

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. M-100, Sub 163

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Investigation Regarding the Ability of North)	
Carolina's Electricity, Natural Gas, and)	PUBLIC STAFF'S
Water/Wastewater Systems to Operate)	COMMENTS
Reliably During Extreme Cold Weather)	

NOW COMES THE PUBLIC STAFF – North Carolina Utilities Commission (Public Staff), by and through its Executive Director, Christopher J. Ayers, and respectfully submits the following comments pursuant to the Commission's May 12, 2022 Order Requesting Comments in the above-referenced docket.

BACKGROUND

1. On January 26, 2022, the Commission issued an Order Opening Investigation, Scheduling Technical Conferences, Requiring Responses, and Allowing Comments and Reply Comments (Initial Order), concerning whether North Carolina's major electric, natural gas, water, and wastewater utilities have taken appropriate steps to assure reliable operations during extreme cold weather events. This investigation was prompted by the outages and rolling blackouts that occurred in Texas and other parts of the country in February of 2021 due to Winter Storm Uri.

2. The Initial Order made Dominion Energy North Carolina (DENC), Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC (collectively, Duke),

Piedmont Natural Gas Company, Inc. (Piedmont), Public Service Company of NC, Inc. (PSNC), Frontier Natural Gas Company (Frontier), Aqua North Carolina, Inc. (Aqua), and Carolina Water Service, Inc. of North Carolina (Carolina Water) (collectively, the Utilities) parties to this proceeding and ordered the Utilities to respond to questions from the Commission and from the Public Staff. In addition, the Commission ordered Aqua and Carolina Water to present their responses and answer Commission and Public Staff questions at a technical conference on March 15, 2022, and ordered DENC, Duke, Piedmont, PSNC, and Frontier to do the same at a technical conference on April 19, 2022.

3. The North Carolina Sustainable Energy Association (NCSEA), the Carolina Industrial Group for Fair Utility Rates I, II, and III (collectively, CIGFUR), the Fayetteville Public Works Commission (FPWC), the Carolina Utility Customers Association, Inc. (CUCA), and Carolinas Clean Energy Business Association (CCEBA) each filed petitions to intervene, which the Commission allowed.

4. At the technical conference on March 15, 2022, information was presented by Aqua representatives Shannon Becker and Joe Pearce and Carolina Water representatives Don Denton and Dana Hill.

5. On April 7, 2022, the Commission issued its Order Requiring Notice of Presenters at Technical Conference, directing DENC, Duke, Piedmont, PSNC, and Frontier to provide to the Commission a list of their presenters prior to the April 19, 2022 technical conference.

6. At the technical conference on April 19, 2022, information was presented by DENC representatives Jacqueline Vitello, J. Scott Gaskill, Mike Barmer, Wesley Walker, and Chris Dibble; Duke representatives Sammy Roberts and Joe McAllister; Frontier representatives Fred Steele and Taylor Younger; Piedmont representatives Bruce Barkley, Adam Long, Neil Moser, Jeff Patton, and Sarah Stabley; and PSNC representatives Bill Raynor, Scott Swindler, and Rose Jackson. Representatives from PJM Interconnection, Inc. (PJM), Matt LaRoque and Donnie Bielek, also responded to questions.

7. On May 12, 2022, the Commission issued its Order Requesting Comments, in which it directed the parties to address the question of whether the Commission's rules require revision in order to ensure reliable utility operations during extreme cold weather. In its Order Requesting Comments, the Commission observed that electric utilities are subject to Commission Rules R8-40 (Report of Impending Emergencies, Load Reductions and Service Interruptions in Bulk Electric Power Supply and Related Power Supply Facilities) and R8-41 (Filing of Emergency Load Reduction Plans and Emergency Procedures); that gas utilities are currently subject to Commission Rule R6-19.2 (Curtailment of Service); and that there are no analogous rules addressing emergency operations for water or wastewater utilities. The Commission directed the parties to file their comments on or before June 29, 2022, and their reply comments on or before July 27, 2022.

