

Regulatory Analysis Form

This space for use by IRRC

(1) Agency

Pennsylvania Public Utility Commission

(2) I.D. Number (Governor's Office Use)

L-00970120/57-185

Mizner

97 SEP 30 PM 1:39

INDEPENDENT REGULATORY
REVIEW COMMISSION

IRRC Number: 1893

(3) Short Title

Electric Service Reliability Standards

(4) PA Code Cite

52 Pa. Code 57.191-57.199

(5) Agency Contacts & Telephone Numbers

Primary Contact: Blaine J. Loper, Bureau of Conservation,
Economics and Energy Planning 717-787-3810 (technical)

Secondary Contact: Susan T. Povilaitis, Law Bureau, 717-787-2871
(legal)

(6) Type of Rulemaking (check one)

- Proposed Rulemaking
 Final Order Adopting Regulation
 Final Order, Proposed Rulemaking Omitted

(7) Is a 120-Day Emergency Certification Attached?

- No
 Yes: By the Attorney General
 Yes: By the Governor

(8) Briefly explain the regulation in clear and nontechnical language.

The regulations establish standards and procedures for continuing and ensuring the safety and reliability of electric service in Pennsylvania. The standards provide a uniform method of assessing the reasonableness of electric service reliability.

(9) State the statutory authority for the regulation and any relevant state or federal court decisions.

66 Pa. C.S. Sections 501, 524, 1102, 1103, 1501, 1504, 1505, 2802(12), 2802(20), 2803, 2804(1), 2805, 2807 and 2809.

PROPOSED	
IRRC #	1893
PAB	10/11/97
CPC	12/10/97
CRD	1/9/98
MONITOR	Mizner
ANALYST	JW
SUPPORT	TE

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(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

Yes. 66 Pa. C.S. 2802(12), 2802(20), 2803, 2804(1), 2807, 2809.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

Reliable electric service is of the utmost importance to the health, safety and welfare of the citizens of the Commonwealth. Electric utility restructuring must ensure that the current level of reliability of the interconnected electric system is maintained. With the restructuring of the electric utility industry and, in particular, the deregulation of electric generation, there may be a reluctance to invest in new facilities necessary to maintain the reliability of the system, in order to maximize profits.

(12) State the public health, safety, environmental or general welfare risks associated with nonregulation.

If the Commission does not require reliability standards for the electric utility industry, there may be a potential for the reliability of electric service in the Commonwealth to deteriorate. Generating capacity deficiencies and reductions in the maintenance of transmission and distribution facilities may result in an increased frequency, duration and magnitude of electric service interruptions, adversely affecting homes and businesses. In turn, the public's health and safety will be affected adversely.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

Customers of electric service, whether citizens of Pennsylvania or visitors to Pennsylvania, will benefit by having safe and reliable service.

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(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effects as completely as possible and approximate the number of people who will be adversely affected.)

No person or entity will be adversely affected by this regulation.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

All electric public utilities under the Commission's jurisdiction (11 companies) and all electric generation suppliers serving retail customers within Pennsylvania will be required to comply with the regulation. It is not currently known how many electric generation suppliers will apply for a license to sell electricity to retail customers.

(16) Describe the communications with and input from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

Comments were filed in response to an advance notice of proposed rulemaking, which was published in the Pennsylvania Bulletin on February 15, 1997 at 27 Pa.B. 809 with a 30-day comment period. Comments were received from John G. Alford, PUC Secretary; the Delaware Valley Citizens' Council for Clean Air; Pennsylvania Energy Project; the Nonprofits Energy Savings Investment Program; the Sierra Club; the Pennsylvania Energy Efficiency Council; the Pennsylvania Solar Energy Association; the East Central Reliability Council; Enron Corp.; the Industrial Energy Consumers of Pennsylvania; the International Brotherhood of Electrical Workers' Pennsylvania Utility Caucus; Metropolitan Edison Company and the Pennsylvania Electric Company; the Office of Consumer Advocate; the Pennsylvania Builders Association; the Pennsylvania Electric Association; Pennsylvania Power & Light Company and the Pennsylvania Rural Electric Association. A working group was formed made up of interested parties, mainly consisting of those parties which provided comments. The working group met on two separate occasions to address the contents of this regulation.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required.

Each electric generation supplier will be required to become a member of an appropriate regional reliability council (if not already a member) and will incur an annual membership fee of between \$1000 and \$3000 for associate membership. Minimal costs will be required to submit a reliability report to the Commission pursuant to Section 57.195. No savings are known at this time.

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(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures which may be required.

Not applicable.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required.

Commission staff will be required to analyze the reliability reports (Section 57.195) and may be required to perform investigations (Section 57.196).

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(20) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year	FY +1 Year	FY +2 Year	FY +3 Year	FY +4 Year	FY +5 Year
SAVINGS:	\$	\$	\$	\$	\$	\$
Regulated Community						
Local Government						
State Government						
Total Savings						
COSTS:						
Regulated Community						
Local Government						
State Government						
Total Costs						
REVENUE LOSSES:						
Regulated Community						
Local Government						
State Government						
Total Revenue Losses						

(20a) Explain how the cost estimates listed above were derived.

Not measurable at this time.

Regulatory Analysis Form

(20b) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY -3	FY -2	FY -1	Current FY
Not applicable.				

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

The benefits of safe and reliable energy service to the public outweighs any minimal costs, especially when protecting the public health and safety.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

Not applicable. Only through established regulatory procedures and enforcement mechanisms can the PUC protect the public.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

No alternative was considered. See #22.

