BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Proposed Rulemaking - Electric Service Reliability Standards : Docket No. L-00970120

GPU ENERGY COMMENTS

Metropolitan Edison Company and Pennsylvania Electric Company d/b/a GPU Energy supports the Proposed Rulemaking Order that will adopt the industry accepted reliability indicators of CAIDI (Customer Average Interruption Duration Index) and SAIFI (System Average Interruption Frequency Index) to monitor the performance and reliability of the transmission and distribution systems for each of the electric utilities in Pennsylvania. The following comments are offered to provide wording consistency, to enhance the understanding of designated paragraphs and to recommend changes in the proposed reporting requirements.

GPU Energy provided input to the comments submitted by the Pennsylvania Electric Association (PEA) on behalf of its members and supports additional comments made by the PEA for other sections of the Proposed Rulemaking Order that were not included in the GPU Energy comments below.

57.191 Purpose

No Comment.

57.192 Definitions

Electric distribution company
Replace the phrase "retail customer" with the phrase "end user". This will provide consistency with the use of the phrase "end user" in the Electric generation supplier or electricity supplier definition.

Major event, paragraph (i)
Paragraph (i) does not contain information on the start and stop times for the major event nor is it clear that the 10% number is an aggregate number for the duration of the major event. To help clarify paragraph (i), GPU Energy recommends the addition of the following sentences:

The interruption duration shall start when the notification of the first interruption is received and shall end when all customers affected by the major event, who are able to

receive service, are restored. The 10% of the customers number is an aggregate of the customers in an operating area during the duration of the major event.

GPU Energy wants to point out that it is possible for one operating area to have a major event and it can have an effect on other operating areas in the company but not to the point of triggering the major event in the other areas. The major event would impact the CAIDI and SAIFI values for the other operating areas, however, those operating areas would not be able to remove the interruption data from the calculations of CAIDI and SAIFI for reporting purposes. GPU Energy therefore recommends that the following sentence be added to paragraph (i) of the major event definition:

If one operating area in an electric distribution company experiences a major event, then the major event definition shall also apply to all the operating areas for the purpose of excluding the major event interruption data from the calculations of the reported CAIDI and SAIFI.

Momentary customer interruption

There is no reference to "instantaneous" and "momentary" in the Proposed Rulemaking Order. Therefore, GPU Energy recommends that the Momentary customer interruption definition be deleted from the Definition section. If the definition remains, then GPU Energy recommends replacing "30 seconds" with "1 minute" in both locations. This will conform to generally accepted industry definitions.

Reliability indices

GPU Energy recommends that definition (ii) System Average Interruption Duration Index (SAIDI) be deleted. SAIDI can be calculated by multiplying CAIDI times SAIFI. The use of SAIDI, therefore, is redundant and does not add any value as one of the indicators to monitor performance and reliability. If the recommendation is accepted, then the use of the ratio, SAIDI/SAIFI, in the definition for (i) Customer Average Interruption Duration Index (CAIDI) should be deleted also.

GPU Energy further recommends that definition (iv) Momentary Average Interruption Frequency Index (MAIFI) be deleted. MAIFI is not a traditional indicator used by the electric utilities. Also, the electric utilities do not have an historic database for this indicator nor do they have a mechanism capable of collecting the data necessary to calculate the indicator. Also, it would be costly to implement and administer a program and system to collect this data.

The above recommendations to delete SAIDI and MAIFI are consistent with the Proposed Rulemaking Order which states that CAIDI and SAIFI will be the indicators to monitor performance and reliability.

Sustained customer interruption

Change the wording in the first sentence from "for a period longer than 5 minutes in duration" to

"for a period of 5 minutes or greater in duration". The new phrasing conforms to generally accepted industry language.

57.193 Transmission Service Reliability

No Comment.

57.194 Distribution System Reliability

Paragraph (h) (3)
This paragraph states that "The Commission will, from time to time, issue numerical values for the CAIDI and SAIFI indices for the reliability performance for each operating area.". However, neither this paragraph, nor the Order itself, states how the initial CAIDI and SAIFI values will be determined for each operating area. Paragraph (e) of this section states that "The procedures shall be designed to sustain, at a minimum, the historic level of reliability and to improve service reliability where necessary.". It is therefore reasonable to calculate CAIDI and SAIFI values based on the historic performance level for each operating area. GPU Energy recommends that the following method be used to calculate the initial numerical and subsequent values for CAIDI and SAIFI:

The numerical values, established by the Commission, for the CAIDI and SAIFI indices for the reliability performance for each operating area will be the average of the last 5 years of calculated values for CAIDI and SAIFI with the major event interruption data excluded.

57.195 Reporting Requirements

Paragraph (d)
GPU Energy recommends that the reporting requirements in paragraph (d) apply only for an operating area that fails to meet the CAIDI or SAIFI standard established for the operating area. The following two reporting requirements listed in paragraph (e) should, therefore, be moved to paragraph (d):

( ) A description of the electric distribution company's program for analyzing and improving the worst performing circuits.

( ) A summary of actions taken and the results of the program for the preceding calendar year.

GPU Energy further recommends that the following sentence be added to paragraph (d) to help clarify that the reporting requirements apply only for an operating area that does not meet the CAIDI or SAIFI standard established for the operating area

( ) For each operating area that fails to meet the CAIDI or SAIFI standard established for the operating area, the report shall contain an analysis of the worst performing circuits for the operating area.

Paragraph (e)
GPU Energy recommends that the reporting requirements in paragraph (e) be revised and apply only for an operating area that meets the CAIDI and SAIFI standard established for the operating area. There should not be a requirement to report the analysis of the 5% worst performing circuits for an operating area that meets the CAIDI and SAIFI standard established for the operating area. A list of the 5% worst performing circuits could be provided as information. GPU Energy recommends the following wording for paragraph (e):

For each operating area that meets the CAIDI and SAIFI standard established for the operating area, the report shall contain a list of the worst performing circuits for the operating area.

GPU Energy wants to emphasize that it does not oppose reporting requirements. Our concern is that the proposed reporting requirements of Section 57.195 , specifically the "worst performing circuits" portion, could be extremely burdensome for both the PUC staff and the electric utilities. Looking to what some other states have done in the area of setting reliability indicators, GPU Energy offers, for the Commission's consideration, information regarding the recent changes the New York Public Service Commission (NYPSC) made to its reporting requirement.

The New York Public Service Commission initially adopted a "worst performing circuits" reporting requirement similar to that proposed in the Pennsylvania Proposed Rulemaking. In February, 1997, the NYPSC modified the original reporting requirements to eliminate the "worst performing circuits" reporting requirement stating in effect that it was becoming a post-review exercise in that the utilities were merely compiling corrective actions that had already been taken and the reporting requirement had become a time consuming exercise of little benefit to the utilities. The NYPSC noted that while it sees benefits in the concept of circuit review, it replaced the "worst performing circuits" reporting requirement with requiring each utility to file the details of their program to analyze "worst performing circuits" each year, along with a representative sample of the program documentation. The NYPSC contended that the change would allow the NYPSC Staff to monitor the effectiveness of each utility's program without reducing the effectiveness of the reporting requirements.

57.196 Generation Reliability

No Comment.

57.197 Reliability Investigations

No Comment.

Comments to Statement of Commissioner John Hanger

GPU Energy offers the following comments to specific questions raised by Commissioner Hanger in his statement to the Proposed Rulemaking Order:

Are there other benchmarks of performance besides those suggested?

The reliability indicators such as CAIDI and SAIFI are sufficient for the Commission to monitor distribution reliability for each of the electric utilities in Pennsylvania.

Should Pennsylvania expect superior performance or accept above average performance?

Act 138 is clear on the point that reliability in Pennsylvania should not decrease as a result of deregulation and the advent of competition. To require above average or superior performance would place an unreasonable financial burden on the electric utilities. The forces of competition and customer choice will be the ultimate drivers toward achieving service reliability levels that meet or exceed customer expectation.

Are frequency and duration of outages sufficient criteria or should other measures, such as voltage reductions be used as well?

The average customer ultimately defines service reliability by the duration and frequency of all the service interruptions they experience. CAIDI and SAIFI are measures of duration and frequency. While momentary interruptions is another indicator, the electric utilities in Pennsylvania do not have historic data to establish a benchmark nor do they have a mechanism capable of collecting this data. Also, it would be costly to implement and administer a program and system to collect this data.

Mark R. Dingman
Vice President and General Manager

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December 9, 1997

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Mr. James J. McNulty, Acting Secretary
Pennsylvania Public Utility Commission
Commonwealth Avenue and North Street
P.O. Box 3265, North Office Building
Harrisburg, PA 17105-3265

RE: Electric Service Reliability Standards - Docket No. L-00970120

Dear Mr. McNulty:

Enclosed for filing in the above captioned matter, please find an original and fifteen (15) copies of the comments of UGI Utilities, Inc. - Electric Division.

Also enclosed is a copy of this letter, which should be date-stamped and returned in the enclosed stamped, self-addressed envelope.

Sincerely,

swd/plw
Enclosure

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Electric Service	:	
Reliability Standards	:	
52 Pa. Code Chapter 57	:	Docket No. L-00970120

COMMENTS OF
UGI UTILITIES, INC. - ELECTRIC DIVISION

UGI Utilities, Inc. - Electric Division ("UGI" or the "Company") submits the following comments in response to the Pennsylvania Public Utility Commission's ("Commission") proposed rulemaking in the above captioned matter adopted in its public meeting on June 12, 1997 at Docket No. L-00970120 and published in the ***Pennsylvania Bulletin*** on October 11, 1997.

Introductions:

UGI is the smallest of the major electric utilities serving approximately 60,000 customers in portions of Luzerne and Wyoming Counties in northeastern Pennsylvania. Reliability should be of the utmost interest and concern to all segments of the restructured electric industry, its regulators and its customers. UGI agrees that electric industry restructuring and the advent of direct retail access must not result in, nor be an acceptable excuse for the degradation of the service reliability our customers have come to know. However, the Commission must remember that reporting requirements like those introduced in this proposed order result in increased costs while each electric utility is currently operating under a rate cap. This is particularly onerous for small utilities with low rates.

§57.192 - Definitions:

The terms "Momentary Customer Interruption" should be eliminated from the list of definitions in this proposed order for several reasons. First service interruption data acquisition and processing systems preclude the practical, cost effective, continuous and uniform collection of service interruptions of less than five minutes. Secondly the term does not play any role in the service reliability objectives of the proposed regulation. Therefore, its presence is both unnecessary and a potential source of confusion when discussing reliability performance standards.

The definition of the "Momentary Average Frequency Index" (MAIFI) reliability index should be deleted. Existing and reasonably implementable service interruption data acquisition and processing systems preclude the practical, cost effective, continuous, and uniform collection of the momentary customer interruption information needed to produce MAIFI index results that can be meaningfully compared, from period to period, within an operating or control area, or for comparisons between electric distribution companies or with a Commission determined standard value. Furthermore, the MAIFI index is not, according to §57.194 (b) of the proposed regulation, a reliability performance standard. Therefore, its inclusion as a defined term is misleading and confusing to the extent that the index could be erroneously read into other parts of the proposed regulation.

§57.194 - Distribution system reliability:

Subsection §57.194 (b) (3) requires the Commission to issue reliability performance standards for each electric distribution company (EDC) operating area in the state and allows the EDC or other interested parties to petition the Commission for modification of those values. When setting these

standards, the Commission must use an objective, realistic approach. Climatic, topographic and population are just some of the conditions that vary between EDCs and between the different operating areas of an individual EDC. As a result it is incumbent upon the Commission to consider the specific conditions applicable to each operating area before setting that area's initial performance standard. As time passes and historic data is gathered the Commission should examine the results and adjust the initially set values as necessary.

§57.195 - Reporting requirements:

The reporting requirements imposed by this proposal are extensive, in some cases duplicative, and will be expensive to implement at a time when each EDC is operating under a rate cap. For example, §57.195 (e) of the proposed regulation requires an EDC to submit as part of its annual report a list of its worst performing circuits and a description of its programs for analyzing and improving these circuits. This not only duplicates the requirement for such an effort established by §57.194 (f), but also increases the time to prepare and the cost of preparing the annual report.

§57.196 - Generation reliability:

This section of the proposed regulation imposes limited service reliability requirements on electric generation suppliers (EGSs). As written this proposal does not require an EGS to become a member of the North American Electric Reliability Council (NERC) or the appropriate regional reliability council. This is inconsistent with the critical future responsibility that unregulated EGSs have in supporting a high level of service reliability. Membership in such councils must be required to ensure that EGSs will cooperate with and adhere to the full range of council

requirements and subject them to such council direction and discipline necessary to preserve the high level of electric service reliability that customers have come to know.

Respectfully Submittted,

Mark R. Dingman
Vice President and General Manager

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

IN REPLY PLEASE
REFER TO OUR FILE

November 13, 1997

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

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Re: L-970120/57-185
Proposed Rulemaking
Electric Service Reliability
52 Pa. Code, Chapter 57

Dear Chairman McGinley:

Enclosed is one (1) copy of comments received regarding the above regulation as required under Section 5(10)(b.1) of the Regulatory Review Act of June 30, 1989 (P.L. 73, No. 19).