DISCUSSION

8. As explained in detail below, the Public Staff suggests that rule revisions are necessary for electric and gas utilities in order to ensure reliable utility operations during extreme cold weather, while an annual reporting requirement for water and wastewater utilities would address these utilities' preparedness for extreme cold weather.

A. Electric Utilities

9. Commission Rules R8-40, R8-40A, and R8-41 require revision in order to ensure reliable utility operations during extreme cold weather and to make these rules consistent with current practices.

10. More specifically, Rule R8-40 requires revision to ensure that the rule:

- a. captures events that occur outside of North Carolina but impact North Carolina ratepayers;
- b. includes load shed occurring on the distribution system in addition to the transmission system;
- c. requires reporting of any loss in service for 15 minutes or more of bulk electric power supply to aggregate loads in excess of 100,000 kilowatts (kW), as opposed to 200,000 kW, thereby eliminating the need for subsection (c) of the rule;

- d. requires the reporting of all utility electrical service equipment that has been impacted by any incident resulting in a service interruption, including a list and description of the affected equipment;
- e. allows the Public Staff to request reports in addition to those specified in subsection (b) during or after the period of interruption and restoration of service and to be provided with any further reports required by the Commission;
- f. requires, upon the initiation by the Commission of an investigation, the reporting of weather of an unusual nature, in addition to the reporting of operating conditions of an unusual nature, preceding the initiation of the incident; and
- g. requires, upon the initiation by the Commission of an investigation, the reporting of the capacity of the electrical service equipment in the area of load interruption (as opposed to merely the transmission lines) and, where available, the actual loading on the ancillary electrical service equipment at the time of the disturbance or, where not available, an estimate of the electrical service equipment loading at the time to the extent possible.

11. It is also timely that Commission Rule R8-40 be revised to reflect that electronic reporting methods should be used in place of telephonic or telegraphic reporting methods.

12. In addition, Commission Rule R8-40A requires revision to ensure that the rule is specific to distribution.

13. Revisions to Commission Rule R8-41 should include:

- a. clarification that the rule applies to electric power suppliers, as that term is defined in N.C. Gen. Stat. § 62-133.8(a)(3), rather than to “[a]ll certificated public utility companies, electric membership corporations and municipal corporations”;
- b. an addition that electric power suppliers’ file their emergency load reduction plans and emergency procedures in clean and red-lined copies;
- c. a requirement that electric power suppliers provide in their annual filing a summary of the identification methodology of the water, gas-electric, or other critical services dependencies and inter-dependencies that could threaten electric operations or customer service during extreme cold weather or other emergencies and whether there were any modifications to the methodology during the previous year; and
- d. a requirement that electric power suppliers identify in their annual filing all water or other critical service dependencies and inter-dependencies (in addition to gas-electric) that could threaten electric operations or customer service during extreme cold weather or other

emergencies, discuss those dependences and inter-dependencies with the appropriate service providers, establish a plan for managing the dependencies and inter-dependencies during extreme cold weather events and other emergencies, and verify that within the last 12 months, the electric power supplier had started its black start generators from a cold shutdown state during cold weather.

14. The Public Staff further suggests that the Commission address the appropriateness of imposing requirements such as those contained in the Public Staff's proposed revisions to Commission Rules R8-40, 40A, and 41 upon Western Carolina University and Appalachian State University d/b/a New River Light and Power Company in each company's next rate case.

15. The Public Staff's suggested revisions to Commission Rules R8-40, 40A, and 41 are attached as Appendices A, B, and C, respectively.

B. Gas Utilities

16. While Commission Rule R6-19.2 does not require revision to ensure reliable utility operations during extreme cold weather, Commission Rule R6-36 requires revision to ensure as such and to make this rule consistent with current practices.

