

June 3, 2005

Re: Docket No. DE 03-113
Public Service Company of New Hampshire
Investigation into Service Quality in Bedford

To all persons on the Service List:

The Commission has concluded its investigation in the above-referenced docket. The purpose of this letter is to advise the Town of Bedford, Public Service Company of New Hampshire (PSNH) and others interested in the docket of the outcome of the investigation.

The Commission has found no evidence of systemic safety or reliability problems on the PSNH electric system in Bedford. However, the investigation did bring to light several subsidiary issues that merit further attention. First, communications between customers and PSNH customer service personnel regarding customer complaints related to voltage variations or service interruptions appear to have been hampered by the lack of a clear and consistent set of terms and definitions. Second, when investigating customer complaints related to voltage variations or service interruptions, there is no systematic process in place to coordinate the actions of PSNH personnel and electricians for customers to readily determine whether a problem is on the company side or the customer side of the meter. Third, the widespread use of more technologically sophisticated electronic devices by customers suggests that a closer look should be taken at existing voltage standards. Fourth, recordkeeping and reporting by PSNH regarding complaints related to voltage variations and service interruptions should be updated. These issues will be addressed through a separate proceeding regarding a pilot power quality improvement team program and through the pending rulemaking docket on electric service as discussed below.

I. Background Summary

Pursuant to RSA 365:5, the Commission opened this docket in 2003 for the purpose of conducting an investigation of the quality of electric service being provided by PSNH to its customers in Bedford. The Commission first employed the services of Vantage Consulting, Inc. to perform an investigation. The Vantage report was filed on August 5, 2003. This report concluded that: "No cause for concern regarding the safety or adequacy of power provided by PSNH was identified during this inquiry."

Following the receipt of written comments from PSNH, an informal citizens group known as Bedford Power Survey and PSNH customers Brian Lamy and Ken C. Greenwood, both of Bedford, the Commission determined, on October 31, 2003, that it would issue a Request for Proposals (RFP) and engage the services of a second consulting firm to critique the Vantage Report and conduct additional investigation of the quality of service being provided by PSNH in Bedford.

The Commission requested certain additional information from PSNH on November 26, 2003. The Office of Consumer Advocate (OCA) entered an appearance on behalf of residential ratepayers on December 1, 2003. PSNH responded to the information request on December 10, 2003.

The OCA filed a written request on January 9, 2004, that the Commission conduct an evening public hearing in Bedford to give PSNH customers an opportunity to obtain further information as well as hear explanatory comments from PSNH. State Representative Ken Hawkins of Bedford filed a letter on January 23, 2004, urging the Commission to grant the OCA's request. The Commission responded to these requests on January 27, 2004, indicating that when the process of choosing the new consultant was completed the Commission would schedule an evening work session.

The Commission hired the consulting firm of Dufresne-Henry to conduct the second phase of the investigation. The Staff of the Commission, along with representatives of Dufresne-Henry, conducted an informal working session, open to the public, in Bedford on the evening of March 17, 2004. The meeting was transcribed and a copy of the transcript filed with the Commission. The meeting was also broadcast on Bedford's local access cable TV channel.

Dufresne-Henry submitted its written report on September 1, 2004, and gave a public presentation of the report in Bedford on the evening of September 29, 2004. On October 26, 2004, Bedford Town Manager Keith Hickey filed a letter indicating that the municipality was in the process of forming a subcommittee to address concerns about electric service in Bedford. Accordingly, Mr. Hickey asked the Commission to await the formation and organization of that group prior to fixing a deadline for the receipt of written comments on the Dufresne-Henry report. By letter on December 1, 2004, the Commission established January 31, 2005, as the deadline for such comments.

The OCA, the Town of Bedford, a number of PSNH customers working together and PSNH filed comments. In light of the comments, the Commission transmitted a request for certain additional information from Dufresne-Henry on April 5, 2005. Dufresne-Henry filed a response on April 25, 2005.