Very truly yours,

Barbara Bruin
Executive Director

Comments submitted by:

Lawrence G. Spielvogel, Inc.

cc: First Deputy Chief Counsel Pankiw
Regulatory Coordinator Leming
Assistant Counsel Burket
Mr. Loper

COPY

LAWRENCE G. SPIELVOGEL, INC. CONSULTING ENGINEERS

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October 29, 1997

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97-10-20

Office of Prothonotary
Pennsylvania Public Utility Commission
PO Box 3265
Harrisburg, PA 17105-3265

Re: Electric Service Reliability Standards

Gentlemen:

Following please find my comments in response to your proposed rulemaking at page 5262 in the October 11, 1997 Pennsylvania Bulletin.

With the beginning of electric deregulation and downsizing by utilities, I have seen degradation of the reliability of utility service. In addition to the public health, safety, and welfare aspect of reliability, I have another concern. My concern is that unreliable electric service increases the cost to affected customers.

This increased cost is for those customers that have electric demand meters. Whenever there is an outage lasting 30 minutes or more, the measured demand for each customer is increased. This causes unjustifiably higher electric bills.

Most buildings rely on electricity to operate heating, air conditioning and equipment such as refrigerators. When electricity is restored after an outage, this type of equipment usually operates at full capacity to restore the conditions that existed before the outage. Depending upon the length of the outage and the severity of the weather, this increase in demand can be very large. I have seen cases where electric demands have doubled immediately after an outage. If you would like, I can provide specific examples showing when and where this has happened repeatedly.

A fairly large portion of the electric bill is based on the peak demand each month. In addition, many utilities also have a demand ratchet. Then, for the next 12 months, customers end up paying higher demand charges than if the outage had not occurred. This unfairly increases the customer electric bills, due to no fault of their own.

The problem is that most, if not all, demand metered customers do not even know their electric bills have increased because of outages. The solution to this problem is to have the Commission require electric distribution companies to grant demand waivers, upon request by the customer.

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LAW BUREAU

First, whenever there has been an outage of more than 30 minutes duration, the electric distribution company should be required to provide written notification or a note on the monthly electric bill to all affected demand metered customers telling them of their opportunity to request a demand waiver.

For customers with indicating demand meters, the electric distribution company should be required to waive any demand for the month when an outage occurred that exceeds the measured demand in the corresponding month in the year or two before the outage. For customers with recording demand meters, the electric distribution company should be required to waive electric demands in the first 24 hours after service is restored each time.

Therefore, provisions should be added to the proposed rule which require electric distribution companies to notify demand metered customers affected by outages, and provide demand waivers upon request.

Very truly yours,

LAWRENCE G. SPIELVOGEL, INC.

L. G. Spielvogel, P.E.

LGS:bhs

cc: Bureau of Conservation, Economics & Energy Planning

BY CERTIFIED MAIL

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

In re: Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability	: Docket No. L-00970120	

COMMENTS OF ENRON POWER MARKETING, INC.

Enron Power Marketing, Inc. ("Enron") files these Comments in response to the Commission's Notice of Proposed Rulemaking to amend 52 Pa. Code Chapter 57 to ensure electric service reliability.[1]

I. GENERAL COMMENT

The purpose of this docket is to carry out a mandate of the Electric Generation Customer Choice and Competition Act (the "Competition Act") by ensuring that retail competition does not jeopardize the continuation of safe and reliable service to all customers. As previously stated, it is Enron's strong view that competition and reliability are synergistic. A competitive electric service industry, created by requiring electric utilities to unbundle rates and services and to provide non-discriminatory open access over the utilities' transmission and distribution systems, will improve reliability, not diminish it.

Enron participated in the advance notice of proposed rulemaking by submitting comments, and was a participant in the Reliability Working Group meetings which are the basis for this Proposed Rulemaking. Enron is therefore generally supportive of the Rulemaking, and

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[1] The Commission issued its Proposed Rulemaking on June 13, 1997, at the above-captioned docket; the Proposed Rulemaking was published in the Pennsylvania Bulletin on October 11, 1997, 27 Pa. Bull. 5262.

will limit its comments to the following two areas: 1) Certain issues as to which the Rulemaking is silent, primarily the issues of what new transmission facilities are needed to ensure reliability and non-discriminatory access to new resources in order to stimulate competition in the generation supply area, and; 2) Proposals for clarifications and/or modification of, specific sections of the proposed rulemaking.

Enron would note that the characterization of Enron's position concerning the inspection and maintenance of distribution facilities at the top of page 5 of the Commission's Proposed Rulemaking Order requires specific clarification. The Order stated that the position of Enron and others is that no additional prescriptive standards are necessary since

> [E]lectric utilities have their own guidelines for operating and upgrading their systems to meet the current and future system needs for their customers. (Emphasis added.)

This position is correct in regard to the operation of the EDC system. However, with regard to upgrading the utilities' systems and/or adding new facilities, Enron's position is as follows:

> The Commission should take an active role between the utility and the ISO to ensure that the upgrading and building of new lines to bring in new supplies is developed in a manner that ensures that the existing EDC utilize non-discriminatory methods in upgrading and building of new lines for access to new resources.

Enron concurs with the utilization in this rulemaking of various reliability indices as a means of monitoring how well service is being supplied and the adequacy of the distribution system. Enron supports the Commission's proposal to rely on the NERC and Regional Reliability Councils for maintaining the electric system reliability. We further agree that by monitoring the activities of NERC and the Regional Reliability Councils, the Commission will be able to maintain the current levels of reliability under the new industry structure.

II. THIS PROPOSED RULEMAKING DOES NOT ADDRESS THE EMERGENCE OF THE ISO AS THE ORGANIZATION WITH FRONTLINE RESPONSIBILITY FOR RELIABILITY.

Commissioner John Hanger, in his statement in this Rulemaking docket, correctly refers to the ISO as "the single most important element of a reliable transmission and generation industry." With this comment we believe that Commissioner Hanger has identified a critical issue in regard to the addition of new facilities. The Proposed Rulemaking at page 3, citing § 2804(l) of the Public Utility Code, defines the Commission's responsibility to ensure the continuation of safe and reliable electric service to all consumers in the Commonwealth as encompassing the installation and maintenance of transmission and distribution facilities. Enron's view is that the installation of new distribution lines is typically not a problem from the competitive suppliers' perspective. This is a local issue and the benefits of the new distribution facilities accrue to the local area. However, installation of new transmission lines is different, in that the benefits of a new line could accrue to an area many miles away from the corridor impacted by a new line, i.e. benefits could even accrue to another state. Therefore, the inability and/or reluctance of the ISO or the utilities to cite and permit new lines could have a substantial impact on retail customers and suppliers, as new lines may be needed to connect new generation supplies or to increase low cost imports from other regions. The regulations are silent on this issue and, as indicated by Commissioner Hanger's statement, it is necessary to review the Commonwealth's role in determining what facilities are needed and encouraging their construction. It is possible that utilities will be tempted to make decisions about additional transmission with an eye to protecting their local markets and their affiliated generation

suppliers. Therefore, to allow the utilities simply to follow their own guidelines in regard to the upgrading and installation of new transmission facilities would be a short-sighted approach.

The fact is, under the restructured utility industry, the ISOs are the organizations that will have front line responsibilities for reliability. It may be that the Commission simply needs to acknowledge the ISO and its role in determining and encouraging the construction of needed facilities. This would probably be the preferred approach. The Commission, however, may want to consider whether it is necessary to implement some standards to address the question of how the need for new facilities would be determined. From a competitive supplier standpoint, how this issue develops is very relevant to determining whether utility market power may be unfairly utilized in the marketplace.

Specifically, Enron would expand the definition of "adequacy" defined under Subchapter B, § 57.192[2] to recognize that in a newly structured industry customers may have market needs to gain competitively priced generation. Therefore, the definition of adequacy should be expanded to include not only that power needed to keep the lights on but also to address a customer's need to import low cost generation into the area.

III. CLARIFICATION AND/OR MODIFICATION REGARDING SECTION 57.197 RELIABILITY INVESTIGATIONS.

Section 57.197 in Annex A of the proposed order, contains proposed regulations regarding the Commission's investigative and enforcement power and is applicable to both electric distribution companies and electric generation suppliers. Enron has no quarrel with the Commission's authority and/or ability to investigate the provision of service by electric

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[2] Proposed Rulemaking Order in this docket, entered June 13, 1997, proposed rules at Annex A.

generation suppliers in regard to generation reliability. Enron would note that the Commission necessarily must have in place enforcement provisions governing the regulated functions of the electric distribution companies. However, it does not follow that the same type of regulation is required for electric generation suppliers. The essence of the Electric Generation Customer Choice and Competition Act is that distribution and transportation shall remain regulated functions while generation is to become a competitive function. Enron reiterates its initial statement, made in these comments, that competitive electric service taking place over the utility's transmission distribution systems will improve reliability, not lessen it. Therefore, the goal in the long run should not be to attempt to regulate electric generation suppliers in a manner identical to or even to the regulatory rules applicable to electric distribution companies.

In the instant proposed regulations, there are approximately four pages that clearly define how an EDU's provision of service will be evaluated in terms of reliability. For electric generation suppliers, there are three paragraphs under § 57.196 relating to generation reliability, and not all of these even apply to suppliers or serve to define reliability criteria.

Enron has two concerns with respect to § 57.196(a). First the requirement that suppliers "maintain . . . generation facilities in conformance with established industry standards and practices," is unnecessarily vague and redundant. The section (appropriately) requires compliance with "operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council . . .." Those organizations' standards and requirements are the only clear reflection of "industry standards" that should be utilized to judge the adequacy of a supplier's generation reliability. Accordingly, the phrase "established industry standards and practices and" should be eliminated.

Second, while the section, as written provides certain general requirements it fails to identify specific standards to which a supplier must comply beyond NERC and regional council standard compliance.

Section 57.196(a) clearly applies to electric distribution companies that continue to provide electric generation service, as it refers to "maintaining its generation facilities in conformance with established industry standards and practices." This does not specify reliability criteria for suppliers. Section 57.196(b) discusses standards set forth by the appropriate regional reliability council or successor organizations. These organizations, as the Commission is aware, will establish penalties for electric generation suppliers that are non-compliant with their applicable reserve requirements and standards and, therefore, no PUC enforcement authority would be necessary. This leaves only 57.196(c) to address the compliance by electric generation suppliers with applicable Commission regulation procedures and orders. It is therefore difficult for Enron to determine in reference to § 57.197(b)(1), exactly what corrective action the Commission might mandate that suppliers must take to improve the reliability of service, as there are very few specific criteria by which to evaluate what reliability on the part of the electric generation supplier would encompass. Enron would, therefore, suggest that § 57.197(b) be deleted.

Should the Commission not adopt the above-recommendation, in regard to § 57.197(b)(ii), Enron would suggest that the following language be inserted on line 3, between the words "may" and "elect":

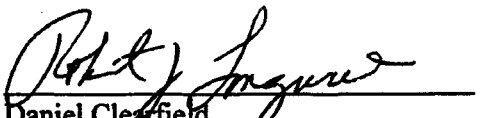
> [D]irect the penalty the Commission deems necessary up to and including the elect[ion] . . . .

Enron makes this suggestion because this section could be read to indicate that the only possible penalty for the failure of an electric generation supplier to take corrective action would be revocation of the supplier's license. Enron does not believe that that is the Commission's intent, and would therefore request this clarifying insert be included.

IV. CONCLUSION

Enron is very supportive of these regulations, and believes that they are an important first step for the Commission to meet its obligation of preserving the continued reliability of the transmission industry distribution systems. As stated in these comments, there are issues raised be the restructured electric utility industry that go above and beyond traditional reliability issues and will require the Commission's wisdom and guidance. Enron has also provided specific corrections that require some modification as identified in these comments to aspects of the proposed regulations. Enron therefore urges that the suggested modifications and/or clarifications listed here, as well as the further defining of the Commission's role in regard to ISO utilities and the installation of new transmission facilities required to meet future competitive service as has been proposed, be reflected in the final rules adopted by the Commission.

Respectfully submitted,



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Dated: December 10, 1997

Before The
PENNSYLVANIA PUBLIC UTILITY COMMISSION

In re:	:	L-00970120
	:	ORIGINAL: 1893
RULEMAKING	:	COPIES: Nanorta
To Amend 52 Pa. Code Chapter 57	:	Sandusky
to Ensure Electric Service Reliability	:	Legal (2)

COMMENTS OF THE
PENNSYLVANIA RURAL ELECTRIC ASSOCIATION

NOW COMES, the Pennsylvania Rural Electric Association ("PREA"), by and through its attorneys, pursuant to the Notice of Proposed Rulemaking Order of this Commission, published in the Pennsylvania Bulletin on October 11, 1997, and files the following Comments in the above captioned proceeding regarding the Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability. These Comments are in addition to the Comments filed March 14, 1997 in the proceeding.

1. In defining a Major Event, PREA believes that weather conditions which routinely occur in Pennsylvania should be excluded unless they occur during and are attributable to a "disaster emergency" as declared by the Pennsylvania Emergency Management Agency ("PEMA").

