>79.7%</td>
<td>80.1%</td>
<td>80.0%</td>
<td>79.3%</td>
<td>78.9%</td>
<td>8.3</td>
</tr>
<tr>
<td>9 Number of Customer Complaints to BCUC</td>
<td>130</td>
<td>90</td>
<td>58</td>
<td>26</td>
<td>3</td>
<td>3</td>
<td>1</td>
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<tr>
<td>10 Number of Prior Period Adjustments</td>
<td>23</td>
<td>15</td>
<td>21</td>
<td>14</td>
<td>19</td>
<td>5</td>
<td>27</td>
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## Directional Indicators

<table>
<thead>
<tr>
<th>Directional Indicator</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>1 Leaks per Kilometer of Distribution Mains</td>
<td>0.0024</td>
<td>0.0016</td>
<td>0.0031</td>
<td>0.0073</td>
<td>0.0083</td>
<td>0.0085</td>
<td></td>
</tr>
<tr>
<td>2 Number of Third Party Distribution System Incidents</td>
<td>1,545</td>
<td>1,574</td>
<td>1,322</td>
<td>1,246</td>
<td>1,125</td>
<td>947</td>
<td></td>
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