II. Summary of the Dufresne-Henry Report

In its report, Dufresne-Henry indicated that it conducted its work by taking the following steps: (1) attending the March 17, 2005 public work session, (2) reviewing the Vantage Report, PSNH's response to the Vantage Report and the customer responses to the Vantage Report, (3) reviewing other materials filed with the Commission in this docket, including PSNH's data responses and the information submitted by the Bedford

Power Survey, (4) requesting and receiving certain additional information from PSNH, and (5) conducting a field investigation.

Dufresne-Henry reviewed customer complaint data covering the five-year period from January 1999 through December 2003. Sources of the complaint data included quarterly Form E-1 voltage complaint reports filed by PSNH with the Commission, responses to a survey conducted by the Bedford Power Survey, miscellaneous communications from Bedford residents, customer comment sheets from the Vantage Report and customer comment forms from the Commission's Consumer Affairs Department. From this data, Dufresne-Henry compiled a detailed schedule of customer concerns, which it appended to the firm's report. The consultants also developed a map of electrical distribution circuits in Bedford. Additional schedules appended to the report describe recloser activity, tree trimming, capacitor banks, circuit conductors, circuit upgrades and transfers, monitoring locations and voltage regulators.

The executive summary of the Dufresne-Henry report states that, based on its monitoring, that "PSNH maintains the customer voltage levels within NHPUC requirements." The executive summary further noted that "[v]oltage measurements within a customer's electrical system indicated short term voltage sags caused by the operation of different types of customer equipment." The consultants made five specific recommendations: (Recommendation No. 1) that PSNH take ground resistance readings on a periodic basis to verify grounding integrity on its distribution circuits, investigating and remediating thereafter as necessary, (Recommendation No. 2) that PSNH periodically review the questions used by Company employees to obtain information from customers about problems and revise the questions so that they cause PSNH to obtain specific data that can be used to address power quality issues, (Recommendation No. 3) that the Commission review the voltage variation criteria in its rules, (Recommendation No. 4) that PSNH investigate a particular ground current reading obtained at a pole adjacent to Town Hall, and (Recommendation No. 5) that a "Power Quality Team" be developed.

In its report, Dufresne-Henry identified strengths and weaknesses in the Vantage Report but overall found the study "technically correct in presentation" and reached the same ultimate conclusion as Vantage. Also included in the Dufresne-Henry report is a detailed description of the distribution feeder arrangements and maintenance activities of PSNH in Bedford. The report noted that approximately 20 feeder circuits serve Bedford but that five such circuits (322X10, 322X12, 360X5, 3W1 and 3W2) serve most of the Town. Dufresne-Henry also described PSNH's maintenance activities in Bedford, with specific references to how PSNH responded to complaints reported on Form E-1, the infra-red/thermovision testing conducted by PSNH, the tree trimming program and ground testing.

The consultants identified and described the applicable rules and regulations governing voltages and service standards. Dufresne-Henry noted that New Hampshire utilities are currently required to maintain service within a range of 110 and 125 volts (for customers taking voltage at the secondary rather than the primary voltage) and concluded that "the power requirements of new electronic and computer equipment may require reevaluation of the voltage regulation standards."

Dufresne-Henry provided a description of the power monitoring it conducted in connection with the investigation. According to Dufresne-Henry, the major goal of this program was to determine if voltage variation on the distribution circuits was within the voltage limits set forth in the Commission's rules. According to Dufresne-Henry, monitoring and data collection on one 12.47 kv and one 34.5 kv distribution circuit would provide a sufficient sample. The consultants indicated that they scheduled the monitoring for late June and early July to cover the period when summer air conditioning loads were highest, given that Bedford and its surrounding area reach peak electric demand in summer rather than winter.