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(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulation.

No.

(25) How does this regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

Since Pennsylvania is one of the first states to implement electric competition, no valid comparison can be made at this time.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

The regulation will supplement Chapter 57 of the Commission's current regulations. The Office of Consumer Advocate and the Office of Small Business Advocate will be involved to the extent that the customers represented by these agencies should be afforded safe and reliable electric service.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

No.

Regulatory Analysis Form

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports which will be required as a result of implementation, if available.

Additional reporting requirements are required under Section 57.195. An annual reliability report is required to be filed with the Commission.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

Not applicable.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

Anticipated effective date is January 1, 1999.

(31) Provide the schedule for continual review of the regulation.

Written comments are due within 60 days of the publication of the order in the Pennsylvania Bulletin. Thereafter, the Commission will review the comments, proceed through the regulatory process and continuously monitoring the effectiveness of this regulation by review of the annual reliability reports filed with the Commission, or through concerns expressed by consumers.

**FACE SHEET
FOR FILING DOCUMENTS
WITH THE LEGISLATIVE REFERENCE BUREAU**

(Pursuant to Commonwealth Documents Law)

97 SEP 25 PM 1:25
INDEPENDENT LEGISLATIVE
REVIEW COMMISSION

DO NOT WRITE IN THIS SPACE

Copy below is hereby approved as to form and legality. Attorney General.

BY *Christina J. Caputo*
(DEPUTY ATTORNEY GENERAL)

Aug 14 1997

DATE OF APPROVAL

Check if applicable
Copy not approved. Objections attached

Copy below is hereby certified to be true and correct copy of a document issued, prescribed or promulgated by:

Pennsylvania Public Utility Commission
(AGENCY)

DOCUMENT/FISCAL NOTE NO. L-970120/57-185

DATE OF ADOPTION June 12, 1997

BY *James J. McNulty*
James J. McNulty

TITLE (ACTING SECRETARY)

Copy below is hereby approved as to form and legality. Executive or independent Agencies.

BY *John F. Povilaitis*
John F. Povilaitis
Chief Counsel

7-25-97
DATE OF APPROVAL

Check if applicable. No Attorney General approval or objection within 30 days after submission.

**L-970120/57-185
Proposed Rulemaking
Electric Service Reliability Standards
52 Pa. Code §§57.191-57.199**

The Pennsylvania Public Utility Commission on June 12, 1997, adopted a proposed rulemaking to establish standards and procedures for continuing and ensuring the safety and reliability of electric service in Pennsylvania. The standards provide a uniform method of assessing the reasonableness of electric service reliability. The contact person is Blaine J. Loper, Bureau of Conservation, Economics and Energy Planning, (717) 787-3810 (technical) and Susan T. Povilaitis, Assistant Counsel, Law Bureau (717) 787-2871.

EXECUTIVE SUMMARY
L-00970120
PROPOSED RULEMAKING
TO ENSURE ELECTRIC SERVICE RELIABILITY

On December 3, 1996, Governor Tom Ridge signed into law Act 138 of 1996, the *Electric Generation Customer Choice and Competition Act*, which amends Title 66 of the Pennsylvania Consolidated Statutes by adding Chapter 28 to establish standards and procedures to create direct access by retail customers to the competitive market for the generation of electricity, while maintaining the safety and reliability of the electric system.

In response to this legislative mandate, the Commission, on January 24, 1997, instituted a rulemaking proceeding to develop regulations to ensure the safety, adequacy and reliability of the generation, transmission and distribution of electricity in Pennsylvania. An advance notice of proposed rulemaking was published in the *Pennsylvania Bulletin* on February 15, 1997 at 27 Pa. B. 809, with a 30-day comment period.

The Commission adopted a proposed rulemaking amending Title 52 of the Pennsylvania Code by adding Subchapter N, to establish standards and procedures for assessing the reasonableness of electric service reliability.

With regard to transmission system reliability, the proposed regulation requires electric utilities to conform to industry standards and to the requirements of the North American Electric Reliability Council (NERC) and the appropriate regional reliability council. The regulation also adopts industry accepted

performance indicators, such as System Average Interruption Frequency Index and Customer Average Interruption Duration Index, for monitoring the performance and reliability of the transmission and distribution systems, and requires annual filings of utility performance results.

The regulation requires electric generation suppliers to be members of the appropriate regional reliability council and comply with NERC and regional operating policies, criteria, requirements and standards, including the maintenance of adequate generating reserve capacity.

The contact persons are Blaine J. Loper, Bureau of Conservation, Economics and Energy Planning, (717) 787-3810 (technical) and Susan T. Povilaitis, Law Bureau, (717) 787-2871 (legal).

**PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265**

Public Meeting held June 12, 1997

Commissioners Present:

**John M. Quain, Chairman
Robert K. Bloom, Vice Chairman , Concurring in result
John Hanger , Statement attached
David W. Rolka
Nora Mead Brownell**

**RULEMAKING
To Amend 52 Pa. Code Chapter 57
to Ensure Electric Service Reliability**

Docket No. L-00970120

PROPOSED RULEMAKING ORDER

BY THE COMMISSION:

Introduction

On December 3, 1996, Governor Tom Ridge signed into law Act 138 of 1996, the *Electricity Generation Customer Choice and Competition Act (Act)*, which amends Title 66 of the Pennsylvania Consolidated Statutes ("Public Utility Code " or "Code") by adding Chapter 28 to establish standards and procedures to create direct access by retail customers to the competitive market for the generation of electricity, while maintaining the safety and reliability of the electric system.