17. More specifically, Commission Rule R6-36(b) should be revised to reflect with greater detail the type of information the utilities must keep in their records of interruptions of service on its system, such as:

- a. a clear description of any and all causes of the incident;
- b. how the incident was discovered;
- c. any operating conditions of an unusual nature preceding the initiation of the incident;
- d. a complete timeline of the incident inclusive of dates and times; and
- e. a map of any critical facilities affected, whether any known critical services were interrupted, and whether any mitigation measures were implemented.

18. Commission Rule R6-36(c) should be enhanced to clearly set forth the circumstances under which a utility is required to promptly notify the Commission of an interruption of service to a major portion of its system, the method by which the utility is to notify the Commission as such, and to add that the Public Staff shall be notified in addition to the Commission.

19. The Public Staff's suggested revisions to Commission Rule R6-36 are attached as Appendix D.

C. *Water and Wastewater Utilities*

20. There is no analogous rule for water and wastewater utilities to Commission Rules R8-40, 40A, and 41 and R6-36. In lieu of creating a new rule in order to ensure reliable utility operations during extreme cold weather, the Commission should order the water and wastewater utilities to verify on an annual

basis that they have contacted on no less than an annual basis all of their electric service providers to ensure that: (1) contact information is up to date (particularly for communication leading up to and during extreme weather events and outages); and (2) service addresses and critical infrastructure served have been accurately identified for prioritization of restoration. The Public Staff recommends that the Commission add a question requesting this information to the annual report forms maintained by the Commission.

CONCLUSION

WHEREFORE, the Public Staff requests that the Commission take these comments into consideration in reaching its decision in this proceeding.

Respectfully submitted this 29th day of June, 2022.

PUBLIC STAFF
Christopher J. Ayers
Executive Director

Lucy E. Edmondson
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Electronically submitted
/s/ Anne M. Keyworth

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CERTIFICATE OF SERVICE

I certify that I have served a copy of the foregoing Comments on all parties of record in accordance with Commission Rule R1-39, by United States mail, postage prepaid, first class; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 29th day of June, 2022.

Electronically submitted
/s/ Anne M. Keyworth

Rule R8-40. REPORT OF IMPENDING EMERGENCIES, LOAD REDUCTIONS AND SERVICE INTERRUPTIONS IN BULK ELECTRIC POWER SUPPLY AND RELATED POWER SUPPLY FACILITIES.

(a) Definitions. — For the purpose of this rule, a bulk electric power supply interruption shall be any interruption or loss of service to customers of any public electric utility, or electric membership corporation engaged in the generation or transmission of electric energy caused by or involving an outage of any electric generation, transmission line, transformer, or related unit or of electric facilities operating at a nominal voltage of 69 44 kV or higher. In determining the aggregate of loads which are interrupted, any load which is interrupted in accordance with the provisions of contracts permitting interruptions in service shall not be included. For purposes of this rule, outage refers to anywhere within the public electric utility's or electric membership corporation's balancing authority, regardless of jurisdiction.

(b) Telephonic-Electronic Reports. — Every public electric utility and electric membership corporation engaged in the generation or transmission of electric energy shall report promptly (Monday ~~—through~~ Friday, during regular work hours) to the Operations Division of the Commission Staff and the Electric-Energy Division of the Public Staff of the North Carolina Utilities Commission by telephone-electronic method such as email (telephonic means, including text messaging, may be used if other electronic methods are unavailable) any event as described below:

- (1) Any decision to issue a public request for reduction in use-of-electricityload.
- (2) Any action to reduce firm customer loads by reduction of voltage for reasons of maintaining adequacy of bulk electric power supply.
- (3) Any action to reduce firm customer loads by manual switching, operation of automatic loadshedding devices, or any other means for reasons of maintaining adequacy of bulk-electric-power-supplyutility service.
- (4) Any loss in service for 15 minutes or more of bulk electric power supply to aggregate loads in excess of 200100,000 kW.
- (5) Any outage in bulk power supply facilities, accident to system facilities, delays in construction, or substantial delays in making repairs following unscheduled outages ~~that are of consequence on a subregional or State basis~~, or which may constitute an unusual hazard to the reliability of electric service.