According to Dufresne-Henry, the purpose of the monitoring was to study the basic power quality issues related to PSNH operations up to the customer meter. The consultants reported that they chose to conduct additional sampling within customer electrical systems to determine if there were other conditions that could contribute to some of the reported concerns. Noting that some reported problems had been resolved to the satisfaction of the complainant, Dufresne-Henry also acknowledged that some complaints remained in which no solution was found. According to Dufresne-Henry, the consultants suspected that there were various problems beyond the meter location, within the person's home, for example, that are not within the utility's legal jurisdiction to resolve.

Dufresne-Henry conducted monitoring on two distribution feeder circuits: 3W2 and 322X10. The former operates at 12,470 volts and originates at PSNH's Meetinghouse Road substation, extending westward across Bedford to serve what Dufresne-Henry characterizes as a representative sample of customers. According to Dufresne-Henry, this circuit was the consultants' first choice for monitoring due to the number of concerns from customers served by this circuit and the availability of relevant pole ground test reports from March 2002.

Distribution circuit 322X10 operates at 34,500 volts and originates from a tap on PSNH's 322 transmission line, primarily serving residential customers in north central Bedford. According to Dufresne-Henry, it selected this circuit for monitoring because of the number of customer concerns related to this circuit and to determine whether there were any differences between PSNH's 12,470 and 34,500 volt systems.

According to the report, the objective of the monitoring effort was to determine how the voltage on the utility's primary circuit varied throughout the day as well as from day to day. The consultants said they accomplished this by installing a meter on the pole top with voltage sensing wires "directly connected to the adjacent to the transformer." Dufresne-Henry additionally sought to measure the voltage within customer electrical systems. According to the consultants, this would pinpoint voltage variations within individual buildings. Dufresne-Henry took meter readings on the 3W2 circuit between June 25, 2004, and July 1, 2004, at Bedford Town Hall, Mckelvie School, Rosewall Road and Greeley Hill Road. As result of this monitoring, Dufresne-Henry concluded that the voltage on this circuit remained within the limits of 110 to 125 volts as specified in the Commission's rules.

On the 322X10 circuit, the consultants did monitoring, between July 9, 2004, and July 14, 2004, at Donald Street, Riddlebrook Elementary School, Stonehenge Road, Rumford Lane and Spring Hill Road. With respect to this circuit, Dufresne-Henry concluded that voltage remained within the specified limits during the monitoring period.

The consultants undertook monitoring of voltage on a limited basis on certain customer premises. The monitoring took place at Bedford Town Hall (connected to Circuit 3W2) and Riddlebrook School (connected to Circuit 322X10). According to the consultants, they undertook this monitoring in public buildings “to avoid any appearance of favoritism or conflict of interest.” Although this monitoring did not involve private residences, Dufresne-Henry determined that the two buildings “are representative of changing electrical load conditions and demonstrate the utilization equipment impacts on the utility system voltage.”

With respect to the Town Hall, Dufresne-Henry concluded that “[v]oltage sags were measured inside the building and also observed by the meter on the pole. The sags were of very short duration and remained within the time frame of the NHPUC voltage limits. These instantaneous voltage dips have apparently existed in the past and we had no reports of any adverse impacts on building or office operations.” As to the Riddlebrook School, the consultants determined that the power supplied to the building was within the specified limits, there were no significant sags or dips observed and the internal voltage measurements paralleled the voltage observed on the utility pole. Noting that the monitoring at these two buildings yielded significantly different results, Dufresne-Henry indicated that both buildings still function without electricity-related problems

The “Conclusions” section of the Dufresne-Henry report states that the consultants “found the PSNH power distribution system to be comparable to that of similar utilities, except for the large number of feeder circuits serving the Town. The utility has a documented record of system maintenance activities and responsiveness to customer complaints. Not all reported problems have been resolved and additional actions will be required to meet this goal.”

The additional actions recommended by Dufresne-Henry involved considering the establishment of a “Power Quality Improvement Team”. In essence, this would involve a coordinated response to voltage complaints with a meeting on the customer’s premises among a power quality technician of the utility, the customer and an electrician selected by the customer. The purpose of such a gathering would be to investigate the source of any potential voltage problem, whether on the customer or utility side of the meter. The consultants concluded that the details of such a program are best left unresolved at this time.