Section 2802(12) of the Code states the following with regard to electric service reliability:

Reliable electric service is of the utmost importance to the health, safety and welfare of the citizens of the Commonwealth. Electric industry restructuring should ensure the reliability of the interconnected electric system by maintaining the efficiency of the transmission and distribution system.

66 Pa.C.S. § 2802(12).

Section 2803 defines "reliability" as follows:

[Reliability] includes adequacy and security. As used in this definition, "adequacy" means the provision of sufficient generation, transmission and distribution capacity so as to supply the aggregate electric power and energy requirements of consumers, taking into account scheduled and unscheduled outages of system facilities; and "security" means designing, maintaining and operating a system so that it can handle emergencies safely while continuing to operate.

66 Pa.C.S. § 2803.

In response to this legislative mandate, on January 24, 1997, the Commission instituted a rulemaking proceeding to develop regulations to ensure the safety, adequacy and reliability of the generation, transmission and distribution of electricity in Pennsylvania.

An advance notice of proposed rulemaking was published in the *Pennsylvania Bulletin* on February 15, 1997 (27 Pa. B. 809), with a 30-day comment period. Comments were received from: John G. Alford, Commission Secretary ("Secretary Alford"); the Delaware Valley Citizens' Council for Clean Air, Penn. Energy Project, the Nonprofits Energy Savings Investment Program, the Sierra Club, the Pennsylvania Energy Efficiency Council and the Pennsylvania Solar Energy Association (collectively, "Environmentalists"); the East Central Area Reliability Council ("ECAR"); Enron Corp. ("Enron"); the Industrial Energy Consumers of Pennsylvania ("IECPA"); the International Brotherhood of Electrical Workers' Pennsylvania Utility Caucus ("IBEW"); Metropolitan

Edison Company and Pennsylvania Electric Company (collectively, "GPU Energy"); the Office of Consumer Advocate ("OCA"); the Pennsylvania Builders Association ("PBA"); the Pennsylvania Electric Association ("PEA"); Pennsylvania Power & Light Company ("PP&L"); and the Pennsylvania Rural Electric Association ("PREA"). A Reliability Working Group, made up of interested participants, was formed by the Commission and met on two separate occasions to discuss the pertinent issues.

This order discusses the comments received and sets forth, in Annex A, proposed regulations governing the safety and reliability of electric service in Pennsylvania.

Discussion

Transmission and Distribution Facilities

Several provisions of the Code address the safety and reliability of electric transmission and distribution facilities. Section 2802(20) states:

Since continuing and ensuring the reliability of electric service depends on adequate generation and on conscientious inspection and maintenance of transmission and distribution systems, the independent system operator or its functional equivalent should set, and the Commission shall set, through regulations, inspection, maintenance, repair and replacement standards and enforce those standards.

66 Pa.C.S. § 2802(20).

Section 2804(1) addresses standards for Commission assessment and approval of utility restructuring plans:

(1) The Commission shall ensure continuation of safe and reliable electric service to all consumers in the Commonwealth, including: . . . (II) the installation and maintenance of transmission and distribution facilities in conformity with established industry standards and practices, including the standards set forth in the National Electric [sic] Safety Code.

66 Pa.C.S. § 2804(1).

Section 2805(B)(1)(III) addresses electric cooperative corporations as follows:

The reliability of the transmission service provided to electric cooperative corporations must be comparable to the reliability which the transmission supplier provides at the wholesale level.

66 Pa.C.S. § 2805(B)(1)(III).

Finally, Section 2807 sets forth the duties of electric distribution companies:

(A) General Rule. Each electric distribution company shall maintain the integrity of the distribution system at least in conformity with the National Electric [sic] Safety Code and such other standards practiced by the industry in a manner sufficient to provide safe and reliable service to all customers connected to the system consistent with this title and the Commission's regulations.

66 Pa.C.S. § 2807(A).

With regard to transmission system reliability, most commentators believe that transmission line reliability performance standards should remain under the jurisdiction of the North American Electric Reliability Council ("NERC"), an organization of regional reliability councils established to promote the reliability of the electricity supply for North America. The regional reliability councils represented in Pennsylvania are ECAR, the Mid-Atlantic Area Council ("MAAC") and the Northeast Power Coordinating Council ("NPCC").

We believe NERC and its member regional reliability councils have been instrumental in establishing and ensuring the current level of reliability enjoyed by electric service customers. Additionally, NERC is in the process of establishing mandatory reliability performance policies, standards, principles and guidelines for all regional reliability councils. We propose to require utilities to conform to industry standards and the requirements of NERC and the appropriate regional council, or successor organizations.

Concerning the inspection and maintenance of distribution facilities, the comments fall in three distinct categories. Enron, GPU Energy, IECPA, PEA and PP&L believe that no additional prescriptive standards are necessary, since electric utilities have their own guidelines for operating and upgrading their systems to meet the current and future needs of their customers. GPU Energy and OCA suggest that the Commission's primary concern should be the performance of the delivery system, with the adoption of service reliability indicators, such as the frequency and duration of service interruptions, which directly impact customer satisfaction. Finally, IBEW and PREA recommend that the Commission set forth comprehensive regulations, including specific maintenance and inspection intervals, tree trimming requirements and service outage reporting.

We decline, at this time, to require specific inspection and maintenance standards, since electric utilities are continually developing new methods and technologies to improve the inspection and testing process. Until such time as prescriptive standards are deemed necessary, we propose to adopt the industry accepted indicators, such as System Average Interruption Frequency Index ("SAIFI") and Customer Average Interruption Duration Index ("CAIDI"), to monitor the performance and reliability of the transmission and distribution systems. We also propose to require annual filings of utility performance results and, based on benchmarks established by the Commission, may direct the utility to take corrective action if performance is found to be unacceptable.