~~(c) Telegraphic or Telephonic Reports. — Every public electric utility and electric membership corporation engaged in the generation or transmission of electric energy shall report any event as described below to the Operations Division of the Commission Staff and Electric Division of the Public Staff of the North Carolina Utilities Commission by telephone or telegram.~~

~~These reports are to be made no later than the beginning of the Commission's next regular work day (Monday — Friday) after the interruption occurred. Events requiring a report are as follows:~~

~~Any loss in service for 15 minutes or more of bulk electric power supply to aggregate loads exceeding the lesser of 100,000 kW or half of the current annual system peak load,~~

and not required to be reported under subsection (b). See subsection (d) for information to be reported.

(d) Information to Be Reported. — The information supplied in the initial report should include, at a minimum: at least

- (1) ~~the~~ The approximate territory affected by the interruption;_i
- (2) ~~the~~ The time of occurrence;_i
- (3) ~~the~~ The duration, or an appraisal of the likely duration;_i
- (4) ~~if~~ If service is still interrupted, an estimate of the number of customers and amount of load involved;_i ~~and~~
- (5) ~~whether~~ Whether any known critical services were interrupted, such as hospitals, pumping stations, traffic control systems, etc., ~~were interrupted~~;_i
- (6) To the extent known or suspected, the report ~~desirably~~ will include a description of the initial incident resulting in the interruption; ~~and~~
- (7) A list and description of what other utility electrical service equipment that was impacted.

The Commission or its representative may require further reports during or after the period of interruption and restoration of service, such reports to be made by telephone or an electronic method such as email (telephonic means may be used if other electronic methods are unavailable), ~~telegraph or letter, as required~~. Such further reports shall also be provided to the Energy Division of the Public Staff.

(e) Special Investigations and Reports.

(1) If so directed by the Commission, an entity experiencing a condition, as described in subsections (b) ~~and (c)~~, shall submit a full report of the circumstances surrounding such occurrence and the conclusions the entity has drawn therefrom. The report shall be filed at such time subsequent to the submittal of the initial report by an electronic method such as email (telephonic means may be used if other electronic methods are unavailable) ~~telephone or telegraph as may be directed by the Commission~~.

(2) The report shall be prepared in such detail as may be appropriate to the severity and complexity of the incident experienced and should include an account understandable to the informed layman in addition to the following technical and other information:

- (i) The cause or causes of the incident clearly described, including the manner in which it was initiated.
- (ii) A description of any operating conditions or weather of an unusual nature preceding the initiation of the incident.
- (iii) If the incident was an interruption and geographically widespread, an enumeration of the sequence of events contributing to its spread.
- (iv) An account of the measures taken which prevented further spreading in the loss of service, e.g., manual or automatic load shedding, unit isolation, or system sectionalization. These actions and all chronicled events should become part of ~~keyed to~~ a record of the ~~coincident frequencies which~~ interruptions that have occurred in the utility's service area.

- (v) A description of the measures taken to restore service with particular an evaluation of the availability of ~~start-up power and~~ native generation or imports, and the ease or difficulty of restoration.
- (vi) A statement of the capacity of the ~~transmission lines~~ electrical service equipment into the area of load interruption, the generating capacity in operation in the area at the beginning of the disturbance, and the actual loading on the generating units and, where available, the loading on the ~~lines~~ ancillary electrical service equipment at that time. When actual loadings are not available, estimate the ~~line loadings~~ electrical service equipment loading at the time to the extent possible.
- (vii) A summary description of any equipment damage and the status of its repair.
- (viii) A description of the impact of any load reduction or interruption on people and industries in the affected area, ~~including a copy of materials in the printed news media indicative of the impact.~~
- (ix) Information on the steps taken, being taken, or planned by the utility, to prevent recurrence of conditions of a similar nature, to ease problems of service restoration, and to minimize impacts on the public and the customers of any future ~~conditions~~ outages of a similar nature.