III. Summary of Written Comments

A. Office of Consumer Advocate

In light of the lengthy history of complaints between PSNH and its Bedford customers and anecdotal evidence of PSNH’s non-responsiveness, the OCA encouraged

PSNH to implement the consultants' recommendations for improvement in customer service. The OCA further recommended that PSNH closely scrutinize its system of customer service and take all action necessary to ensure that it is consistent, reliable and responsive to the needs of its customers. Particularly, the OCA urged PSNH to "educate and empower its customer service representatives and customers, to help them understand the various components of electricity service and factors that may impact its quality."

The OCA also addressed two additional issues: what it characterized as "the limited scope of mandatory reporting of voltage complaints; and the need for review of the Commission's voltage range." According to the OCA, the rulemaking process would be a more appropriate context in which to address those questions.

B. Town of Bedford

The Town of Bedford commented that the restructuring of the electric industry amplified the need for a "single point of authority for electric power generation and distribution beyond the meter and inside the residential end-user premise." The Town characterized Dufresne-Henry's Power Quality Improvement Team proposal as a "very positive recommendation that should be endorsed and expanded to fully address residential concerns."

The Town noted that the Commission's rules for electric service (N.H. Code Admin. Rules Chapter 300) are currently in the process of repromulgation and that, in the context of those efforts, the duration for voltage variations outside the normal limits should be reduced to 1 to 2 minutes. The Town further recommended the establishment of an advisory group to improve the flow of information from the public to the Commission and electric utilities. According to the Town, the Dufresne-Henry report notes that complaints as reported on Form E-1 are not evenly distributed through Bedford but does not explain why this is so.

The Town characterized Dufresne-Henry's monitoring program as "inconclusive." According to the Town, "the monitoring time period was insufficient to fully determine the root cause of the problems experienced by residents." The Town proposed that existing codes, standards and protocols be reviewed and improved with attention to "present-day residential concerns and demand." According to the Town, the complaint process memorialized in Form E-1 needs to be improved, particularly by requiring all voltage complaints (as opposed to only those that resulting in voltage monitoring by the utility) be recorded there. The Town called for improvement in ground testing procedures and standards and alluded to the possibility of long-term damage to the electric distribution system as the result of rapid load growth. The Town also posed a series of questions.¹

¹ The issues raised by the questions, to the extent directly relevant to the conclusion of this proceeding, have been resolved. However, to the extent any questions may remain unanswered, if appropriate, they can be pursued in connection with the electric service rulemaking or the docket opened to undertake the Power Quality Improvement Team pilot program.

C. Individual Residential Customers

The Commission received a set of written comments jointly filed by a group of PSNH customers in Bedford: Brian D. Lamy, David Christopher, Joleen Johrde Walden, Ken C. Greenwood, Marcella MacDonald, Robert Blier, Robert Lamy, Karen Beaulieu, Nicholas Bonardi, Anne Guillemette and Norma Collins. The customers described the issues raised by the investigation as “far from resolved” and suggested that the Commission is obligated to take further action. The customers indicated that they “consulted with a few different experts” and considered their comments as reflecting expert opinions.

According to the joint comments, the customers “have spent much time and effort over the years trying to understand why we have lost so many appliances and suffered so many electrical problems.” The customers stated they have “become fearful for our safety and that of our families.” According to the customers, “[w]e have been very frustrated by PSNH’s failure to address this situation and we know there are many others who share this frustration.”

The customers complain that the Dufresne-Henry report lacks specificity and “contains no real analysis of what the problem is or could be and what the remedy is.” Other aspects of the report the customers characterize as flaws include the decision to conduct monitoring on only two distribution feeder circuits, the use of a threshold for harmonic distortion the customers consider too high, the failure to account for “badly distorted sign [sic] waves,” the lack of any analysis of PSNH’s capacitor banks, the absence of any discussion of current (as opposed to voltage) distortion, the lack of analysis of different ohm readings, the absence of transformer loading analysis, the lack of analysis of voltage spikes and variations, the failure “to correlate the monitoring in the system,” and the lack of specifics as to why customer equipment would cause voltage sags.