Section 57.17 (relating to service interruptions), section 57.18 (relating to inspection of facilities) and section 57.26 (relating to construction and maintenance of

facilities) of our regulations have been incorporated herein. 52 Pa. Code §§ 57.17, 57.18, 57.26.

Maintenance of Adequate Reserve Margins

The Code requires the maintenance of adequate generation capacity reserve margins. Section 2804(1) states:

(1) The Commission shall ensure the continuation of safe and reliable electric service to all consumers in the Commonwealth, including: (I) The maintenance of adequate reserve margins by electric suppliers in conformity with the standards required by the North American Electric Reliability Council (NERC) and the regional reliability council appropriate to each supplier, or any successors to those reliability entities, and in conformity with established industry standards and practices.

66 Pa.C.S. § 2804(1).

Also, with regard to requirements for electric generation suppliers, section 2809(E) provides the following:

In regulating the service of electric generation suppliers, the Commission shall impose requirements necessary to ensure that the present quality of service provided by electric utilities does not deteriorate, including assuring that adequate reserve margins of electric supply are maintained

66 Pa.C.S. § 2809(E).

ECAR, GPU Energy, PEA and PP&L believe that, as long as all electricity suppliers agree to comply with the reliability criteria set forth by NERC and the regional reliability councils, additional state government regulation is not required. These commentors aver that Commission established reliability criteria and protocols could introduce conflict and complexity into control area operations and may actually serve to reduce reliability. Furthermore, more stringent standards may disadvantage electric generation suppliers and discourage them from entering the Pennsylvania market.

ECAR, GPU Energy, IBEW, PEA, PP&L and PREA suggest that, as a condition for approval of all tariffs, licenses or contractual agreements, all electricity suppliers should be required to maintain membership in an appropriate regional reliability council at a level of membership which assures each supplier's full compliance with applicable reliability criteria and protocols. With regard to penalties or sanctions for non-compliance, ECAR, GPU Energy, PEA and PP&L suggest that the Commission defer to the NERC and regional reliability council processes now under development.

IBEW avers it is not sufficient, at this time, to rely on NERC and the regional reliability councils to regulate the reliability of electric generation supply in Pennsylvania. OCA recommends that the Commission monitor NERC performance and either supplement or supplant NERC efforts if they do not achieve the strict requirements of the Act.

We propose to require electric generation suppliers to fully comply with the operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council. We also propose to revoke the license of an electric generation supplier if an investigation shows that the supplier is in non-compliance and no corrective action has been taken.

Although we propose to rely on NERC and the regional reliability councils for maintaining electric system reliability, we are not abdicating our responsibility or authority in this area of regulation. We will continue to monitor the activities of NERC and the regional reliability councils to provide for adequate assurances that these entities will be able to maintain the current levels of reliability under the new industry structure. Absent

such assurances, we will not hesitate to implement further appropriate measures to ensure reliability.

The Commission reserves the right to waive any or all requirements of these regulations upon petition by an affected party pursuant to 52 Pa. Code § 5.43 (relating to petitions for issuance, amendment, waiver or repeal of regulations).

In order to ensure the continued safety and reliability of electric service in Pennsylvania, we propose to amend Chapter 57 of our regulations by adding Subchapter N, as set forth in Annex A hereto, which establishes standards and procedures for assessing the reasonableness of electric service reliability. Accordingly, pursuant to Sections 501, 524, 1102, 1103, 1501, 1504, 1505, 2802, 2804, 2807 and 2809 of the Public Utility Code, 66 Pa. C. S. §§ 501, 524, 1102, 1103, 1501, 1504, 1505, 2802, 2804, 2807 and 2809, and the Commonwealth Documents Law (45 P.S. §§ 1202, *et. seq.*) and the regulations promulgated thereunder at 1 Pa. Code §§ 7.1-7.4, we shall issue for comment proposed amendments to 52 Pa. Code Chapter 57; **THEREFORE,**

IT IS ORDERED:

1. That the proposed amendments to 52 Pa. Code Chapter 57, as set forth in Annex A hereto, are issued for comment.
2. That the Secretary shall certify this order and Annex A and deposit them with the Legislative Reference Bureau for publication in the *Pennsylvania Bulletin*.
3. That interested persons may submit an original and 15 copies of written comments to the Office of Prothonotary, Pennsylvania Public Utility Commission, P.O.

Box 3265, Harrisburg, PA, 17105-3265, within 60 days from the date this order is published in the *Pennsylvania Bulletin*. A copy of written comments shall also be served upon the Commission's Bureau of Conservation, Economics and Energy Planning.

4. That the Secretary shall submit this order and Annex A to the Office of Attorney General for approval as to legality.

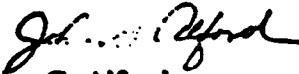
5. That the Secretary shall submit this order and Annex A to the Governor's Budget Office for review of fiscal impact.

6. That the Secretary shall submit this order and Annex A for review by the designated standing committees of both Houses of the General Assembly, and for review and approval by the Independent Regulatory Review Commission.

7. That a copy of this order and Annex A shall be served upon the Office of Consumer Advocate, the Office of Small Business Advocate, the Office of Trial Staff, all jurisdictional electric utilities, all parties of record and all Electric Competition Stakeholders.