2. The Pennsylvania Public Utility Commission ("PUC") needs to specify a specific time period for the Electric Distribution Company (EDC) to correct problems. For this purpose, consistent with the PREA's previous Comments, both a System Average Interruption Duration Index (SAIDI) and a Customer Average

Interruption Index (CAIDI) could be utilized as reliability indices, calculated as follows:

> Actual SAIDI and CAIDI would be calculated annually for each delivery point and compared to the EDC system-wide retail SAIDI and CAIDI for the last ten years calculated at the substation level, with the worst year and best year excluded. The SAIDI and CAIDI at each delivery point would be at least as good as EDC's system-wide retail and wholesale reliability, as calculated above. Calculations of the SAIDI and CAIDI would be based on the total number of end-use consumers, regardless of whether the end-use consumer is served by the LDC's facilities or the facilities of a PREA member.

3. More detail is also needed as to how the Commission plans to direct the EDC to correct reliability problems and how it plans to enforce its directives.

4. PREA suggests that individual reliability goals be established for each delivery point on an annual basis calculated by voltage level of service as follows:

i) Delivery points above 46kV
CAIDI - 0.25 hour, SAIDI - 0.25 hour

ii) Delivery points at 46kV
CAIDI - 0.50 hour, SAIDI - 1 hour

iii) Delivery point at 34.5kV or 22.8kV
CAIDI - 0.75 hour, SAIDI - 1.5 hours

iv) Delivery points at less than 22.8kV
CAIDI - 1.0 hour, SAIDI - 2.0 hours

WHEREFORE, the Pennsylvania Rural Electric Association requests that the Commission consider the foregoing Comments regarding its Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability.

Respectfully submitted,

THOMAS, THOMAS, ARMSTRONG & NIESEN

By _____
Patricia Armstrong

Attorneys for
Pennsylvania Rural Electric Association

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December 10, 1997

VIA HAND DELIVERY

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Room B-20, North Office Building
P.O. Box 3265
Harrisburg, PA 17105-3265

RE: Electric Service Reliability Standards: 52 Pa. Code Chapter 57; Docket No. L-00970120

Dear Mr. McNulty:

Enclosed for filing with the Commission are the original and fifteen (15) copies of the Comments on behalf of the Industrial Energy Consumers of Pennsylvania ("IECPA") in the above-referenced matter.

Please date stamp the extra copy of this transmittal letter and kindly return it for our filing purposes.

Very truly yours,

McNEES, WALLACE & NURICK

By Pamela C. Polacek/gm
Pamela C. Polacek

Counsel to the Industrial Energy
Consumers of Pennsylvania

PCP/clc
Enclosures
c: Office of Consumer Advocate (w/enc.)
Office of Trial Staff (w/enc.)
Office of Small Business Advocate (w/enc.)
Blaine J. Loper, Bureau of Conservation, Economics & Energy Planning (w/enc.)
Susan T. Povilaitis, Assistant Counsel, PUC Law Bureau (w/enc.)
Pennsylvania Electric Association (w/enc.)

bc: Independent Regulatory Review Commission (w/enc.)

PENNSYLVANIA ELECTRIC ASSOCIATION

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James M. Cunningham
President

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Legal (2)

December 10, 1997

Office of Prothonotary
Pennsylvania Public Utility Commission
Room B-20, North Office Building
P. O. Box 3265
Harrisburg, PA 17105-3265

Re: Proposed Rulemaking:
Electric Service
Reliability Standards
Docket No. L-00970120

To the Prothonotary:

Enclosed herewith are an original and 15 copies of comments in the above-captioned rulemaking submitted by the Pennsylvania Electric Association on behalf of:

Allegheny Power
Duquesne Light Company
Metropolitan Edison Company and Pennsylvania Electric Company
d.b.a. GPU Energy
PP&L, Inc.
Pennsylvania Power Company
PECO Energy Company
UGI Utilities, Inc.

A copy is being served on the Commission's Bureau of Conservation, Economics and Energy Planning.

Sincerely,

James M. Cunningham
President

JMC:mjn
Enclosures
CC: Bureau of Conservation,
Economics and Energy Planning

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Proposed Rulemaking:
Electric Service
Reliability Standards

Amending 52 Pa Code Ch. 57
Adding Subchapter N
Electric Reliability Standards

Docket No. L-00970120

Pennsylvania Bulletin, Vol. 27, No. 41
October 11, 1997
Page 5262 et. seq.

COMMENTS OF THE
PENNSYLVANIA ELECTRIC ASSOCIATION
ON BEHALF OF:

Allegheny Power
Duquesne Light Company
Metropolitan Edison Company and Pennsylvania Electric Company
d.b.a. GPU Energy
PP&L, Inc.
Pennsylvania Power Company
PECO Energy Company
UGI Utilities, Inc.

Pennsylvania Electric Association
301 APC Bldg., 800 North Third St.
Harrisburg, Pennsylvania 17102-2025
(717) 257-5850

James M. Cunningham
President

Dated: December 10, 1997

Comments of the Pennsylvania Electric Association
on Behalf of its Member Companies, on
Pennsylvania Public Utility Commission's Proposed Rulemaking
Regarding Electric Service Reliability

Introduction

On behalf of its member companies, the Pennsylvania Electric Association (PEA) welcomes this opportunity to provide its views on a subject that has and will continue, perhaps even more so, to be one of utmost interest and concern to all segments of the restructured electric industry, its regulators and its customers. None will dispute the statement that electric industry restructuring and the advent of direct retail access must not result in degradation of historic levels of service reliability. PEA member companies have therefore carefully studied the proposed regulation, respectfully submit the following comments and requests, and urge their studied consideration and support by all responsible parties in the rulemaking process.

Section 57.192. Definitions

1. Major event, Clause (i) – This definition is quite important in assessing electric transmission and distribution service reliability in that its underlying concept is that some significant electric service interruptions are either the results of involuntary factors beyond the control of the electric distribution company, such as weather conditions, or the result of voluntary intentional actions of the company necessary to assure reliability and security of the transmission and distribution system, such as deliberate service interruptions under extreme operational conditions. Hence it is required that the

definition language be comprehensive and unambiguous. PEA believes that in the following several respects, the proposed language fails to satisfy those requirements:

- The points in time that define the duration, i.e., "start" and "end" of a major event, are indeterminate. Does the event "start" only when the "10% - 5 minutes or greater" criteria are first realized, and "end" when those criteria no longer exist? Or alternatively, is the start of a major event defined by the point in time, for a particular service interruption causation, at which the first few, scattered service interruptions are first reported, and its end defined as the time when all service is subsequently restored. PEA believes the latter statement is that likely intended by the proposed regulation and is that which accords with past practice, operational reality, and bonafide measurement of the customer impact of service interruptions.
- A time reference frame for the "10%" criterion is not specified. Is it a major event only if, at any instant throughout the duration of the event, 10% or more of the customers of an operating area are out of service for 5 minutes or more? Or alternatively, is it a major event if, throughout the duration of the event, 10% or more of operating area customers have experienced service interruption of 5 minutes or more? PEA believes that the latter statement is that likely intended by the proposed regulation and is that which accords with past practice, operational reality, and bonafide measurement of the customer impact of service interruptions.
- The "adverse weather" conditions in the proposed regulation are of the violent type. Hence, judicial interpretation might preclude such relatively non-violent conditions as wet, heavy snowstorms on fully leafed trees, as the recent mid-west experience; heat

storms; cold waves; floods; etc. from being considered a "major event". It is imperative to insert some sense of non-violent weather conditions in the definition language.

- Accidental damage and incidents of civil unrest or sabotage are involuntary factors beyond the control of the electric distribution company. These should be expressly recognized as legitimate potential causes of major events.
- Many adverse weather conditions may affect one or more operating areas of a particular electric distribution company more severely than other areas of that company, such that service interruptions in the less severely affected areas do not meet the threshold 10% - 5 minutes criteria. Nevertheless, logical application of the essential rationale of the "major event" concept argues strongly that the service interruptions in all operating areas should be viewed as an integral part or complement of the "major event" and therefore should in all respects be accorded "major event' analysis and reporting treatment.

On the basis of the foregoing considerations, PEA respectfully urges revision of Clause (i) as follows:

> (i) **With respect to a specific operating area, an identifiable period of continuing, dispersed interruption of electric service caused by a discrete adverse weather condition, such as a thunderstorm, hurricane, tornado, snow or sleet storm, flooding, extreme temperature; by an unusual equipment failure; by accidental damage; or due to incidents of civil disturbance or sabotage; during which period 10% or more of individual customers have**

each experienced a service interruption of 5 minutes. The period begins at the time of the first ascribable customer service interruption and ends with restoration of service to all affected customers. Service interruptions in other remaining operating areas of the electric distribution company, even though not affecting in such operating areas 10% or more of individual customers for 5 minutes or greater, shall nevertheless, in all respects be considered an integral complement of the major event and treated accordingly for the analysis and reporting requirements of this chapter.

2. Momentary customer interruption - This definition relates to service interruptions of less than 5 minutes. For the following reasons, PEA respectfully urges that this definition be deleted:

   - Existing or reasonably implementable service interruption data acquisition and processing systems preclude the practical, cost-effective, continuous and uniform collection of short service interruptions of less than 5 minutes.
   - In the proposed regulation, the term appears and is used only in the definition of Momentary Average Frequency Index (MAIFI), which index, see below, PEA also urges deletion for reason stated therein. In short, neither "momentary customer interruption" nor MAIFI play any role whatsoever in the substantive service reliability objectives of the proposed regulation. Hence their presence is both superfluous and a potential future source of confusion.

Alternatively, should the Commission not grant PEA's request for deletion of this superfluous language, then PEA wishes to draw the Commission's attention to substantively

related language now being drafted by a relevant committee of the Institute of Electrical and Electronic Engineers (IEEE) as part of a forthcoming IEEE standard on criteria for service reliability reporting and analysis. In relevant portion, the IEEE proposal recognizes the defining boundaries of a momentary interruption to range from "1 minute" to "less than 5 minutes". For technical reasons, the IEEE proposal recognizes the impracticality, and virtual impossibility, of consistently acquiring and rationally applying information on interruptions of less than 1 minute. In this vein, the IEEE proposal does not recognize the concept of "instantaneous interruption", it being a concept impossible to define except by subjective reference to a practicable, quantifiable time period of 1 minute. In view of the rationale of the forthcoming IEEE standard, and because that standard will later be adopted as a standard by the American National Standards Institute (ANSI), PEA urges the Commission, as the alternative to the more preferable deletion previously requested, to adopt the following definition:

> **Momentary customer interruption – The loss of electric service by a customer for a period of 1 minute to less than 5 minutes. Interruptions of less than 1 minute are excluded.**

3. Reliability Indices (iv) Momentary Average Frequency Index (MAIFI) – This reliability index quantifies only "momentary interruptions". For the following reasons, PEA respectfully urges that this definition be deleted:

   - Existing or reasonably implementable service interruption data acquisition and processing systems preclude the practical, cost-effective, continuous, and uniform collection of momentary customer interruption information needed to produce

(MAIFI) index calculations that could be meaningfully compared, from period to period, within an operating or control area; or for any given time period, comparison made between electric distribution companies or with a Commission determined standard value.

- The index is not elsewhere made a requirement in the substance and implementation of the proposed regulation, in particular the reliability performance standards of Section 57.194(h). Hence its inclusion as a defined term sets up the misleading and confusing inference that the index must be erroneously "read into" other parts of the proposed regulation.

4. Worst-performing circuits – This term addresses the concept of the 5% of circuits which have the lowest reliability performance in an operating area which has failed to meet Commission reliability performance standards to be set under Section 57.194(h). The first sentence phrase ", for each reliability index" is ambiguous in that a literal interpretation would require that each of the four now presently defined reliability indices must be calculated for all circuits within an operating area. Such an interpretation is neither practically possible for MAIFI (see prior Comment 3 relating to MAIFI) nor for SAIDI, necessary for several reasons:

   - Section 57.197(h), relating to distribution circuit reliability, requires calculation of only CAIDI and SAIFI for comparison with Commission-issued standard values.
   - The service reliability criteria underlying SAIFI is inherent and expressed in the calculation of the required CAIDI, as is demonstrated in the mathematical expression in the CAIDI definition.

For these reasons, the language of this definition should be revised to expressly specify use of only CAIDI and SAIFI as the applicable reliability indices to be used in this context. See the suggested revised definition of this term following Comment 5.

5. Worst-Performing Circuits – The proposed language speaks in indefinite, subjective language of "...operating area with the highest achieved values (lowest performance levels) for the reliability index." For the reasons set forth in this and the preceding comment, PEA strongly urges revision of this definition as follows:

> **Worst-performing circuits – Circuits associated with specific operating areas identified by application of the following process:**
>
> 1. **Identify those operating areas whose CAIDI or SAIFI values, individually or both, are unacceptable as measured by Commission-established values for that area.**
> 2. **For an operating area whose CAIDI value is unacceptable, worst-performing circuits are the 5%, or less as the case may be, of the total circuits in the area whose individual circuit CAIDI value is unacceptable.**
> 3. **For an operating area whose SAIFI value is unacceptable, worst-performing circuits are the 5%, or less as the case may be, of the total circuits in the area whose individual circuit SAIFI value is unacceptable.**

Section 57.193. Transmission System Reliability

6. Subsection (a) – This subsection, in general language, requires an electric distribution company (EDC) to install, maintain and operate its transmission facilities in conformity

with industry standards and practices, reliability council requirements, and "...the most recent National Electrical Safety Code." For several reasons, as follows, PEA believes the language should be revised to accord with actual industry practice.