According to the customers, potential sources of problems with the electric distribution system in Bedford include “phase imbalance, stray voltage – neutral to earth stray voltage – ground rods – resistance, overloaded transformers – voltage drop, summer load growth, insufficient tree trimming, and the fact that utility and possibly customer service facilities have not been upgraded as customer load has been added.” The customers called for continued investigation of these issues and expressed a lack of faith in PSNH’s ability to undertake such work without direct Commission involvement and “meaningful participation by an expert who has the credentials and experience to help solve this problem.”

The customers characterized as “helpful” the Dufresne-Henry proposal for a Power Quality Improvement Team. However, the customers indicated that the team should be charged with a “system-wide review of the issues” they have raised and that PSNH should be required to bear all expenses associated with the team. The customers called for an “action plan” for the team as well as representation by all affected parties. According to the customers, the team should address compliance with the National

Electrical Code as well as the complaint process. They also called for the project to have a “clear scope and objective” as well as a “time frame for resolution.”²

D. Public Service Company of New Hampshire

PSNH praised the Dufresne-Henry report as a “well-documented, comprehensive examination” of the Company’s distribution system in Bedford. PSNH indicated that it supported the consultants’ recommendations with respect to ground resistance monitoring (Recommendation No. 1) and the review and standardization of queries made of customers with voltage complaints (Recommendation No. 2). With respect to permissible voltage variations under the Commission’s rules (Recommendation No. 3), PSNH indicated that it would work with the Commission and interested parties to explore the possible impacts. Likewise, PSNH indicated a willingness to work with the Commission to explore options for the kind of power quality program recommended by Dufresne-Henry (Recommendation No. 5). Finally, PSNH indicated that it agreed with the consultants’ characterizations of the technical results of their investigation (Recommendation No. 4) and that subsequent testing by PSNH of the ground current at a particular pole (located at Town Hall) revealed results that are more indicative of actual conditions than an anomalous result obtained by the consultants, potentially because poison ivy affected the location of the consultants’ monitoring.

E. Dufresne-Henry

At the request of the Commission, Dufresne-Henry filed a letter on April 25, 2005 responding to two specific queries. The first query asked why testing was only conducted for six days, as opposed to a month or longer. The second query asked what effect, if any, the existence of multiple circuit feeders has on system performance in Bedford.

With respect to the duration of the monitoring, Dufresne-Henry noted that prior to the actual testing the consultants conducted preliminary monitoring on an informal basis over a period of two months, primarily at the Bedford residence of an employee of the firm. The consultants reported no abnormal readings in connection with this informal monitoring beyond those caused by operation of typical customer equipment. With respect to the formal monitoring, Dufresne-Henry stated that the two monitoring periods covered representative daytime and nighttime load variations on both weekdays and weekends. According to the consultants, “[w]e did not feel that longer testing periods would yield any more significant data. Based on our unofficial and official monitoring periods, it is our professional opinion that the two reported monitoring periods were of

² In addition to participating in the submission of these comments, on May 9, 2005, Mr. Lamy submitted a document consisting of data obtained in connection with power quality monitoring independently conducted at his home. The data was transmitted to the Commission in the form of a report from Rx Monitoring Services. The report has pages of tables and graphs but does not contain specific information on the test methodology or test equipment, including software, used to produce the data. For this reason, the Commission is not able to determine its value at this time. The data will, however, be made available during the Power Quality Improvement Team Pilot Program to determine its usefulness to that proceeding.

adequate duration to determine the system voltage characteristics under varying system load conditions.”