(NCUC Docket No. E-100, Sub 8, 12/30/70; NCUC Docket No. M-100, Sub 75, 10/27/77; NCUC Docket No. M-100, Sub 140, 12/03/13.)

Rule R8-40. REPORT OF IMPENDING EMERGENCIES, LOAD REDUCTIONS AND SERVICE INTERRUPTIONS IN BULK ELECTRIC POWER SUPPLY AND RELATED POWER SUPPLY FACILITIES.

(a) Definitions. — For the purpose of this rule, a bulk electric power supply interruption shall be any interruption or loss of service to customers of any public electric utility, or electric membership corporation engaged in the generation or transmission of electric energy caused by or involving an outage of any electric generation, transmission line, transformer, or related facilities operating at a nominal voltage of 44 kV or higher. In determining the aggregate of loads which are interrupted, any load which is interrupted in accordance with the provisions of contracts permitting interruptions in service shall not be included. For purposes of this rule, outage refers to anywhere within the public electric utility's or electric membership corporation's balancing authority, regardless of jurisdiction.

(b) Electronic Reports. — Every public electric utility and electric membership corporation engaged in the generation or transmission of electric energy shall report promptly (Monday through Friday, during regular work hours) to the Operations Division of the Commission Staff and the Energy Division of the Public Staff of the North Carolina Utilities Commission by electronic method such as email (telephonic means, including text messaging, may be used if other electronic methods are unavailable) any event as described below:

- (1) Any decision to issue a public request for reduction in load.
- (2) Any action to reduce firm customer loads by reduction of voltage for reasons of maintaining adequacy of bulk electric power supply.
- (3) Any action to reduce firm customer loads by manual switching, operation of automatic loadshedding devices, or any other means for reasons of maintaining adequacy of utility service.
- (4) Any loss in service for 15 minutes or more of bulk electric power supply to aggregate loads in excess of 100,000 kW.
- (5) Any outage in bulk power supply facilities, accident to system facilities, delays in construction, or substantial delays in making repairs following unscheduled outages, or which may constitute an unusual hazard to the reliability of electric service.

(d) Information to Be Reported. — The information supplied in the initial report should include, at a minimum:

- (1) The approximate territory affected by the interruption;
- (2) The time of occurrence;
- (3) The duration, or an appraisal of the likely duration;
- (4) If service is still interrupted, an estimate of the number of customers and amount of load involved;
- (5) Whether any known critical services were interrupted, such as hospitals, pumping stations, traffic control systems, etc.;
- (6) To the extent known or suspected, the report will include a description of the initial incident resulting in the interruption; and

- (7) A list and description of what other utility electrical service equipment that was impacted.

The Commission or its representative may require further reports during or after the period of interruption and restoration of service, such reports to be made by an electronic method such as email (telephonic means may be used if other electronic methods are unavailable). Such further reports shall also be provided to the Energy Division of the Public Staff.

(e) Special Investigations and Reports.

(1) If so directed by the Commission, an entity experiencing a condition, as described in subsections (b), shall submit a full report of the circumstances surrounding such occurrence and the conclusions the entity has drawn therefrom. The report shall be filed at such time subsequent to the submittal of the initial report by an electronic method such as email (telephonic means may be used if other electronic methods are unavailable).

(2) The report shall be prepared in such detail as may be appropriate to the severity and complexity of the incident experienced and should include an account understandable to the informed layman in addition to the following technical and other information:

(i) The cause or causes of the incident clearly described, including the manner in which it was initiated.

(ii) A description of any operating conditions or weather of an unusual nature preceding the initiation of the incident.

(iii) If the incident was an interruption and geographically widespread, an enumeration of the sequence of events contributing to its spread.