8. The contact persons for this matter are Blaine J. Loper, Bureau of Conservation, Economics and Energy Planning, (717) 787-3810 (technical) and Susan T. Povilaitis, Law Bureau, (717) 787-2871 (legal).

BY THE COMMISSION,


John G. Alford
Secretary

(SEAL)

ORDER ADOPTED: June 12, 1997

ORDER ENTERED: JUN 13 1997

ANNEX A

CHAPTER 57. ELECTRIC SERVICE

Subchapter B. SERVICE AND FACILITIES

§ 57.17. [Service interruptions.

(a) As used in this section, the term "service interruption" means the interval of time exceeding 1 minute during which the voltage of service rendered falls below 50% of the standard nominal service voltage.

(b) A public utility shall keep a record, including data showing the time, duration and cause of each interruption of electric service affecting the entire system or a major division of the system.] Reserved.

§ 57.18. [Inspection of facilities.

(a) *Periodic inspections.* A public utility shall make periodic inspections of its equipment and facilities in accordance with good practice and in a manner satisfactory to the Commission.

(b) *Inspection reports and records.* A public utility shall file with the Commission a statement of the condition of its equipment and facilities and such reports of inspections, when and in such form as the Commission may require.

(c) *Special inspections.* If equipment or facilities which have for any reason become dangerous, or may cause injury to persons or damage to property, are removed from service because of any defect which may involve a hazard to life, such equipment or facilities shall be thoroughly inspected and tested before being again placed in service.]

Reserved.

§ 57.26. [Construction and maintenance of facilities.

Overhead and underground transmission and distribution facilities and crossings of the wires or cables of every public utility over or under the facilities of other public utilities, cooperative associations or communication utilities, including parallel or random installation of underground electric supply and communications conductors or cable, shall be constructed and maintained in accordance with safe and reasonable standards, as set forth in the most recent National Electrical Safety Code.] Reserved.

Subchapter N. ELECTRIC RELIABILITY STANDARDS

§ 57.191. Purpose.

Reliable electric service is essential to the health, safety and welfare of the citizens of the Commonwealth. The purpose of this subchapter is to establish standards and procedures for continuing and ensuring the safety and reliability of the electric system in Pennsylvania. The standards have been developed to provide a uniform method of assessing the reasonableness of electric service reliability.

§ 57.192. Definitions.

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

(1) Adequacy -- The ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

(2) Control area -- An electric system or systems, bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other control areas and contributing to frequency regulation of the interconnected systems.

(3) Electric distribution company - - A public utility providing facilities for the jurisdictional transmission and distribution of electricity to retail customers, except building or facility owners/operators that manage the internal distribution system serving such building or facility and that supply electric power and other related electric power services to occupants of the building or facility.

(4) Electric generation supplier or electricity supplier -- A person or corporation, including municipal corporations which choose to provide service outside their municipal limits except to the extent provided prior to December 3, 1996, brokers, marketers, aggregators or any other entities, that sells to end-use customers electricity or related services utilizing the jurisdictional transmission or distribution facilities of an electric distribution company or that purchases, brokers, arranges or markets electricity or related services for sale to end-use customers utilizing the jurisdictional transmission and distribution facilities of an electric distribution company. The term excludes building or facility owner/operators that manage the internal distribution system serving such building or facility and that supply electric power and other related power services to occupants of the building or facility. The term excludes electric cooperative corporations except as provided

in 15 Pa. C.S. §§ 7401-7410 (relating to generation choice for customers of electric cooperatives).

(5) *Interruption duration* -- A period of time measured to the nearest 1-minute increment which starts when an electric distribution company is notified or becomes aware of an interruption, unless an electric distribution company can determine a more precise estimate of the actual starting time of an interruption, and ends when service is restored.

(6) *Major event* -- Either of the following:

(A) An interruption of electric service caused by adverse weather, such as thunderstorms, tornadoes or hurricanes, or by unusual equipment failures which affects at least 10% of the customers in an operating area for a duration of 5 minutes or greater.

(B) An interruption of electric service resulting from an action taken by an electric distribution company to maintain the security of the electrical system which affects at least one customer, as described in § 57.52 (relating to emergency load control and energy conservation by electric utilities).

(7) *Momentary customer interruption* -- The loss of electric service by one or more customers for a period of between 30 seconds and 5 minutes in duration. Instantaneous interruptions of less than 30 seconds in duration are excluded.

(8) North American Electric Reliability Council (NERC) -- An organization of regional reliability councils established to promote the reliability of the electricity supply for North America.

(9) Operating area -- A geographical area, as defined by an electric distribution company, of its franchise service territory for its transmission and distribution operations.

(10) Regional reliability council - - An organization established to augment the reliability of its members' bulk electric supply systems through coordinated planning and operation of generation and transmission facilities. The following regional reliability councils impact the bulk electric supply systems within the Commonwealth:

(A) East Central Area Reliability Coordination Agreement (ECAR).

(B) Mid-Atlantic Area Council (MAAC).

(C) Northeast Power Coordinating Council (NPCC)

(11) Reliability -- The degree of performance of the elements of an electric system that results in electricity being delivered to customers within accepted standards and in the desired amount, measured by the frequency, duration and magnitude of adverse effects on the electric supply and by considering two basic and functional aspects of the electric system: adequacy and security.

(12) Reliability Indices -- Service performance indicators which measure the frequency and duration of sustained customer interruptions, excluding major events.