Dufresne-Henry added a “caveat” to this discussion. According to the consultants, “while we did not identify any broad systemic problems, it does not eliminate the possibility that localized problems may exist and require individual diagnosis and correction at individual customer locations where voltage problems have been reported.”

Concerning the second query, Dufresne-Henry stated that multiple feeders from one or more substations within a community are typical. They speculated that the present configuration in Bedford is the result of “cumulative load growth in the town.” According to the consultants, there is an advantage to the use of multiple feeder circuits in Bedford: the division of the local customer base into smaller sections each fed by a separate feeder means that an outage on a single feeder would affect fewer customers and involve a smaller geographic area than otherwise. Dufresne-Henry stated that “multiple feeders do not, in themselves, present any adverse power quality issue and their use is a standard industry practice.”

IV. Commission Determinations

A. General Observations and Conclusions

New Hampshire law obligates each utility, including Public Service Company of New Hampshire, to provide “such service and facilities as shall be reasonably safe and adequate.” RSA 374:1. It is the duty of the Commission to keep informed as to all public utilities in the state with respect to the safety and adequacy of their service. RSA 374:4. It is in the discharge of this duty that the Commission has undertaken this detailed and extended investigation pursuant to RSA 365:5 of the electric distribution system owned and operated by PSNH in Bedford.

In particular, the Commission has carefully reviewed the report of its consultants and the various comments filed in response to that report. The Commission has paid particular attention to those comments that were critical of the consultants’ work and recommendations. In conducting its review, the Commission has been mindful of three distinct questions: whether the distribution system in Bedford is safe, from the standpoint of people and their property, whether the system is also reliable (i.e., consistently available) and whether the power is of acceptable quality, particularly given the demands of customer electric equipment in the digital age. Obviously, safety is the Commission’s paramount concern, but the Commission also expects PSNH to provide service that is both reliable and of acceptable quality.

The Commission believes that the investigation and monitoring conducted by Dufresne-Henry in Bedford was thorough and responsive to the task assigned to the consultants. As the consultants themselves noted, their purpose was not to resolve individual customer problems in Bedford, which may or may not be related to issues arising on the customers’ premises, but to determine whether there were any systemic

flaws in the distribution feeder circuits operated in Bedford by PSNH. The Commission is satisfied that the duration and breadth of this monitoring was appropriate to the task.

While the Commission is aware that the Town and some customers would have preferred a more extended monitoring program, the Commission believes Dufresne-Henry's justification for the monitoring period actually employed is satisfactory. This is because the consultants intentionally conducted their monitoring during the summer – a time of peak loads – and over a period calculated to capture the load profile as it varies by time of day and day of week.

No investigation can absolutely rule out the existence of any problems in an electric distribution system. Because electric distribution systems are dynamic in nature – i.e., constantly changing – no monitoring period, however long, can account for things that may occur outside the monitoring period. Nevertheless, the Commission concludes, based on the Dufresne-Henry report, that there is no evidence of systemic flaws in the design or operation of the electric system in Bedford and there is no basis for finding that the system is unsafe or unreliable.

The Commission has determined as well that there is no basis for employing a third consultant to conduct an additional study as some customers have suggested. However, as discussed below, the Power Quality Improvement Team Pilot Program being undertaken by the Commission may offer the additional advantage of identifying localized problems in Bedford to the extent they may exist.

B. Fire Protection Issues

Although it was not discussed in the Dufresne-Henry report nor addressed in any of the comments, the Commission wishes to take up a subject that has been the focus of concern by some in Bedford. Specifically, it is the Commission's understanding that some residents believe that Bedford has in recent years suffered a disproportionate number of fires caused by electrical malfunctions. Separate from the work of Dufresne-Henry, Commission Staff investigated this issue by consulting with the state Fire Marshall and the Bedford Fire Department. The Commission also reviewed data provided by PSNH, derived from information comparing Bedford to Manchester and obtained at municipal assessors' offices, the Census Bureau and the National Fire Incident Reporting System. Neither the state Fire Marshall nor the Bedford Fire Department were aware of any unusual incidence of electrical fires in the Bedford area. The PSNH data indicated that Manchester has six times Bedford's population, four times Bedford's structures and 14 times its electricity-related fires. In light of this information, the Commission has concluded that electrical malfunctions have not caused a disproportionate number of fires in Bedford.