- With respect to the references to the National Electrical Safety Code (Code), the literal demands of this subsection language are unreasonable, inconsistent with long established practice, and contrary to the actual Code provisions in that facilities governed by the Code, while required to meet current Code requirements upon their initial installation, are permissibly maintained and operated in conformity with the relevant requirements of the same Code edition, and need not be maintained and operated, years later, in conformity with "...the most recent..." Code.
- Reliability council policies and requirements relate to continuing, real-time operations involving power flows in and through a transmission system, while Code requirements relate to the electrical, mechanical and civil engineering aspects of the design, installation and maintenance of the physical transmission and distribution facilities. Thus the two sets of requirements are quite different. These considerations, combined with the concern expressed above, leads PEA to request division and restatement of this subsection into two separate sentences, as follows:

  (a) **An electric distribution company shall install, maintain, and operate its transmission facilities in conformity with the requirements of applicable edition of the National Electrical Safety Code. An electric distribution company shall operate its transmission facilities in conformity with the**

operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council, or successor organizations.

Section 57.194. Distribution system reliability

7. Subsection (b) - Similar to provisions of Section 57.193(a), relating to transmission system reliability, this subsection (b) requires an EDC to install, maintain and operate its distribution system in accordance with "...the most recent National Electrical Safety Code. PEA's concern in this respect is the same as previously expressed in Comment 6, and will not be repeated. Likewise, the remedy for PEA's concern is similar to that previously urged, i.e., revise subsection (b) to read:

   (b) **An electric distribution company shall install, maintain, and operate its distribution facilities in conformity with the requirements of the applicable edition of the National Electrical Safety Code.**

8. Subsection (f) - This subsection requires an EDC to "...develop and maintain a program for analyzing its worst-performing circuits during the course of each year." The language is ambiguous and undirected in that no objective is stated for the required "analyzing". To remedy these concerns, PEA urges revision, as follows, to provide a more clear and comprehensive directive.

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

9. **Subsection (h)(3)** - This subsection requires the Commission to issue reliability performance standard values for the CAIDI and SAIFI indices for each of the approximately 32 EDC operating areas in the state; and allows an EDC or other

interested party to petition the Commission for modification of those values. PEA is concerned that the language lacks any requirement for an objective, realistic approach by the Commission to setting the values. Climatic, topographic, population and infrastructure conditions vary quite widely among the operating areas throughout the state, therefore it is necessary that specific conditions applicable to each area be considered in setting initial values. As time progresses, it will be necessary to examine whether or not the initially set values are appropriate in light of changed conditions within an operating area.

In the context of this subsection (h)(3), PEA wishes to address a matter of concern to the four smaller of its member companies, these being Citizens' Electric Company, Pike County Light and Power Company, Wellsboro Electric Company, and UGI Utilities, Inc. - Electric Division. Each of these four companies are unique in that they are a single operating area covering a varying number of distribution circuits. To varying degrees, these companies have not found it necessary to acquire service interruption information in such form and manner as to allow calculation of CAIDI or SAIFI values for individual circuits. Rather, they have found it adequate to acquire information for and calculate those values for their entire single company-operating area. Then, because of their intimate knowledge of distribution circuit problem areas within a relatively small geographic company area, they are able to take requisite corrective actions. Therefore, PEA respectfully suggests that in light of regulatory prudence and economy considerations, the Commission should exercise appropriate judgment in applying the more stringent reporting and compliance provisions of these regulations to those four companies. Specifically, for example, PEA suggests that the four companies be absolved

from mandatory calculation and reporting of CAIDI and SAIFI values of their individual distribution circuits, and instead be required to acquire information for, apply analysis of, and report such values only for their integral company-operating area as a whole. PEA is not at this time proposing for insertion in the regulation of explicit language to address this concern. However, should the Commission wish to do so, PEA will be most pleased to cooperate with Commission staff in its drafting.

To address these concerns, PEA respectfully requests a brief insertion at the beginning of the first sentence of this subsection, as follows:

> **(3) After consultation with the appropriate electric distribution company, the Commission will, ...for each operating area.**

Section 57.195. Reporting requirements

10. Subsection (c) – This subsection requires that the annual reliability report to be submitted to the Commission by each electric distribution company is to "...include a table showing the actual values of each of the reliability indices for each operating area..." (emphasis supplied) PEA's concern about this language is much the same as previously stated at length in Comment 4, i.e., ambiguity leading to erroneous and unintended inclusion of other than CAIDI and SAIFI values. The ambiguity is easily resolved by rephrasing the offending sentence portion to read "include a table showing the actual CAIDI and SAIFI values for..."

11. Subsection (e) – This subsection states additional requirements for an electric distribution company's annual reliability report. These include, in brief:

- A list of worst performing circuits that fail to meet CAIDI or SAIFI standards for each operating area.
- A description of the company's program for analyzing and improving such circuits.
- A summary of program actions and results for the preceding year.

On several accounts, the proposed language is confusing and seemingly duplicative and inconsistent.

- The language is inconsistent with the definition of "worst-performing circuits" (See Comment 5.)
- The language is seemingly duplicative of, and yet inconsistent with that of Section 57.194(f), relating to a program for analyzing worst performing circuits. (See Comment 9, in which PEA suggests revision to reflect a more general circuit analysis program.)
- It seems to be the intent of this subsection (e) to focus on circuits within a particular operating area that has failed to meet its standard CAIDI or SAIFI value. If this be so, and with the preceding comments in mind, the following revision of subsection (e) is suggested:

> (e) **For those operating areas of an electric distribution company which fail to meet either Commission-established CAIDI or SAIFI standard values, a list of the worst-performing circuits within such areas, a description of the company's program for service reliability improvement of such circuits, and a summary of actions and results under the program for the preceding calendar year.**

Section 57.196. Generation reliability

12. (Entire Section) – This section imposes service reliability related requirements on electric generation suppliers (EGSs). These requirements focus on

- "...compliance with the operating policies, criteria, requirements and standards of NERC and the appropriate regional reliability council or successor organization." (Note that in this regard the language is appropriately similar to that of Section 57.193, relating to transmission system reliability.)
- "...maintain appropriate generating reserve capacity in compliance with any applicable reserve requirement standards set forth by the appropriate regional reliability council, or successor organization." (Note that in this regard the requirements are appropriately specific to EGSs.)

In PEA's view, the foregoing specified requirements suffice insofar as they go. However, they are deficient in one most important respect: they fail to require actual committed membership by EGSs in "...NERC and the appropriate regional reliability council, or successor organization." This deficiency, in PEA's strongly held view, is seriously inconsistent with the critical future responsibility that unregulated EGSs will bear in supporting high levels of service reliability. In the past case of vertically integrated electric utilities, the generation function has always been a functioning member of NERC and regional councils. In the emerging industry restructuring, electric distribution companies will of course continue such membership. By the same token, nothing in a restructured, competitive, direct access, electric industry model suggests any rational, defensible reason why all participating EGS entities

should not continue, as did their vertically integrated counterparts, to be full-fledged, card-carrying members of NERC and regional councils. Membership will clearly serve to enhance their active participation in cooperation with and adherence to the full range of council activities and requirements, and subject them to such council direction and discipline necessary to preserve the high level of electric service reliability traditionally enjoyed by consumers. However, in the spirit of not imposing unnecessary regulatory burdens on commerce, PEA could understand why the Commission may wish to exempt "brokers" and "marketers" from the requirement of NERC and regional council membership. As defined in the Electricity Generation Customer Choice and Competition Act, a "broker or marketer" is a specific type of Commission-licensed EGS who "acts as an agent or intermediary in the sale and purchase of electric energy but that does not take title to electric energy" (emphasis supplied). Clearly, in a transaction involving a broker or marketer, the seller as a principal to the transaction has title to the energy and thus properly should be required to hold NERC and regional council membership. Not so, however, the broker or marketer, who are not principals in the transaction and should be able to rely on the seller to ensure that the transaction complies with NERC and regional council requirements.

Statement of Commissioner John Hanger

Commissioner Hanger's statement raises a number of matters, in several categories, on which PEA wishes to comment.

13. **Distribution system performance benchmarks and criteria** – The following questions are posed:

- "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?"

  PEA believes that the nationally recognized and applied CAIDI and SAIFI standards are more than adequate, and cost-effective, measures of service reliability. Use of additional measures would require added expense and produce little, if any, additional appreciation of service reliability. Voltage reductions go unnoticed by almost all customers and may be nothing more than a slight inconvenience to the remaining few, hence they are not meaningful service reliability indicators.

14. **Electric supplier reserve requirements** and
15. **Electric supplier reliability council membership** – Commissioner Hanger's position is that not all suppliers, particularly smaller ones, should be required to physically provide reserve requirements, but may have its reliability council reserve requirement "...supplied by the system and the costs fully recovered through system charges..." In a related statement, Commissioner Hanger sees no reason to require a supplier, serving only a few direct access retail Pennsylvania customers, to be a "member" of a regional reliability council, but he nevertheless believes that "...certainly compliance with the requirements of the Council is appropriate."

PEA respectfully disagrees with Commissioner Hanger's views on this matter, particularly with regard to the membership question. If a supplier, regardless of the number of customers served, must arrange for reserve requirements through control areas and also

must comply with all other corresponding requirements, it is difficult to understand why such a supplier, benefiting from all the resources of the council, should not be required to be a member.

16. **Commission intervention to ensure development of reliable transmission and generation** - Commissioner Hanger appears to believe that it is presently inappropriate for the Commission to intervene with reliability councils or generation and transmission owners by imposing specific rules for ensuring continued reliability. He then welcomes comments on the question: "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?"

PEA agrees that Commission intervention with reliability councils or generating and transmission owners to impose specific reliability related rules is completely unwarranted at this time, although the Commission should continue to maintain a presence at the regional reliability councils. No present or foreseeable operating conditions exist to suggest the need for or character of such interventions. Obviously then, no specific time can be identified when, if ever, such Commission interventions might be warranted. PEA suggests that collection and analysis of the service reliability data required by this proposed regulation will serve to provide timely and reasonable indicators of when and to what degree such Commission interventions might be warranted.

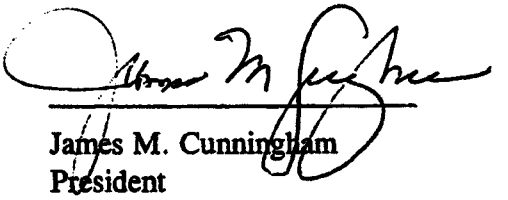
Conclusion

After thorough examination of the proposed regulation, PEA and its member companies believe that all will agree that it is absolutely necessary that the finally adopted regulation be clear and free of misdirecting and conflict-instigating ambiguity. As the

representative of those organizations which uniquely have a long history of direct, front-line experience with service reliability responsibilities, PEA respectfully requests that the Commission fully consider and affirmatively respond to all of the foregoing comments and requests.

PEA also respectfully commends to Commission consideration comments that are being filed by several of its member companies.

Respectfully submitted:



James M. Cunningham
President

December 10, 1997

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December 10, 1997

James J. McNulty, Esquire
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P. O. Box 3265
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Sandusky
Legal (2)

Re: Proposed Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability Docket No. L-00970120

Dear Mr. McNulty:

Enclosed for filing on behalf of PP&L, Inc. (PP&L) are an original and fifteen (15) copies of PP&L's comments in this proceeding. A copy of these comments is being served upon the Commission's Bureau of Conservation, Economics and Energy Planning and the Commission's Law Bureau.

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on December 10, 1997, which is the date it was deposited with an overnight express delivery service as shown on the delivery receipt attached to the mailing envelope.

In addition, please date and time-stamp the enclosed extra copy of this letter and return it to me in the envelope provided.

If you have any questions regarding the enclosed comments, please call.

Very truly yours,

Paul E. Russell

Enclosures

cc: Mr. Blaine J. Loper, Bureau of Conservation, Economics and Energy Planning
Susan T. Povilaitis, Esquire, Law Bureau

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Proposed Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability	:	Docket No. L-00970120

COMMENTS OF PP&L, INC.

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1. Introduction

On December 3, 1996, Governor Tom Ridge signed into law the Electricity Generation Customer Choice and Competition Act (the "Act"). The Act restructures the electric utility industry in Pennsylvania to provide customers choice of their electricity generator.

To implement these restructuring changes, the Act adds Chapter 28 to the Public Utility Code (the "Code"), 66 Pa.C.S. § 101, et seq. Specifically, 66 Pa.C.S. § 2802(12) states that reliable electric service is of the utmost importance and that electric industry restructuring should ensure the reliability of the interconnected electric system by maintaining the efficiency of the transmission and distribution system. In addition, 66 Pa.C.S. § 2804(1) requires the Pennsylvania Public Utility Commission ("PUC" or the "Commission") to ensure the continuation of safe and reliable electric service to all consumers in the Commonwealth.

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. An advance notice of proposed rulemaking was published in the Pennsylvania Bulletin on February 15, 1997, with a 30-day comment period. 27 Pa. B. 809. The Commission received comments from a number of interested parties regarding these issues.

On June 12, 1997, the Commission adopted a proposed rulemaking which adds Subsection N to its regulations (52 Pa. Code, Chapter 57), establishing standards and procedures for assessing the reasonableness of electric service reliability. Notice of this proposed rulemaking was published in the Pennsylvania Bulletin on October 11, 1997, with a 60-day comment period. 27 Pa. B. 5262.