(A) Customer Average Interruption Duration Index (CAIDI) --

The average interruption duration of sustained interruptions for those customers who experience interruptions during the analysis period. CAIDI represents the average time required to restore service to the average customer per sustained interruption. It is determined by dividing the sum of all sustained customer interruption durations, in minutes, by the total number of interrupted customers. This determination is made by using the following equation:

$$\underline{CAIDI = \frac{\sum r_i N_i}{\sum N_i} = \frac{SAIDI}{SAIFI}}$$

where:

i = an interruption event;

r_i = restoration time for each interruption event;

and N_i = number of customers who have experienced a sustained interruption during the reporting period.

(B) System Average Interruption Duration Index (SAIDI) --

The average duration of sustained customer interruptions per customer occurring during the analysis period. It is the average time customers were without power. It is determined by dividing the sum of all sustained customer interruption durations, in minutes, by the total number of customers served. This determination is made by using the following equation:

$$SAIDI = \frac{\sum r_i N_i}{N_T}$$

where:

N_T = total number of customers served for the area being indexed.

(C) System Average Interruption Frequency Index (SAIFI) -- The average frequency of sustained interruptions per customer occurring during the analysis period. It is calculated by dividing the total number of sustained customer interruptions by the total number of customers served. This determination is made by using the following equation:

$$SAIFI = \frac{\sum N_i}{N_T}$$

(D) Momentary Average Interruption Frequency Index (MAIFI) -- The average frequency of momentary interruptions per customer occurring during the analysis period. It is calculated by dividing the total number of momentary customer interruptions by the total number of customers served. This determination is made by using the following equation:

$$MAIFI = \frac{\sum M_i}{N_T}$$

where:

M_i = number of customers who have experienced a momentary interruption during the reporting period.

(13) Security -- The ability of the electric system to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements.

(14) Sustained customer interruption -- The loss of electric service by one or more customers for a period longer than 5 minutes in duration. This term does not include interruptions intentionally initiated by an electric distribution company, such as scheduled maintenance.

(15) Worst-performing circuits -- Those circuits which, for each reliability index, are among the 5% of circuits in an operating area with the highest achieved values (lowest performance levels) for the reliability index.

§ 57.193. Transmission system reliability.

(a) An electric distribution company shall install, maintain and operate its transmission facilities in a safe and reliable manner in conformity with established industry standards and practices, including the operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council, or successor organizations, and as set forth in the most recent National Electrical Safety Code.

(b) The reliability of an electric distribution company's transmission service provided to wholesale customers, such as electric cooperative corporations and municipal corporations, shall be comparable to the reliability which the transmission supplier provides at the wholesale level, taking into account the nature of each service area in which electricity is delivered to the customer, the delivery voltage and the configuration and length of the circuit from which electricity is delivered.

§ 57.194. Distribution system reliability.

(a) An electric distribution company shall furnish and maintain adequate, efficient, safe and reasonable service and facilities, and shall make necessary repairs, changes, alterations, substitutions, extensions and improvements in or to its service and facilities. Electric service shall be reasonably continuous and without unreasonable interruption or delay.

(b) An electric distribution company shall install, maintain and operate its distribution system in accordance with safe and reasonable standards, as set forth in the most recent National Electrical Safety Code.

(c) An electric distribution company shall make periodic inspections of its equipment and facilities in accordance with good practice and in a manner satisfactory to the Commission.

(d) An electric distribution company shall strive to prevent interruptions of electric service and, when interruptions occur, restore service within the shortest reasonable time. In the event that service must be interrupted for maintenance purposes, an electric distribution company should, where reasonable and practicable, attempt to perform the work at a time which will cause minimal inconvenience to customers and provide notice to customers in advance of the interruption.

(e) An electric distribution company shall maintain procedures to meet the reliability performance standards set forth in subsection (g) below. The procedures shall be designed to sustain, at a minimum, the historical level of reliability and to improve service reliability where necessary.

(f) An electric distribution company shall develop and maintain a program for analyzing its worst-performing circuits during the course of each year.

(g) An electric distribution company shall annually maintain a 5-year historical record of all sustained customer interruptions, including the time, duration and cause of each interruption.

(h) An electric distribution company shall take measures necessary to meet the reliability performance standard set forth by this subsection.

(1) The reliability performance standard is the minimum level of acceptable electric service reliability below which further review, analysis and corrective action may be necessary. This standard is reached when the actual CAIDI and SAIFI values of each operating area are both equal to or less than the CAIDI and SAIFI values established by the Commission.

(2) Performance shall be considered unacceptable when either the CAIDI or the SAIFI value of an operating area is greater than the standard CAIDI or SAIFI value established by the Commission.

(3) The Commission will, from time to time, issue numerical values for the CAIDI and SAIFI indices for the reliability performance standard for each operating area. An electric distribution company or any other interested party may, at any time, petition the Commission for modification of these standards.

§ 57.195. Reporting requirements.

(a) An electric distribution company shall submit to the Commission, on or before March 31, 1999, and March 31 of each succeeding year, a reliability report which

includes, at a minimum, the information prescribed in this section. An original and 5 copies of the report shall be filed with the Commission's Office of Prothonotary and one copy shall also be submitted to the Office of Consumer Advocate and the Office of Small Business Advocate. The name and telephone number of the persons having knowledge of the matters, and to whom inquiries should be addressed, shall be included.

(b) The report shall include an assessment of electric service reliability in the electric distribution company's service territory, by operating area and system-wide. The assessment shall include a discussion of the electric distribution company's programs and procedures for providing reliable electric service. The assessment shall include a discussion of major events occurring during the preceding calendar year.

(c) The report shall include a table showing the actual values of each of the reliability indices for each operating area and for the electric distribution company as a whole for the preceding five calendar years.