C. Service Standards and Complaint Reporting

The Commission agrees with the various comments that have suggested the need to address service standards – particularly the allowable voltage variations in light of the demand of precision electric devices used by consumers – as well as the process by which PSNH and other electric utilities account to the Commission (via Form E-1) for

voltage complaints. The appropriate forum for addressing these issues is the rulemaking process. Following informal discussions in which many of the commenters here have participated, on May 6, 2005, the Commission approved an initial proposal for revised electric service rules (N.H. Code Admin. Rules Ch. Puc 300) and will soon schedule a public hearing. This addresses the recommendation in the Dufresne-Henry report (Recommendation No. 3) that the Commission consider reviewing its voltage regulation criteria.

D. Power Quality Improvement Team

The Commission shares the consensus view of those who have participated in this investigation that the Dufresne-Henry proposal for a Power Quality Improvement Team (Recommendation No. 5) merits further exploration. Specifically, the Commission believes that the information collected in this proceeding highlights the potential benefits associated with a process that would facilitate the coordinated investigation, on both the customer and company side of the meter, of an electrical complaint.

The Commission will issue an Order of Notice to the effect that the agency intends to establish a Power Quality Improvement Team Pilot Program. The scope of the program, its financing and its details are matters that will be resolved in the proceeding commenced by the Order of Notice. The Commission believes that the Pilot Program should include Bedford as the two power surveys that were undertaken were the result of locally reported circumstances and this experience forms a good foundation for the proceeding.

There is another particular issue identified by the Dufresne-Henry report (Recommendation No. 2) that the Commission believes can be addressed in connection with the Pilot Program. The Commission agrees that PSNH's efforts to address customer service quality concerns may have been hampered by the lack of a common understanding, as between utility employees and customers, of certain terms related to electric service. The Commission expects that this problem can be satisfactorily addressed as a preliminary step in the proceeding.

E. Additional Dufresne-Henry Recommendations

Dufresne-Henry made two other recommendations to which PSNH has assented. The first (identified in the report as Recommendation No. 1) involves taking ground resistance readings on a periodic basis to verify grounding integrity on distribution circuits, with investigation and remediation at specific locations when resistance values have increased significantly. The Commission expects PSNH to implement this recommendation.

The other recommendation (identified as Recommendation No. 4) involves investigating the cause of an anomalous ground current reading of 3.15 amps at a particular pole near Town Hall. According to PSNH, it has already done additional monitoring at the site, determined that the current is normal and concluded that the initial readings referenced in the Dufresne-Henry report were likely incorrect. The Commission accepts this response by PSNH to the recommendation.

V. Conclusion

The Commission wishes to make clear to concerned PSNH customers and public officials in Bedford, as well as the public at large, that following a rigorous investigation pursuant to RSA 365:5 the Commission has determined that there is no evidence of systemic safety and reliability problems in the electric distribution system owned and operated by PSNH in Bedford. This determination is based on the conclusions of two independent studies and our review of those studies. While the Commission is aware that the decisions contained in this letter will leave some customers dissatisfied, the facts demonstrate that each concern expressed to the Commission during the two years of the current investigation has been heard and seriously considered. Like the experts employed by the Commission to assist in this investigation, the Commission believes that the Power Quality Improvement Team Pilot Program to be explored in a new proceeding offers the best avenue for ultimately resolving concerns that some customers continue to hold. The Commission also believes that such an initiative can serve as a model for resolving future electric service issues as they may arise around the state.

In light of the foregoing, and as outlined above, the Commission is hereby closing the RSA 365:5 investigation conducted in this docket.

Very truly yours,

Debra A. Howland
Executive Director and Secretary