(iv) An account of the measures taken which prevented further spreading in the loss of service, e.g., manual or automatic load shedding, unit isolation, or system sectionalization. These actions and all chronicled events should become part of a record of the interruptions that have occurred in the utility's service area.

(v) A description of the measures taken to restore service with an evaluation of the availability of native generation or imports, and the ease or difficulty of restoration.

(vi) A statement of the capacity of the electrical service equipment into the area of load interruption, the generating capacity in operation in the area at the beginning of the disturbance, and the actual loading on the generating units and, where available, the loading on the ancillary electrical service equipment at that time. When actual loadings are not available, estimate the electrical service equipment loading at the time to the extent possible.

(vii) A summary description of any equipment damage and the status of its repair.

(viii) A description of the impact of any load reduction or interruption on people and industries in the affected area.

(ix) Information on the steps taken, being taken, or planned by the utility, to prevent recurrence of conditions of a similar nature, to ease problems of

service restoration, and to minimize impacts on the public and the customers of any future outages of a similar nature.

(NCUC Docket No. E-100, Sub 8, 12/30/70; NCUC Docket No. M-100, Sub 75, 10/27/77; NCUC Docket No. M-100, Sub 140, 12/03/13.)

R8-40A. DISTRIBUTION SERVICE RELIABILITY INDEX REPORTING.

(a) Purpose. The purpose of this Rule is to establish standards for measuring and reporting distribution service reliability by electric public utilities that own and operate electric power distribution systems in North Carolina.

(b) Applicability. This Rule applies to Duke Energy Carolinas, LLC; Duke Energy Progress, Inc.; and Dominion Energy North Carolina-~~Power~~.

(c) Definitions. Unless otherwise provided for in this Rule, all terms used are as defined by the Institute of Electrical and Electronics Engineers (IEEE) in the most current IEEE Guide for Electric Power Distribution Reliability Indices 1366 (IEEE Standard 1366).

(d) Quarterly Reports.

(1) Each electric public utility shall report service reliability data to the Commission on a quarterly basis. The data reported shall be submitted within 30 days of the end of each quarter and shall reflect System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) (or equivalent designation) results for the preceding 12 months.

(2) SAIDI and SAIFI shall be calculated in accordance with IEEE Standard 1366.

(3) The reports shall include: SAIDI, with and without Major Event Days, and SAIFI, with and without Major Event Days.

(4) Interruptions reported shall include all sustained interruptions, except those for Major Event Days.

(NCUC Docket No. E-100, Sub 138, 11/25/13)

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(2) SAIDI and SAIFI shall be calculated in accordance with IEEE Standard 1366.

(3) The reports shall include: SAIDI, with and without Major Event Days, and SAIFI, with and without Major Event Days.

(4) Interruptions reported shall include all sustained interruptions, except those for Major Event Days.

(NCUC Docket No. E-100, Sub 138, 11/25/13)

Rule R8-41. FILING OF EMERGENCY LOAD REDUCTION PLANS AND EMERGENCY PROCEDURES.

(a) All ~~certificated public electric utility companies, electric membership corporations and municipal corporations~~electric power suppliers engaged in the generation, transmission or distribution of electric energy, shall design and adopt a set of load-reducing plans and emergency procedures that will provide judicious treatment to all affected customers in the event that emergency load reduction is required, provided that compliance with the requirements of this subsection by any municipal corporation shall be voluntary. Furthermore, the plans and procedures of each such electric power supplier or participating municipal corporation shall be coordinated with the plans and procedures of its natural gas suppliers, natural gas distribution utilities, gas pipelines, wholesale suppliers and/or wholesale-for-resale customers to the extent reasonably practicable.

(b) A detailed copy of emergency load reduction plans and emergency procedures in effect shall be filed by each electric power supplier ~~or municipal corporation in the office of~~with the Commission in Docket No. E-100, Sub 10A and shall be updated annually (clean and red-lined copies) not later than May 15. Each filing shall contain a certification that such plans and procedures have been coordinated with the electric utilities' power supplier's natural gas suppliers, natural gas distribution utilities, and gas pipelines, as well as wholesale power suppliers or wholesale-for-resale customers as applicable.