(d) When an electric distribution company's reliability performance within an operating area is found to be unacceptable, as defined in paragraph 57.194(g)(3), the report shall include the following:

- (1) An analysis of the service interruption patterns and trends.
- (2) An analysis of the operational and maintenance history of the affected operating area.
- (3) A description of the causes of the unacceptable performance.
- (4) A description of the corrective measures the electric distribution company is taking and target dates for completion.

(e) The report shall include a list showing the worst-performing circuits that fail to meet the CAIDI or SAIFI standard for each operating area, a description of the electric distribution company's program for analyzing and improving worst performing circuits and a summary of actions taken and the results of the program for the preceding calendar year.

§ 57.196. Generation reliability.

(a) An electric generation supplier shall operate and maintain its generating facilities in conformity with established industry standards and practices and in full compliance with the operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council, or successor organizations.

(b) An electric generation supplier shall maintain appropriate generating reserve capacity in compliance with any applicable reserve requirement standards set forth by the appropriate regional reliability council, or successor organizations.

(c) An electric generation supplier shall abide by applicable Commission regulations, procedures and orders, including emergency orders.

§ 57.197. Reliability investigations.

(a) Upon complaint, an investigation may be initiated to determine whether an electric distribution company is providing service in accordance with § 57.193 (relating to transmission system reliability) and § 57.194 (relating to distribution system reliability).

(1) Based upon the record developed in such an investigation, the Commission may enter an order directing the electric distribution company to take

the corrective action the Commission deems necessary to improve the reliability of electric service.

(2) If the Commission directs an electric distribution company to make expenditures to repair or upgrade its transmission or distribution system, the electric distribution company may seek an exception to the limitations set forth in 66 Pa. C.S. § 2804(4) (relating to electric utility rate caps).

(b) Upon complaint, an investigation may be initiated to determine whether an electric generation supplier is providing service in accordance with § 57.196 (relating to generation reliability).

(1) Based upon the record developed in such an investigation, the Commission may enter an order directing the electric generation supplier to take the corrective action the Commission deems necessary to improve the reliability of service.

(2) If such corrective action is not taken within the period of time designated by the Commission in an order entered under paragraph (1), the Commission may elect to revoke, either temporarily or permanently, the license of the electric generation supplier, obtained pursuant to 66 Pa. C.S. § 2809(a) (relating to requirements for electric generation suppliers).

PENNSYLVANIA PUBLIC UTILITY COMMISSION
Harrisburg, Pennsylvania

RULEMAKING to AMEND 52 PA CODE
CHAPTER 57 TO ENSURE ELECTRIC
SERVICE RELIABILITY

PUBLIC MEETING-
JUNE 12, 1997
JUN-97-E-4*
DOCKET NO. L-00970120

STATEMENT OF COMMISSIONER JOHN HANGER

Chapter 28 requires that the Commission ensure that reliability is maintained at least at current levels as we move into the era of competitive generation. The Commission appreciates the excellent comments filed in response to the Reliability NOPR, which is the Commission's first regulatory response to the statutory mandate.

Distribution System Reliability-

Interested parties should recognize that the Proposed Rules significantly improve the Commission's ability to ensure that distribution system reliability is at least maintained at current levels. As OCA points out in its comments, approximately 80% of all service interruptions occur due to failures in the distribution system. Distribution systems will remain completely regulated as generation is opened to competition. This Proposed Rulemaking is an important step forward in the Commission's ability to ensure the maintenance of reliability levels. It requires safe and reliable operation in accordance with the National Electrical Safety Code, periodic inspections of facilities, programs for improvements of the worst performing circuits, and comprehensive annual reports of service interruptions. Of perhaps greatest importance, the Proposed Rules include benchmarks to ensure that performance is in fact acceptable and require plans to correct unacceptable performance. Thus, compared to today, the Proposed Rules will significantly improve the Commission's ability to monitor distribution system reliability and require operational or system improvements when performance does not meet designated benchmarks.

I encourage parties to submit comments on these important protections. In particular, are there other benchmarks of performance besides those suggested that should be used? Are frequency and duration of outages sufficient criteria or should other measures, such as voltage reductions, be used as well? How should the Commission determine the level of performance expected under a benchmark? Should Pennsylvania expect superior performance or accept above average performance? Should Pennsylvania also adopt specific requirements for activities to achieve the required reliability levels? Should specific requirements be adopted but applied only if a utility fails to perform adequately?

Generation and Transmission-

Generation and transmission reliability have historically

been subject to industry reliability standards through the North American Electric Reliability Council (NERC) and regional councils such as the Mid-Atlantic Area Council (MAAC) and the East Central Area Reliability Council (ECAR). While the Commission has monitored the activities of these Councils in the past, Pennsylvania has enjoyed a high level of reliability and intervention by the Commission has not been an issue. For example, this Commission has no reserve requirement standard of its own.

The reliability of the regional generation and transmission markets should improve as a result of competition because the system will be more coordinated. Larger areas with more diverse load and supply can achieve the same level of reliability more efficiently, provided that the system is properly managed.

The change to competitive generation does, however, inherently require changes in the standards and agreements of the Reliability Councils. For example, when the industry included a small number of owners of substantial generation and transmission facilities, it was appropriate to make all players, e.g. utilities, subject to the same rules. Many comments wrongly assume that it is competitively neutral or fair to continue to apply the exact same rules to all suppliers. Nothing could be further from the truth. Spinning reserves can be supplied by the system and the costs fully recovered through system charges without requiring every supplier to provide spinning reserves. There is no reason why a small independent solar generator should be required to hold back the sale of a portion of its on-peak output in order to meet a planning reserve requirement. There is no reason to require a supplier who has one Pennsylvania customer supplied through a FERC tariff to be a member of a regional reliability council, although certainly compliance with the requirements of the Council is appropriate.