Following are PP&L, Inc.'s ("PP&L" or the "Company") comments to the Commission's Proposed Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability. The Company believes that these proposed regulations generally are well drafted and will help to maintain acceptable levels of service performance for Pennsylvania's electricity customers. Nevertheless, PP&L is submitting specific comments regarding definitions, transmission system reliability, distribution system reliability, reporting requirements and reliability investigations.

2. Specific Comments

Section 57.192 - Definitions

The term "Major Event" is defined as "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 five minutes or greater."

PP&L believes that a "Major Event" also can be caused by other types of natural disasters such as earthquakes, floods, fires, or other unusual events. Therefore, the definition of a major event should not be constrained to weather or unusual equipment failures.

Historical experience shows that, during a major event, numerous customers will be interrupted and those customers will have service restored at various time periods. Because it is impractical to track each and every interruption during the course of the event, PP&L believes that it would be more practical to report on only those customers with interruptions lasting five minutes or longer. If these interruptions affect more than 10% of the customer base, a "Major Event" will be deemed to have occurred.

PP&L also believes that, when a major event affects one operating area and then moves through the electric distribution company's system affecting its other operating areas, the resulting interruptions for all affected areas should be excluded from the utility's overall reliability indices.

Therefore, PP&L recommends that the definition of a "Major Event" should be modified as follows: "An interruption of electric service which affects at least 10% of the customers in an operating area over the course of the event, for a duration of 5 minutes or greater." When one operating area experiences a major event, the major event shall be deemed to extend to all other affected operating areas.

Alternatively, the term "Major Event" also is defined as "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)."

PP&L believes that the definition should be expanded to encompass system stability concerns, overloaded equipment and emergency repairs. PP&L recommends that the language in this section should be modified as follows: "An interruption of electric service resulting from an action taken by an electric distribution company to maintain the adequacy and security of the electrical system, including, but not limited to, emergency load control, emergency switching and energy conservation procedures, which affects at least one customer, as described in § 57.52 (relating to emergency load control and energy conservation by electric utilities)."

The term "Momentary Customer Interruption" is defined as "the loss of electric service by one or more customers for a period of between 30 seconds and

5 minutes in duration." However, the proposed regulations do not require utilities to report momentary interruptions. Therefore, this definition could cause unnecessary confusion. PP&L recommends that this definition be deleted.

The term "Instantaneous Interruption" is defined as "interruptions of less than 30 seconds in duration." However, the regulations do not require utilities to report instantaneous interruptions. Therefore, PP&L recommends that this definition also be deleted.

PP&L also would note the costs associated with installing devices to record momentary or instantaneous interruptions at the customer level are prohibitive and that the devices are not proven to be cost-effective.

PP&L recommends that the definition of "Reliability" should be consistent with the definition of that term in § 2803 of the Act. 66 Pa.C.S. § 2803.

The term "Reliability Indices" is defined as "service performance indicators which measure the frequency and duration of sustained customer interruptions, excluding major events, ..."

PP&L believes that when a major event affects one operating area and then moves through the electric distribution company's system affecting its other operating areas, the resulting interruptions for all affected areas should be excluded from the utility's overall reliability indices. Failure to exclude such interruptions from the applicable database for all affected operating areas will skew the derived reliability performance indices.

Accordingly, PP&L recommends that the definition of "Reliability Indices" should be modified as follows: "Service performance indicators which measure the frequency and duration of sustained customer interruptions, excluding all outages associated with major events. ...."

Under the definition of "Reliability Indices" utilities are required to provide a "System Average Interruption Duration Index (SAIDI)," as well as a "System Average Interruption Frequency Index (SAIFI)" and a "Customer Average Interruption Duration Index (CAIDI)." Because SAIDI can be calculated directly from SAIFI and CAIDI by multiplying the two values together, the reporting of SAIDI would require duplicative and unnecessary effort. Therefore, PP&L recommends that SAIDI requirement be deleted.

Utilities also are required to provide a "Momentary Average Interruption Frequency Index (MAIFI)." However, the information needed to calculate this index is difficult and extremely costly to obtain, without any real attendant benefits. In addition, momentary interruptions are, in many instances, instituted by utilities directly to implement necessary switching procedures. Because such interruptions do not provide a good indication of the reliability of the utility's overall distribution system, PP&L recommends that the requirement for this index should be deleted.

The term "Worst-Performing Circuits" is defined as "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."

PP&L believes that specific reliability indicators should be used to determine the worst-performing circuits. In addition, PP&L believes that analyses of the worst performing circuits should be done on a utility system-wide basis not an operating area basis, because the worst performing circuit in one operating area may be better than a number of the worst performing circuits in another operating area.

Accordingly, PP&L recommends that the definition of "worst-performing circuits" should be modified as follows: "... the 5% of circuits for the system with the highest achieved values (lowest performance levels) for the CAIDI and/or SAIFI indices."

Section 57.193 – Transmission System Reliability

Subsection (b) of this section establishes comparability standards for an electric distribution company's transmission service provided to wholesale customers. Clearly, transmission service provided to wholesale customers is a matter wholly within the exclusive jurisdiction of the Federal Energy Regulatory Commission ("FERC"). For this reason, PP&L recommends that the proposed regulations be amended by deleting subsection (b) of this section.

Section 57.194 – Distribution System Reliability

Subsection (e) of the proposed regulation states that "An electric distribution company shall maintain procedures to meet the reliability performance stan-

dards in subsection (h). The procedures shall be designed to sustain at a minimum, the historical level of reliability and to improve service reliability when necessary."

PP&L believes that sustaining historically high levels of reliability in a specific operating area may not be practical or cost-effective when performance is viewed on a utility system-wide basis. Therefore, PP&L recommends that the language of subsection (e) should be modified as follows: "The procedures shall be designed to sustain at a minimum, acceptable levels of reliability and to improve service reliability when necessary and cost-effective.

Subsection (h) states that "An electric distribution company shall take measures necessary to meet the reliability performance standard in this subsection."

In some instances, measures to improve reliability that may be technologically possible could be prohibitively expensive and, as such, would not be cost-effective. PP&L recommends that the language of subsection (h) should be modified as follows: "An electric distribution company shall take reasonable measures to meet the reliability performance standard in this subsection."

Subsection (h) (3) states that "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."

PP&L does not believe that this portion of the rulemaking adequately addresses how the values for CAIDI and SAIFI will be calculated. PP&L strongly

recommends that a consistent methodology be developed for calculating numerical index values. In addition, PP&L believes that electric distribution companies, the PUC and other affected parties should work together cooperatively to set reliability performance standards.

Therefore, PP&L recommends that the language of subsection (h)(3) should be modified as follows: "In cooperation with jurisdictional electric distribution companies and other affected parties, 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 affected party may, at any time, petition the Commission for modification of these standards."

Section 57.195 – Reporting Requirements

Subsection (a) of the proposed regulation states that "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 ...."

Because of the time required to verify and enter end-of-year reliability information into its database, to make the necessary analyses, to plan improvements, and to determine the improvement experienced by circuits that were worked on in the previous year, PP&L believes that it will be very difficult to prepare and submit the required report by March 31 of each year.

Therefore, PP&L recommends that the language of subsection (a) should be modified as follows: "An electric distribution company shall submit to the

Commission, on or before May 30, 1999, and May 30 of each succeeding year, a reliability report ...."

Subsection (c) of the proposed regulation states that "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 5 calendar years."

PP&L believes that the proposed reporting requirement should indicate the specific indices to be used. Therefore, PP&L recommends that the language of subsection (c) should be modified as follows: "The report shall include a table showing the actual values of CAIDI and SAIFI for each operating area and for the electric distribution company as a whole for each of the preceding 5 calendar years.".

Subsection (e) states that "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."

As previously indicated, PP&L believes that circuits should be evaluated on a utility system-wide basis, not on an operating area basis. The proposed reporting requirement does not quantify which reliability values should be used in selecting the "worst-performing circuits." PP&L believes that the use of reliability values should be specific. Therefore, PP&L recommends that the language of subsection (e) should be modified as follows: "The report shall include:

(1) A list showing the worst-performing circuits on a utility system basis that fail to meet the CAIDI and/or SAIFI standard in the preceding calendar year.

(2) A description of the electric distribution company's program for analyzing and improving those circuits.

(3) A summary of actions taken to improve the performance of the worst-performing circuits included in the last report of the electric distribution company.

(4) A summary of the results of the preceding year's improvement program for the worst-performing circuits included in the second last report of the electric distribution company."

Section 57.197 - Reliability Investigations

PP&L recommends that the language of proposed subsections (a) and (b) should be modified as follows: "Upon complaint by an affected party, an investigation may be initiated to determine...."

Because reliability improvements require engineering analysis to determine their cost-effectiveness and overall impact on system reliability, PP&L recommends that the language of proposed subsection (a)(1) should be modified as follows: "Based upon the record developed in such an investigation, the Commission may enter an order directing the electric distribution company to take reasonable and cost-effective corrective action to improve the reliability of its electric service.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Electric Service Reliability Standards : COPY
52 Pa. Code Chapter 57 : Docket No. L-00970120

COMMENTS OF THE INDUSTRIAL ENERGY CONSUMERS OF PENNSYLVANIA

Air Liquide America Corporation
Air Products and Chemicals, Inc.
Allegheny Ludlum Steel Corp.
Allentown Cement Company
AlliedSignal Inc. - Chemical Intermediates
Alumax Extrusions Inc.
Aluminum Company of America
Amp, Inc.
Anchor Glass Container Corp.
Appleton Papers Inc.
Arco Chemical Company
Armco Advanced Materials Co.
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Baker Refractories
Bethlehem Steel Corporation
BOC Gases
Boeing Defense & Space Group - Helicopters Division
Buckeye Pipeline Company, LP
Cabot Performance Materials
Carbide/Graphite Group, Inc., The
Carlisle Tire & Wheel Company
Carpenter Technology Corporation
Caterpillar Inc.
CertainTeed Corporation
Cooper Industries
Corning Asahi Video Products
Dana Corporation
East Penn Manufacturing Company
Ervin Industries, Inc.
FirstMiss Steel, Inc.
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Glen-Gery Corporation
Harley-Davidson Motor Company - York Division
Hershey Foods Corporation
Hon Company, The
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IHFP, Inc.
International Paper Company
J&L Specialty Steel, Inc.
Knouse Foods Cooperative, Inc.
Koppel Steel Corporation
Lafarge Corporation - Whitehall Plant
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Dated: December 10, 1997

TABLE OF CONTENTS

I. INTRODUCTION

On June 12, 1997, the Pennsylvania Public Utility Commission ("PUC" or "Commission") issued a Proposed Rulemaking Order regarding electric service reliability standards. Re: Electric Service Reliability Standards: 52 Pa. Code Chapter 57, Docket No. L-00970120, Order entered on June 12, 1997 (hereinafter "Reliability PRO"). The Reliability PRO was published in the Pennsylvania Bulletin on October 11, 1997. 27 Pa. Bull. 5262 (October 11, 1997). The Industrial Energy Consumers of Pennsylvania ("IECPA") hereby submit these comments to the Reliability PRO.

IECPA is a 71 member association of energy-intensive industrial consumers of electricity and natural gas. IECPA members are listed on the cover of these comments and in Appendix "A". IECPA members collectively consume approximately 30% of the industrial electricity consumed in Pennsylvania. More than 100,000 Pennsylvanians are employed by IECPA member companies at nearly 200 plant locations and manufacturing facilities within the Commonwealth.

The Reliability PRO is a component of the Commission's on-going implementation process for the Electricity Generation Customer Choice and Competition Act ("the Act"), P.L. 802, No. 138, December 3, 1996, codified at 66 Pa. C.S. § 2801 et seq. The Act specifies that the Commission must ensure the continued provision of safe and reliable electric service to all consumers in the Commonwealth during competitive market for electric generation supply in Pennsylvania. Id. at §§ 2802(12), 2804(1) & 2804(14). As part of that duty, the Commission issued an Advanced Notice of Proposed Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability, at this Docket on January 24, 1997. IECPA submitted comments to that ANOPR. In addition, the Commission convened an informal working group to address electric service reliability. IECPA actively participated in that working group.

The Reliability PRO proposes regulations to govern the measurement and enforcement of reliability performance and enforcement of standards for electric distribution companies ("EDCs") and electric generation suppliers ("EGSs") in the competitive market. IECPA submits comments on the following three aspects of those proposed regulations:

(1) The necessity to monitor the power quality performance of EDCs, specifically the occurrence of short duration interruptions and voltage and frequency variations that can be very harmful to sensitive manufacturing equipment.

(2) The necessity in the competitive market for mandated generation reserve levels to be replaced by market-based reserve levels.

(3) The necessity to limit the scope of any enforcement mechanism instituted against EGSs in both the scope of actions redressable and possible aggrieved party eligible to bring a complaint.

II. COMMENTS

A. The Commission Must Establish Adequate Reliability Standards for Voltage and Frequency Variations and for Momentary Interruptions.

In implementing the Act, the Commission is charged with the duty to ensure that the reliability of the electric distribution system remains at current levels. 66 Pa. C.S. §§ 2802(12), 2804(1) & 2804(14). The Reliability PRO recognizes that the historical level of reliability may be insufficient in the competitive market and should be improved where appropriate. Reliability PRO, Annex A, § 57.194(e). One area where the Commission must increase its role in the restructured industry is in monitoring "power quality." The Commission should adopt adequate reliability standards and enforcement mechanisms to address voltage and frequency variations and momentary customer interruptions.