(c) In its annual filing, each electric ~~public utility and electric membership corporation~~power supplier shall include the following, along with a verified statement by an officer ~~stating that~~:

- (1) (1) A summary of the identification methodology of the water, gas-electric, or other critical services dependencies and inter-dependencies that could threaten electric operations or customer service during extreme cold weather or other emergencies and whether there were any modifications to the methodology during the previous year;
- (2) That the utility had~~electric power supplier~~ identified all the water, gas-electric, or other critical service dependencies and inter-dependencies that could threaten electric operations or customer service during extreme cold weather or other emergencies;
- (3) (2) That the electric ~~utility~~power supplier had discussed those dependencies and inter-dependencies with the appropriate ~~gas utility(ies) and pipeline(s)~~service providers;
- (4) (3) That the electric ~~utility~~power supplier had, in cooperation with ~~the gas utility(ies) and/or pipeline(s)~~other service providers, established a plan for managing the dependencies and inter-dependencies during extreme cold weather events and other emergencies; and
- (5) (4) That the electric ~~utility~~power supplier had within the last 12 months demonstrated its ability to start its black start generators from a cold shutdown state during cold weather.

(NCUC Docket No. E-100, Sub 10, 3/3/72; NCUC Docket No. M-100, Sub 135, 9/10/13.)

Rule R8-41. FILING OF EMERGENCY LOAD REDUCTION PLANS AND EMERGENCY PROCEDURES.

(a) All electric power suppliers engaged in the generation, transmission or distribution of electric energy, shall design and adopt a set of load-reducing plans and emergency procedures that will provide judicious treatment to all affected customers in the event that emergency load reduction is required, provided that compliance with the requirements of this subsection by any municipal corporation shall be voluntary. Furthermore, the plans and procedures of each such electric power supplier or participating municipal corporation shall be coordinated with the plans and procedures of its natural gas suppliers, natural gas distribution utilities, gas pipelines, wholesale suppliers and/or wholesale-for-resale customers to the extent reasonably practicable.

(b) A detailed copy of emergency load reduction plans and emergency procedures in effect shall be filed by each electric power supplier with the Commission in Docket No. E-100, Sub 10A and shall be updated annually (clean and red-lined copies) not later than May 15. Each filing shall contain a certification that such plans and procedures have been coordinated with the electric power supplier's natural gas suppliers, natural gas distribution utilities, and gas pipelines, as well as wholesale power suppliers or wholesale-for-resale customers as applicable.

(c) In its annual filing, each electric power supplier shall include the following, along with a verified statement by an officer:

- (1) A summary of the identification methodology of the water, gas-electric, or other critical services dependencies and inter-dependencies that could threaten electric operations or customer service during extreme cold weather or other emergencies and whether there were any modifications to the methodology during the previous year;
- (2) That the electric power supplier identified all the water, gas-electric, or other critical service dependencies and inter-dependencies that could threaten electric operations or customer service during extreme cold weather or other emergencies;
- (3) That the electric power supplier had discussed those dependencies and inter-dependencies with the appropriate service providers;
- (4) That the electric power supplier had, in cooperation with other service providers, established a plan for managing the dependencies and inter-dependencies during extreme cold weather events and other emergencies; and
- (5) That the electric power supplier had within the last 12 months demonstrated its ability to start its black start generators from a cold shutdown state during cold weather.

(NCUC Docket No. E-100, Sub 10, 3/3/72; NCUC Docket No. M-100, Sub 135, 9/10/13.)

Rule R6-36. INTERRUPTIONS OF SERVICE.

(a) Each utility, except where interruptions are permitted by tariff or contract, shall make reasonable efforts to avoid interruptions of service; but when interruptions occur, service shall be reestablished within the shortest time practicable, consistent with safety.