The fundamental issue, therefore, is whether the Commission should change its historic deference to the industry and the Councils at this time. The Proposed Rulemaking issued today substantially accepts the comments of most parties that, at this point in time, it would be inappropriate for the Commission to provide the Reliability Councils or the generation and transmission owners with specific rules for ensuring the maintenance of continued reliability. This position is appropriate because of the regional and multi-jurisdictional nature of the generation and transmission industry.

The interested parties and the Councils should have the opportunity to develop appropriate institutions, standards and protocols. While some non-utilities have been participating in discussions, all potential interested parties must have a full and fair opportunity to participate in designing the rules of the road. The results must maintain reliability while also promoting robust competition.

At this point in time, the Commission should continue to

work with other states, utilities, power pools, suppliers, consumers and FERC to ensure that the regional generation and transmission system develops in a way that assures both reliability and efficiency in a truly competitive market.

Is there a point in time or a sequence of events following which the Commission should intervene more aggressively to ensure the development of reliable transmission and generation? No answer to that question is necessary today, but comments on this question are welcome.

An effective Independent System Operator will be the single most important element of a reliable transmission and generation industry. The industry may not be moving fast enough to establish effective ISOs. With both Pennsylvania and New Jersey committed to implementation of retail competition in the not-too-distant future, it appears that PJM, despite its efforts, is having difficulty achieving organization as a truly independent system operator.

Though the journey to an ISO has been bumpy and is not now ended, the PJM utilities should be commended for the progress that has been made. Within the next few months, it is imperative that the PJM ISO debate be brought to a conclusion.

While the PJM utilities progress towards an ISO has been difficult, Pennsylvania's non-PJM utilities have not informed me or this Commission about what their plans are concerning Independent System Operators. Given that the pilots will commence in 1997 and full competition will be phased in within 19 months, I yet again repeat my concerns about the apparent lack of movement by non-PJM utilities toward securing the reliability and efficiency benefits provided by an ISO.

June 12, 1997

DATED

John Hanger

JOHN HANGER, COMMISSIONER



PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG, PENNSYLVANIA

THE CHAIRMAN

September 30, 1997

The Honorable John R. McGinley, Jr.
Chairman
Independent Regulatory Review Commission
14th Floor, Harristown II
333 Market Street
Harrisburg, PA 17101

Re: L-970120/57-185
Proposed Regulations
Electric Service Reliability Standards
52 Pa. Code §§57.191-57.199

Dear Chairman McGinley:

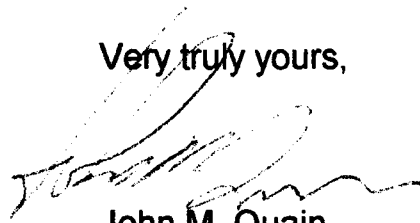
Enclosed please find one (1) copy of the proposed rulemaking and the Regulatory Analysis Form prepared in compliance with Executive Order 1996-1, "Regulatory Review and Promulgation." Pursuant to Section 5(a) of the Regulatory Review Act of June 30, 1989 (P.L. 73, No. 19) (71 P.S. §§745.1-745.15) the Commission is submitting today a copy of the proposed rulemaking and Regulatory Analysis Form to the Chairman of the House Committee on Consumer Affairs and to the Chairman of the Senate Committee on Consumer Protection and Professional Licensure.

The purpose of this proposal is to establish procedures for continuing and ensuring the safety and reliability of electric serviced in Pennsylvania. The standards provide a uniform method of assessing the

reasonableness of electric service reliability. The contact person is Blaine J. Loper, Bureau of Conservation, Economics and Energy Planning, (717) 787-3810 (technical) and Susan T. Povilaitis, Assistant Counsel, Assistant Counsel, Law Bureau (717) 787-2871.

The proposal has been deposited for publication with the Legislative Reference Bureau.

Very truly yours,

A handwritten signature in black ink, appearing to read "John M. Quain", is written over a light blue horizontal line.

John M. Quain
Chairman

Enclosures

cc: The Honorable Clarence D. Bell
The Honorable Roy C. Afflerbach
The Honorable Chris R. Wogan
The Honorable William R. Lloyd, Jr.
Legislative Affairs Director Chiavetta
First Deputy Chief Counsel Pankiw
Assistant Counsel Povilaitis
Mr. Loper
Regulatory Coordinator Leming
Mr. Tartline

TRANSMITTAL SHEET FOR REGULATIONS SUBJECT
TO THE REGULATORY REVIEW ACT

ID Number: L-970120/57-185

Subject: Electric Service Reliability Standards

Pennsylvania Public Utility Commission

TYPE OF REGULATION

- Proposed Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted.
- Final Regulation
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor

PROPOSED
97 SEP 30 PM 4:40
INDEPENDENT REGULATORY
REVIEW COMMISSION

FILING OF REPORT

<u>Date</u>	<u>Signature</u>	<u>Designation</u>
9/30/97	<i>Suzanne Kiper</i>	<u>HOUSE COMMITTEE</u> Consumer Affairs
9/30/97	<i>Martino Fasanov</i>	<u>SENATE COMMITTEE</u> Consumer Protection and Professional Licensure
9/30/97	<i>Dr. Silvest</i>	Independent Regulatory Review Commission Attorney General
		Legislative Reference Bureau