In order to attain the pro-business growth goals of the Act (66 Pa. C.S. 2802(7)), the Commission must establish specific reliability criteria related to voltage and frequency variations and must mandate that the EDCs track and rectify interruptions of short duration as defined below. As explained below, the Commission's attention to power quality standards will facilitate the siting of high-tech industrial facilities in Pennsylvania and the retention of facilities already located in the Commonwealth. By adopting forward-looking power quality standards, the Commission can insure that Pennsylvania attains the full benefit of its leadership role in electricity deregulation.

The Reliability PRO proposes definitions of "momentary customer interruption" and "sustained customer interruption." Annex A, § 57.192. A "momentary customer interruption" is defined as follows:

> 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.

Id. A "sustained customer interruption" is defined as follows:

> The loss of electric service by one or more customers for longer than 5 minutes in duration. This term does not include interruptions intentionally initiated by an electric distribution company, such as scheduled maintenance.

Id. The PRO also requires EDCs to fulfill performance reliability standards based on those definitions; namely the "Customer Average Interruption Duration Index" (CAIDI) and "System Average Interruption Frequency Index" (SAIFI) standards. Id. at § 57.194(h).

Although compliance by the EDC with CAIDI and SAIFI benchmarks may ensure reliability for the majority of the EDCs' customers, CAIDI and SAIFI do not measure or ensure the level of reliability necessary for Pennsylvania to attract high-tech, machinery-intensive industries that Pennsylvania needs to be economically prosperous. If this Commission desires to fulfill the economic development and growth goals of the Act, the Commission must adopt power quality standards aimed at ensuring that manufacturing equipment is not needlessly shut down, and production hours lost, due to interruptions and voltage and frequency fluctuations of lesser scope and duration than those specified in the Reliability PRO.

"Power quality" is a relatively recent concern. Much of the mechanized equipment used in modern manufacturing is susceptible to problems associated with electronic phenomena (such as voltage sags) that can cause the equipment to shut down. The mechanized equipment susceptible to power quality problems includes computers, motors, heating elements, adjustable speed motor drives, and programmable logic controllers. When the mechanized equipment fails, the entire production process often ceases. Some of the industries in which such equipment is integrally

involved includes plastics, petrochemicals, textiles, paper, semiconductors and automotive. Obviously, attraction of these industries to Pennsylvania could increase the economic prosperity of the Commonwealth exponentially.

In order to attract and retain businesses using this type of equipment, the Commission must establish standards for the monitoring of EDCs' fulfillment of "power quality standards." As explained by the Institute of Electrical and Electronics Engineers,

> There are several important reasons to monitor power quality. The primary reason underpinning all others is economic, particularly if critical process loads are being adversely affected by electromagnetic phenomena. Effects on equipment and process operations can include misoperation, damage, process disruption, and other such anomalies. Such disruptions are costly since a profit-based operation is interrupted unexpectedly and must be restored to continued production. In addition, equipment damage and subsequent repair cost both money and time. Product damage can also result from electromagnetic phenomena requiring that the damaged product either be recycled or discarded, both of which are economic issues.

IEEE Recommended Practice for Monitoring Electric Power Quality, IEEE Standard 1159-1995, § 5.2. Given the economic concerns at stake for many of Pennsylvania's businesses, this Commission must address power quality issues as part of fulfilling its duty to ensure and enhance electric service reliability in the competitive market.

IECPA urges the Commission to address power quality by establishing standards for the scope and duration of permissible deviations in voltage and frequency of delivered electricity and by requiring EDCs to track and rectify interruptions of less than 30 seconds. The Commission should also establish benchmarks for EDC performance in those categories.

The Commission should adopt the IEEE definitions for power quality monitoring as the applicable standard for EDCs' to ensure electric service reliability. The Commission should adopt the definitions by reference, instead of adopting the explicit definitions endorsed at this time by the IEEE. Adoption of the standards by reference will enable power quality in Pennsylvania to be measured according to current industry standards as those standards may evolve in the coming years. At this time, the IEEE endorses the following definitions for power quality monitoring:

> **Momentary Interruption:** The complete loss of voltage for a time period between 0.5 seconds and thirty seconds.
>
> **Sustained Interruption:** The complete loss of voltage for a time period greater than thirty seconds.
>
> **Voltage Sag:** The decrease in voltage to 90% or less for a duration of 0.5 seconds to one minute.

IEEE Standard 1159-1995, §§ 3.1.29, 3.1.30, & 3.1.51. As aforementioned, these industry standards will change in the future to adapt to the needs of new manufacturing equipment. In order for this Commonwealth to attract high-tech industries using sensitive equipment, the Commission should show a similar ability to adapt to new industry standards in the future by adopting the IEEE standards by reference.[1]

In sharp contrast to the forward-minded IEEE standards, the Reliability PRO proposes to eliminate consideration of drops in voltage as qualifying as a "service interruption." Annex A, § 57.17 (eliminated). As regulations currently stand, a service interruption occurs when the interval of time exceeding 1 minute during which the voltage of service rendered falls below 50% of the standard nominal service voltage. 52 Pa. Code § 57.17. The Commission clearly is violating its duty

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[1] This would be similar to the proposed adoption of the North American Electric Reliability Council ("NERC") standards by reference. Annex A, § 57.196(a).

to continue at least the historic level of reliability if it no longer considers voltage variations as an indication of EDC reliability performance. Voltage variations must continue to be monitored.

The Commission regulations currently also contain a section establishing permissible voltage variations for lighting and power purposes. Id. at § 57.14. In 1996, the Commission issued a proposed rulemaking order that propose to delete a similar provision regarding system frequency variations (52 Pa. Code § 57.15) as being "obsolete." Obsolete Regulations Concerning Electric Service, Docket No. L-950108, 27 Pa. Bull. 1162 (March 8, 1997).[2] Not only do the currently effective regulations not qualify as being "obsolete", the regulations should be strengthened in order to provide Pennsylvania businesses with the level of power quality necessary in today's manufacturing workplace.

Furthermore, the Commission must establish specific reliability criteria with respect to power quality to be attained by EDCs. The Commission should explicitly adopt the standard that no more than one interruption or voltage sag, as defined above, is permissible within two years without taking corrective action. This is a reasonable benchmark that will ensure the level of reliability necessary to attract and retain the businesses necessary for the Commonwealth's economic prosperity, in accordance with the goals of the Act.

Moreover, the Commission must establish specific guidelines for customers to protest an EDC's lack of compliance with power quality criteria. The EDC should be required to address customer complaints of momentary interruptions and voltage sags by installing appropriate power quality monitoring equipment to determine the extent of the problem. If it is determined that the

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[2] The Order and proposed regulations are pending before the Independent Regulatory Review Commission.

problem results from the EDC's system, the EDC should be required to revise the distribution system to resolve the situation. In addition, the EDC should be required to compensate customers that have sustained tangible losses in the form of equipment damage or lost production if the number of interruptions or sags caused by EDC equipment exceeds the benchmark of one in two years.

Pennsylvania must take the initiative in establishing power quality standards for EDCs. Countless manufacturing facilities will experience tangible losses if the regulations contained in the Reliability PRO are adopted as proposed without consideration of voltage sags and short duration interruptions. The Commission must ensure that jobs are not needlessly lost to other states such as New York that have realized the importance of power quality monitoring and taken steps to hold EDCs to standards of power quality performance. See Proceeding on Motion of the Commission as to Proposed Changes to the Standards on Reliability and Quality of Electric Service, New York Public Service Commission Case 96-E-0979, 1997 N.Y. PUC LEXIS 78 (February 26, 1997). The Commission must place Pennsylvania at the forefront of power quality by adopting the IECPA proposals.

B. The Commission Must Allow the Market to Establish Appropriate Levels of Generation Reserves.

The Reliability PRO proposes to require EGSs to "maintain an appropriate generating reserve capacity in compliance with any applicable reserve requirement standards set forth by the appropriate regional reliability council, or successor organizations." Annex A, § 57.196(b). This requirement is inappositive to the creation of a competitive market for generation supply. In a competitive market, all generation supply, including generating reserves, should be dictated by the market. In addition, as recognized in Commissioner Hanger's statement, the changing market requires new

approaches to generating reserves. Specifically, any generation reserve requirement set by the Commission or by the regional reliability councils (if one is established at all) must take into account the availability of interruptible service as a generation-equivalent resource.

The market for the generation of electric supply is deregulated by the Act. 66 Pa. C.S. § 2802(12). This should include the market for the appropriate level of generation reserves to support a supplier's contract with a customer to supply electricity. The level of generation reserves necessary to ensure supply of electricity to a customer should be dictated by the level of reliability desired by the particular customer. Some customers, for example industrial customers, may be willing to contract with an alternative supplier for electricity that is backed by no generation reserve and will be interrupted if the supplier's generation resources fail. Customers should be permitted to enter into such contracts and the supplier should not be required to maintain generation reserves in excess of those demanded by the customer. Transactions such as these are the essence of a competitive generation market -- suppliers develop service offerings according to the customers' desires.

Although certain customers in the competitive market may need protection by the Commission through the establishment of a generation reserve requirement (i.e., residential customers), industrial and commercial customers are not in need of the Commission's protection in this regard. Industrial and commercial customers should be permitted to make informed business decisions regarding the level of generation reserves necessary to ensure the desired reliability and the appropriate price for that level of reliability. Reliability (in the form of generation reserve levels) should become another factor in the supply and demand equation.

If the Commission persists in its mandate that EGSs maintain a prescribed level of generating reserves, then the Commission must insist that differing levels of interruptible service be considered

as generation-equivalent resources. In other words, the EGS must be able to use any interruptible portion of its load as counting towards its generating reserve requirement. If an EGS has a customer portfolio such that it has interruptible customers with load sufficient to fulfill its generating reserve requirement, then the EGS should need no extra generation reserve resources. The Commission must insist that the regional reliability councils give appropriate credit to EGSs for alternate generation resources in calculating any reserve requirement.[3]

C. The Commission Must Limit the Complaint Mechanism With Respect to Electric Generation Suppliers.

The Reliability PRO establishes the same enforcement mechanism for reliability complaints regarding EDCs and EGSs. Upon complaint regarding either entity, an investigation can be initiated into the compliance of the entity with the appropriate reliability criteria. Annex A, § 57.197. The use of the same enforcement mechanism for an EGS, which is a non-public utility, and an EDC, a public utility, is completely inappropriate and antithetical to the deregulation of generation supply under the Act.

The same enforcement mechanism must not be used for the EGS and the EDC. An EDC is a public utility that must be held to a much higher standard of regulatory oversight. The transmission and distribution of electricity remains a regulated function because it is a natural monopoly. 66 Pa. C.S. § 2801(16). The supply of electricity, on the other hand, has been deregulated by the Commonwealth because "market forces are more effective than economic regulation in controlling

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[3] The same argument applies to Commissioner Hanger's example of an independent solar generator selling a portion of its on peak output to the grid. The generator needs no generation reserve; if the generator fails, it simply does not sell to the grid.

the cost of generating electricity." Id. at § 2802(5). The generation of electricity is no longer regulated as a public utility function. Id. at § 2802(14). The reliability enforcement mechanisms must recognize this fundamental distinction.

The enforcement mechanism for EGSs must be further defined by limiting the scope of redressable activities and the parties that can bring a complaint. This is necessary to reflect the very limited jurisdictional oversight that the PUC has with respect to EGSs. **First,** any complaint against an EGS must make a prima facie showing of (1) failure by the EGS to provide the level of service guaranteed by the relationship between the EGS and the customer, and (2) harm or damage to the complainant resulting from that failure. Adoption of this standard will ensure that the subject matter of any complaint is within the PUC's scope of review. **Second,** only the EGS's customers or the Commission's Law Bureau must be permitted to bring a complaint against an EGS. Adoption of both limitations will ensure that the complaint mechanism is used for the intended purpose; i.e., to provide customers with the appropriate level of service. Adoption of the limitations will prevent competitors or the EDCs from using the complaint mechanism as an anti-competitive weapon against the EGSs.

III. CONCLUSION

The continued safety and reliability of the electric distribution system is paramount in the upcoming competitive generation market. In order to maximize Pennsylvania's economic gains from deregulation, the Commission must enhance that reliability by adopting power quality standards for disturbances such as voltage sags. Adoption of more stringent power quality standards is appropriate because the electric distribution company remains a public utility subject to full regulatory oversight by the Commission.

The Commission must not, however, allow the zealous pursuit of safety and reliability to impinge on the deregulation of electricity generation supply. Reliability criteria aimed at electric generation suppliers must be narrowly tailored to serve a specific purpose that the competitive market cannot serve. The competitive market can control the level of generation reserves that suppliers must maintain; the Commission should not explicitly or implicitly interfere with the market function in this regard by establishing generation reserve requirements. Also, the enforcement mechanism for suppliers must be limited in scope of actions covered and aggrieved party able to bring a complaint.

WHEREFORE, the Industrial Energy Consumers of Pennsylvania respectfully request that the Commission modify the proposed electric service reliability regulations consistent with the foregoing comments.

Respectfully submitted,

McNEES, WALLACE & NURICK

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Dated: December 10, 1997

INDUSTRIAL ENERGY CONSUMERS OF PENNSYLVANIA

MEMBERS

Air Liquide America Corporation
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Allentown Cement Company
AlliedSignal Inc. - Chemical Intermediates
Alumax Extrusions Inc.
Aluminum Company of America
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Victaulic Company of America
WEA Manufacturing
Yuasa-Exide, Inc.