(b) Each utility shall keep records of interruptions of service on its system and shall make an analysis of the records for the purpose of determining steps to be taken to prevent recurrence of such interruptions. Such records should include the following concerning the interruptions:

- (1) Cause.—All causes of the incident clearly described, including how the incident was discovered.
- (2) Date and time.—A description of any operating conditions of an unusual nature preceding the initiation of the incident. This includes all natural gas utilities operating within the State of North Carolina under the jurisdiction of the North Carolina Utilities Commission and to intrastate and interstate natural gas companies having pipeline facilities located within North Carolina.
- (3) Duration.—A complete timeline of the incident, including relevant dates and times.
- (4) Location affected.—The duration of the interruption, or estimated duration if the incident is ongoing.
- (5) Number of customers affected.
- (6) Whether any known critical services, such as hospitals, pumping stations, electric generators, compressor stations, etc. were interrupted.
- (7) What mitigation measures implemented.

(c) Each utility shall ~~notify~~ report promptly (Monday through Friday during regular work hours) to the Operations Division of the Commission Staff and the Energy Division of the Public Staff by telephone or facsimile electronic method, such as email (telephone communications, including text messaging, may be used if electronic methods are unavailable), of any interruption of service to a major portion of its system. In this event, the following shall be provided:

- (1) Alternate backup plans and procedures due to the inability of natural gas pipelines and appurtenances to provide service.
- (2) Whether a public request for reduction of natural gas usage was issued.
- (3) Number of transportation customers interrupted for the purpose of maintaining adequate natural gas supply for firm service customers.
- i Period of advance notice provided to interrupted customers.

~~(c)~~(d) A detailed, written report on each interruption of service shall be filed within 30 days following the notice required in (c) above.

(d)(e) Planned interruptions shall be made at ~~a~~-times that will not cause unreasonable inconvenience to customers and shall be preceded by adequate notice to those who will be affected.

(NCUC Docket No. G-100, Sub 7, 5/31/67; NCUC Docket No. G-100, Sub 74, 12/4/97.)

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(b) Each utility shall keep records of interruptions of service on its system and shall make an analysis of the records for the purpose of determining steps to be taken to prevent recurrence of such interruptions. Such records should include the following concerning the interruptions:

- (1) All causes of the incident clearly described, including how the incident was discovered.
- (2) A description of any operating conditions of an unusual nature preceding the initiation of the incident. This includes all natural gas utilities operating within the State of North Carolina under the jurisdiction of the North Carolina Utilities Commission and to intrastate and interstate natural gas companies having pipeline facilities located within North Carolina.
- (3) A complete timeline of the incident, including relevant dates and times.
- (4) The duration of the interruption, or estimated duration if the incident is ongoing.
- (5) Number of customers affected.
- (6) Whether any known critical services, such as hospitals, pumping stations, electric generators, compressor stations, etc. were interrupted.
- (7) What mitigation measures implemented.

(c) Each utility shall report promptly (Monday through Friday during regular work hours) to the Operations Division of the Commission Staff and the Energy Division of the Public Staff by electronic method, such as email (telephone communications, including text messaging, may be used if electronic methods are unavailable), of any interruption of service to a major portion of its system. In this event, the following shall be provided:

- (1) Alternate backup plans and procedures due to the inability of natural gas pipelines and appurtenances to provide service.
- (2) Whether a public request for reduction of natural gas usage was issued.
- (3) Number of transportation customers interrupted for the purpose of maintaining adequate natural gas supply for firm service customers.
 - i Period of advance notice provided to interrupted customers.

(d) A detailed, written report on each interruption of service shall be filed within 30 days following the notice required in (c) above.

(e) Planned interruptions shall be made at times that will not cause unreasonable inconvenience to customers and shall be preceded by adequate notice to those who will be affected.

(NCUC Docket No. G-100, Sub 7, 5/31/67; NCUC Docket No. G-100, Sub 74, 12/4/97.)