APPENDIX "A"

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Electric Service Reliability Standards: :
52 Pa. Code Chapter 57 : Docket No. L-00970120

COMMENTS OF THE
INDUSTRIAL ENERGY CONSUMERS OF PENNSYLVANIA

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Dated: December 10, 1997

TABLE OF CONTENTS

I. INTRODUCTION

On June 12, 1997, the Pennsylvania Public Utility Commission ("PUC" or "Commission") issued a Proposed Rulemaking Order regarding electric service reliability standards. Re: Electric Service Reliability Standards: 52 Pa. Code Chapter 57, Docket No. L-00970120, Order entered on June 12, 1997 (hereinafter "Reliability PRO"). The Reliability PRO was published in the Pennsylvania Bulletin on October 11, 1997. 27 Pa. Bull. 5262 (October 11, 1997). The Industrial Energy Consumers of Pennsylvania ("IECPA") hereby submit these comments to the Reliability PRO.

IECPA is a 71 member association of energy-intensive industrial consumers of electricity and natural gas. IECPA members are listed on the cover of these comments and in Appendix "A". IECPA members collectively consume approximately 30% of the industrial electricity consumed in Pennsylvania. More than 100,000 Pennsylvanians are employed by IECPA member companies at nearly 200 plant locations and manufacturing facilities within the Commonwealth.

The Reliability PRO is a component of the Commission's on-going implementation process for the Electricity Generation Customer Choice and Competition Act ("the Act"), P.L. 802, No. 138, December 3, 1996, codified at 66 Pa. C.S. § 2801 et seq. The Act specifies that the Commission must ensure the continued provision of safe and reliable electric service to all consumers in the Commonwealth during competitive market for electric generation supply in Pennsylvania. Id. at §§ 2802(12), 2804(1) & 2804(14). As part of that duty, the Commission issued an Advanced Notice of Proposed Rulemaking to Amend 52 Pa. Code Chapter 57 to Ensure Electric Service Reliability, at this Docket on January 24, 1997. IECPA submitted comments to that ANOPR. In addition, the Commission convened an informal working group to address electric service reliability. IECPA actively participated in that working group.

The Reliability PRO proposes regulations to govern the measurement and enforcement of reliability performance and enforcement of standards for electric distribution companies ("EDCs") and electric generation suppliers ("EGSs") in the competitive market. IECPA submits comments on the following three aspects of those proposed regulations:

(1) The necessity to monitor the power quality performance of EDCs, specifically the occurrence of short duration interruptions and voltage and frequency variations that can be very harmful to sensitive manufacturing equipment.

(2) The necessity in the competitive market for mandated generation reserve levels to be replaced by market-based reserve levels.

(3) The necessity to limit the scope of any enforcement mechanism instituted against EGSs in both the scope of actions redressable and possible aggrieved party eligible to bring a complaint.

II. COMMENTS

A. The Commission Must Establish Adequate Reliability Standards for Voltage and Frequency Variations and for Momentary Interruptions.

In implementing the Act, the Commission is charged with the duty to ensure that the reliability of the electric distribution system remains at current levels. 66 Pa. C.S. §§ 2802(12), 2804(1) & 2804(14). The Reliability PRO recognizes that the historical level of reliability may be insufficient in the competitive market and should be improved where appropriate. Reliability PRO, Annex A, § 57.194(e). One area where the Commission must increase its role in the restructured industry is in monitoring "power quality." The Commission should adopt adequate reliability standards and enforcement mechanisms to address voltage and frequency variations and momentary customer interruptions.

In order to attain the pro-business growth goals of the Act (66 Pa. C.S. 2802(7)), the Commission must establish specific reliability criteria related to voltage and frequency variations and must mandate that the EDCs track and rectify interruptions of short duration as defined below. As explained below, the Commission's attention to power quality standards will facilitate the siting of high-tech industrial facilities in Pennsylvania and the retention of facilities already located in the Commonwealth. By adopting forward-looking power quality standards, the Commission can insure that Pennsylvania attains the full benefit of its leadership role in electricity deregulation.

The Reliability PRO proposes definitions of "momentary customer interruption" and "sustained customer interruption." Annex A, § 57.192. A "momentary customer interruption" is defined as follows:

> 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.

Id. A "sustained customer interruption" is defined as follows:

> The loss of electric service by one or more customers for longer than 5 minutes in duration. This term does not include interruptions intentionally initiated by an electric distribution company, such as scheduled maintenance.

Id. The PRO also requires EDCs to fulfill performance reliability standards based on those definitions; namely the "Customer Average Interruption Duration Index" (CAIDI) and "System Average Interruption Frequency Index" (SAIFI) standards. Id. at § 57.194(h).

Although compliance by the EDC with CAIDI and SAIFI benchmarks may ensure reliability for the majority of the EDCs' customers, CAIDI and SAIFI do not measure or ensure the level of reliability necessary for Pennsylvania to attract high-tech, machinery-intensive industries that Pennsylvania needs to be economically prosperous. If this Commission desires to fulfill the economic development and growth goals of the Act, the Commission must adopt power quality standards aimed at ensuring that manufacturing equipment is not needlessly shut down, and production hours lost, due to interruptions and voltage and frequency fluctuations of lesser scope and duration than those specified in the Reliability PRO.

"Power quality" is a relatively recent concern. Much of the mechanized equipment used in modern manufacturing is susceptible to problems associated with electronic phenomena (such as voltage sags) that can cause the equipment to shut down. The mechanized equipment susceptible to power quality problems includes computers, motors, heating elements, adjustable speed motor drives, and programmable logic controllers. When the mechanized equipment fails, the entire production process often ceases. Some of the industries in which such equipment is integrally

involved includes plastics, petrochemicals, textiles, paper, semiconductors and automotive. Obviously, attraction of these industries to Pennsylvania could increase the economic prosperity of the Commonwealth exponentially.

In order to attract and retain businesses using this type of equipment, the Commission must establish standards for the monitoring of EDCs' fulfillment of "power quality standards." As explained by the Institute of Electrical and Electronics Engineers,

> There are several important reasons to monitor power quality. The primary reason underpinning all others is economic, particularly if critical process loads are being adversely affected by electromagnetic phenomena. Effects on equipment and process operations can include misoperation, damage, process disruption, and other such anomalies. Such disruptions are costly since a profit-based operation is interrupted unexpectedly and must be restored to continued production. In addition, equipment damage and subsequent repair cost both money and time. Product damage can also result from electromagnetic phenomena requiring that the damaged product either be recycled or discarded, both of which are economic issues.

IEEE Recommended Practice for Monitoring Electric Power Quality, IEEE Standard 1159-1995, § 5.2. Given the economic concerns at stake for many of Pennsylvania's businesses, this Commission must address power quality issues as part of fulfilling its duty to ensure and enhance electric service reliability in the competitive market.

IECPA urges the Commission to address power quality by establishing standards for the scope and duration of permissible deviations in voltage and frequency of delivered electricity and by requiring EDCs to track and rectify interruptions of less than 30 seconds. The Commission should also establish benchmarks for EDC performance in those categories.

The Commission should adopt the IEEE definitions for power quality monitoring as the applicable standard for EDCs' to ensure electric service reliability. The Commission should adopt the definitions by reference, instead of adopting the explicit definitions endorsed at this time by the IEEE. Adoption of the standards by reference will enable power quality in Pennsylvania to be measured according to current industry standards as those standards may evolve in the coming years. At this time, the IEEE endorses the following definitions for power quality monitoring:

> **Momentary Interruption:** The complete loss of voltage for a time period between 0.5 seconds and thirty seconds.
>
> **Sustained Interruption:** The complete loss of voltage for a time period greater than thirty seconds.
>
> **Voltage Sag:** The decrease in voltage to 90% or less for a duration of 0.5 seconds to one minute.

IEEE Standard 1159-1995, §§ 3.1.29, 3.1.30, & 3.1.51. As aforementioned, these industry standards will change in the future to adapt to the needs of new manufacturing equipment. In order for this Commonwealth to attract high-tech industries using sensitive equipment, the Commission should show a similar ability to adapt to new industry standards in the future by adopting the IEEE standards by reference.[1]

In sharp contrast to the forward-minded IEEE standards, the Reliability PRO proposes to eliminate consideration of drops in voltage as qualifying as a "service interruption." Annex A, § 57.17 (eliminated). As regulations currently stand, a service interruption occurs when the interval of time exceeding 1 minute during which the voltage of service rendered falls below 50% of the standard nominal service voltage. 52 Pa. Code § 57.17. The Commission clearly is violating its duty

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[1] This would be similar to the proposed adoption of the North American Electric Reliability Council ("NERC") standards by reference. Annex A, § 57.196(a).

to continue at least the historic level of reliability if it no longer considers voltage variations as an indication of EDC reliability performance. Voltage variations must continue to be monitored.

The Commission regulations currently also contain a section establishing permissible voltage variations for lighting and power purposes. Id. at § 57.14. In 1996, the Commission issued a proposed rulemaking order that propose to delete a similar provision regarding system frequency variations (52 Pa. Code § 57.15) as being "obsolete." Obsolete Regulations Concerning Electric Service, Docket No. L-950108, 27 Pa. Bull. 1162 (March 8, 1997).[2] Not only do the currently effective regulations not qualify as being "obsolete", the regulations should be strengthened in order to provide Pennsylvania businesses with the level of power quality necessary in today's manufacturing workplace.

Furthermore, the Commission must establish specific reliability criteria with respect to power quality to be attained by EDCs. The Commission should explicitly adopt the standard that no more than one interruption or voltage sag, as defined above, is permissible within two years without taking corrective action. This is a reasonable benchmark that will ensure the level of reliability necessary to attract and retain the businesses necessary for the Commonwealth's economic prosperity, in accordance with the goals of the Act.

Moreover, the Commission must establish specific guidelines for customers to protest an EDC's lack of compliance with power quality criteria. The EDC should be required to address customer complaints of momentary interruptions and voltage sags by installing appropriate power quality monitoring equipment to determine the extent of the problem. If it is determined that the

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[2] The Order and proposed regulations are pending before the Independent Regulatory Review Commission.

problem results from the EDC's system, the EDC should be required to revise the distribution system to resolve the situation. In addition, the EDC should be required to compensate customers that have sustained tangible losses in the form of equipment damage or lost production if the number of interruptions or sags caused by EDC equipment exceeds the benchmark of one in two years.

Pennsylvania must take the initiative in establishing power quality standards for EDCs. Countless manufacturing facilities will experience tangible losses if the regulations contained in the Reliability PRO are adopted as proposed without consideration of voltage sags and short duration interruptions. The Commission must ensure that jobs are not needlessly lost to other states such as New York that have realized the importance of power quality monitoring and taken steps to hold EDCs to standards of power quality performance. See Proceeding on Motion of the Commission as to Proposed Changes to the Standards on Reliability and Quality of Electric Service, New York Public Service Commission Case 96-E-0979, 1997 N.Y. PUC LEXIS 78 (February 26, 1997). The Commission must place Pennsylvania at the forefront of power quality by adopting the IECPA proposals.

B. The Commission Must Allow the Market to Establish Appropriate Levels of Generation Reserves.

The Reliability PRO proposes to require EGSs to "maintain an appropriate generating reserve capacity in compliance with any applicable reserve requirement standards set forth by the appropriate regional reliability council, or successor organizations." Annex A, § 57.196(b). This requirement is inappositive to the creation of a competitive market for generation supply. In a competitive market, all generation supply, including generating reserves, should be dictated by the market. In addition, as recognized in Commissioner Hanger's statement, the changing market requires new

approaches to generating reserves. Specifically, any generation reserve requirement set by the Commission or by the regional reliability councils (if one is established at all) must take into account the availability of interruptible service as a generation-equivalent resource.

The market for the generation of electric supply is deregulated by the Act. 66 Pa. C.S. § 2802(12). This should include the market for the appropriate level of generation reserves to support a supplier's contract with a customer to supply electricity. The level of generation reserves necessary to ensure supply of electricity to a customer should be dictated by the level of reliability desired by the particular customer. Some customers, for example industrial customers, may be willing to contract with an alternative supplier for electricity that is backed by no generation reserve and will be interrupted if the supplier's generation resources fail. Customers should be permitted to enter into such contracts and the supplier should not be required to maintain generation reserves in excess of those demanded by the customer. Transactions such as these are the essence of a competitive generation market -- suppliers develop service offerings according to the customers' desires.

Although certain customers in the competitive market may need protection by the Commission through the establishment of a generation reserve requirement (i.e., residential customers), industrial and commercial customers are not in need of the Commission's protection in this regard. Industrial and commercial customers should be permitted to make informed business decisions regarding the level of generation reserves necessary to ensure the desired reliability and the appropriate price for that level of reliability. Reliability (in the form of generation reserve levels) should become another factor in the supply and demand equation.

If the Commission persists in its mandate that EGSs maintain a prescribed level of generating reserves, then the Commission must insist that differing levels of interruptible service be considered

as generation-equivalent resources. In other words, the EGS must be able to use any interruptible portion of its load as counting towards its generating reserve requirement. If an EGS has a customer portfolio such that it has interruptible customers with load sufficient to fulfill its generating reserve requirement, then the EGS should need no extra generation reserve resources. The Commission must insist that the regional reliability councils give appropriate credit to EGSs for alternate generation resources in calculating any reserve requirement.[3]

C. The Commission Must Limit the Complaint Mechanism With Respect to Electric Generation Suppliers.

The Reliability PRO establishes the same enforcement mechanism for reliability complaints regarding EDCs and EGSs. Upon complaint regarding either entity, an investigation can be initiated into the compliance of the entity with the appropriate reliability criteria. Annex A, § 57.197. The use of the same enforcement mechanism for an EGS, which is a non-public utility, and an EDC, a public utility, is completely inappropriate and antithetical to the deregulation of generation supply under the Act.

The same enforcement mechanism must not be used for the EGS and the EDC. An EDC is a public utility that must be held to a much higher standard of regulatory oversight. The transmission and distribution of electricity remains a regulated function because it is a natural monopoly. 66 Pa. C.S. § 2801(16). The supply of electricity, on the other hand, has been deregulated by the Commonwealth because "market forces are more effective than economic regulation in controlling

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[3] The same argument applies to Commissioner Hanger's example of an independent solar generator selling a portion of its on peak output to the grid. The generator needs no generation reserve; if the generator fails, it simply does not sell to the grid.

the cost of generating electricity." Id. at § 2802(5). The generation of electricity is no longer regulated as a public utility function. Id. at § 2802(14). The reliability enforcement mechanisms must recognize this fundamental distinction.

The enforcement mechanism for EGSs must be further defined by limiting the scope of redressable activities and the parties that can bring a complaint. This is necessary to reflect the very limited jurisdictional oversight that the PUC has with respect to EGSs. **First,** any complaint against an EGS must make a prima facie showing of (1) failure by the EGS to provide the level of service guaranteed by the relationship between the EGS and the customer, and (2) harm or damage to the complainant resulting from that failure. Adoption of this standard will ensure that the subject matter of any complaint is within the PUC's scope of review. **Second,** only the EGS's customers or the Commission's Law Bureau must be permitted to bring a complaint against an EGS. Adoption of both limitations will ensure that the complaint mechanism is used for the intended purpose; i.e., to provide customers with the appropriate level of service. Adoption of the limitations will prevent competitors or the EDCs from using the complaint mechanism as an anti-competitive weapon against the EGSs.

III. CONCLUSION

The continued safety and reliability of the electric distribution system is paramount in the upcoming competitive generation market. In order to maximize Pennsylvania's economic gains from deregulation, the Commission must enhance that reliability by adopting power quality standards for disturbances such as voltage sags. Adoption of more stringent power quality standards is appropriate because the electric distribution company remains a public utility subject to full regulatory oversight by the Commission.

The Commission must not, however, allow the zealous pursuit of safety and reliability to impinge on the deregulation of electricity generation supply. Reliability criteria aimed at electric generation suppliers must be narrowly tailored to serve a specific purpose that the competitive market cannot serve. The competitive market can control the level of generation reserves that suppliers must maintain; the Commission should not explicitly or implicitly interfere with the market function in this regard by establishing generation reserve requirements. Also, the enforcement mechanism for suppliers must be limited in scope of actions covered and aggrieved party able to bring a complaint.

WHEREFORE, the Industrial Energy Consumers of Pennsylvania respectfully request that the Commission modify the proposed electric service reliability regulations consistent with the foregoing comments.

Respectfully submitted,

McNEES, WALLACE & NURICK

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Dated: December 10, 1997

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Air Products and Chemicals, Inc.
Allegheny Ludlum Steel Corp.
Allentown Cement Company
AlliedSignal Inc. - Chemical Intermediates
Alumax Extrusions Inc.
Aluminum Company of America
Amp, Inc.
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Dana Corporation
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Ervin Industries, Inc.
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Koppel Steel Corporation
Lafarge Corporation - Whitehall Plant
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National Forge Company
Nestles USA, Inc.
Nova Chemicals, Inc.
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Philadelphia Water Department, City of
PPG Industries, Inc.
Praxair, Inc.
Procter & Gamble Paper Products Company, The
R.R. Donnelley & Sons Company
Rhone-Poulenc Rorer Pharmaceuticals
Rohm and Haas Company
SmithKline Beecham Pharmaceuticals
Standard Steel
Stone Container Corporation
Stroh Brewery Company, The
Sun Company, Inc.
Temple University
Thomson Consumer Electronics, Inc.
U.S. Steel, a Unit of USX Corporation
Victaulic Company of America
WEA Manufacturing
Yuasa-Exide, Inc.

APPENDIX "A"

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Notice Of Proposed Rulemaking Re: :
Electric Service Reliability Standards : Docket No. L-00970120

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Dated: December 10, 1997

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Notice Of Proposed Rulemaking Re
Electric Service Reliability Standards

Docket No L-00970120

COMMENTS OF THE
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Dated December 10, 1997

I. INTRODUCTION

The Pennsylvania Public Utility Commission (PUC or Commission) issued its Proposed Rulemaking Order on June 13, 1997. The Order was published in the Pennsylvania Bulletin on October 11, 1997. 27 Pa.Bull. 5262. This order calls for comments by interested parties. The Office of Consumer Advocate (OCA) welcomes this opportunity to review the proposed rules and comment on them.

The OCA believes that the Proposed Rulemaking Order is well thought out and addresses most of the concerns the OCA raised in response to the Advanced Notice of Proposed Rulemaking. The OCA supports the Commission's overall direction of setting forth reliability standards and holding the companies to those standards without, at this time, mandating specific actions for meeting those reliability standards in these regulations. As we said in our initial comments, we believe that this is the best approach at this time. Although not necessarily a part of this rulemaking, however, the OCA submits that the Commission should consider means to determine how each utility's overall service quality -- including reliability -- will be maintained and improved. We are hopeful that the forthcoming rulemaking on customer service quality will provide more concrete direction in this regard. For example, the data required by this rule should be included in a utility-specific service quality index. It will be important to establish a benchmark performance level for each utility and then monitor for compliance with that standard for each performance area on an annual basis. Unless there is some annual review and pre-established consequences for the failure to maintain an adequate performance level (as compared to the baseline or benchmark), there will be little incentive for utilities to assure performance with historical performance levels. This is true for most areas that measure customer-specific service quality, but especially the case with the reliability

criteria. A utility facing the pressures associated with maintaining profitability under the Customer Choice Act may well make short term decisions concerning operations and maintenance expenditures that will have an adverse impact on customer reliability. We look forward to working with the Commission and other parties to devise the best mechanism to turn the proposed reporting requirements of this proposed rule into a specific performance plan for each utility.

The OCA also has a few comments on the specific language included in the proposed rules. Our comments focus more on issues of clarity than on the substance of the rules. In addition, we have attempted to answer the questions raised in Commissioner Hanger's Statement.

II. COMMENTS ON SPECIFIC PROVISIONS

57.17(b): Section (b) proposes that public utilities shall keep records of each service interruption "affecting the entire system or a major division of the system." It is OCA's position that this definition is too vague and too lax to produce an effective record of service interruptions. The term "major division" is not defined in Annex A. Furthermore, OCA submits that any service interruption that affects customers at the feeder level or higher should be recorded and reported.

57.192 Definitions

- The definition of an *electric generation supplier or electricity supplier* includes persons or corporations who sell electricity or related services. We did not find any reference to a definition for *related services* as used in this section. It is a vague term and has the potential

to lead to interpretation difficulties. We do not believe that adding the reference to related services is necessary in the context of the section and would suggest dropping it.

- The definition of a *major event* includes interruption of electric service resulting from actions taken to maintain the security of the electrical system. The OCA assumes that this is not supposed to include utility actions to interrupt customers on interruptible rate tariffs who agree to interruptions in return for a price break. The wording, however, does not appear to differentiate. We would recommend including a statement that interruptions under interruptible rate tariffs do not fall under the category of major events.

- The definition of an *operating area* is unclear. We cannot tell from the definition whether an operating area is the entire franchise service territory or only a part of that territory.

- The definition of *reliability* is unclear. The rules have earlier defined major events, momentary interruptions, and the like, but the definition here introduces a new term, adverse effects, which is not used elsewhere. Furthermore, it is not clear how the reference to adequacy and security relates to the rest of the definition. We would recommend the following definition of reliability:

  Reliability -- The degree of performance of the elements of an electric system that results in electricity being delivered to customers within accepted standards as

measured by the frequency, duration, and magnitude of major events and momentary customer interruptions.

- The formula for the *Customer Average Interruption Duration Index* includes, as a divisor, the number of customer interruption minutes. As with the definition above of a major event, the OCA believes it is important to be clear that interruption of customers under interruptible rate tariffs should not be included in calculation of the CAIDI.

- The definition for *sustained customer interruption* should be clarified to be clear that interruption of customers under interruptible rate tariffs is not included as a sustained customer interruption for the purpose of calculating reliability.

57.193 Transmission system reliability

While this section addresses transmission systems, the text repeatedly refers to the distribution company. The possibility exists that the transmission system will be administered by an Independent System Operator, Pool Company or Transmission Company -- not a distribution company. We recommend replacing the phrase "electric distribution company" with, "transmission system operator" until such a time as the transmission entity is decided.

In addition, since the functions of the transmission and distribution systems are similar, each of the provisions in the proposed rulemaking order specified for transmission should also be specified for distribution and vice versa.

Transmission system operators should also be required to provide the Commission with an annual Available Transmission Capacity Status and Determination (ATC) report. By requiring this information, the Commission will be able to quickly determine if the transmission system is being built and operated to reliably allow a fully competitive market. If, for example, a utility or transmission operator was to consistently report zero available firm transmission capacity, then one could infer that either the transmission system is inadequately built to support competitive market transactions, or that the utility is unfairly reserving excess capacity for its own benefit. The ATC report will provide the Commission with an additional method to monitor transmission system activities.

59.197 Reliability Investigations

The Commission reserves the right to order the electric distribution company to take the corrective action necessary to improve the reliability of electric service. The Commission may want to extend its authority to the transmission system operator -- not just the distribution company, to the extent that the Commission has jurisdiction over the entity. The OCA recommends that "transmission system operator" be included in this section since transmission improvements may be the appropriate solution to persistent reliability problems.

III. COMMENTS IN RESPONSE TO COMMISSIONER HANGER'S QUESTIONS

Commissioner Hanger raises a number of questions in his Statement. The OCA has the following comments and responses to Commissioner Hanger's questions.

1. Are other reliability criteria beyond frequency and duration of outage necessary?

The OCA believes that, at this time, frequency and duration of outages are sufficient criteria to judge the reliability of the system. If complaints develop over system problems such as voltage drops which may not fall under the frequency and duration criteria, it may become necessary to develop criteria for those problems. We do not believe, however, that these are necessary at this time. However, the Commission may want to make sure that a process is developed by which reliability problems other than outage frequency and duration are reported so that problem trends can be identified.

2. How should the Commission determine the level of performance expected?

In the OCA's initial comments in response to the Advance Notice of Proposed Rulemaking we suggested that the Commission use historical normalized performance as the benchmark against which to compare future performance. We still believe that historical performance is a reasonable benchmark.

3. Should Pennsylvania expect superior performance or accept above average performance?

The OCA suggests that use of terms such as *superior* or *above average* is less useful than using measurable performance as the standard. That is why we have suggested developing historically based performance standards and holding the utilities to those standards. However, determining an appropriate level of standard does require the Commission to decide whether past performance has been adequate or not. If past reliability has been satisfactory, it should be sufficient to set past performance as the future standard. If not, the future standard must be made more stringent than past performance.

4. Should Pennsylvania adopt specific requirements for activities to achieve and maintain reliability? Should specific requirements be adopted but held in abeyance unless utilities fail to perform?

The OCA expects to address this issue more specifically in its Comments on a proposed service quality index. The Commission cannot delay setting service quality standards until the evidence of worsening reliability is upon us. Utilities and their ratepayers have a right to know in advance what is expected of them and what will happen if the utility fails to maintain adequate reliability performance. As noted in our preliminary comments on service quality issues, the OCA intends to urge the Commission to establish specific service quality standards that will include reliability concerns.

The OCA believes that, while the primary focus should be on performance rather than on prescriptive measures, there is value in a certain degree of prescriptiveness, especially since small problems can build slowly over time before they suddenly present a major problem.

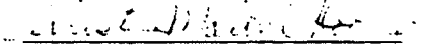
We are most concerned about the ongoing performance of necessary inspection and maintenance of the T&D system. T&D maintenance is easy to let slide when under competitive pressures. The system can withstand some maintenance slippage with little reliability impact. However, a point is reached when the system reliability begins to fall off rapidly. At that point, the cost and difficulty of catching up can be high. Therefore, we would suggest that the utilities develop and file T&D Maintenance Plans. We attach pages 19 and 20 of the OCA comments on the Advance Notice of Proposed Rulemaking, March 17, 1997 for a detailed set of recommendations on this issue.

5. Is there a point in time or a sequence of events following which the Commission should intervene more aggressively to ensure reliable transmission and distribution?

The OCA believes that there *may* be such a point in time, but hopes that such Commission intervention does not turn out to be necessary. The OCA hopes that the utilities will continue to follow their long standing mandate to provide reliable service, even while facing competitive pressures that are new to the industry. In the meantime, as noted above, the OCA intends to present overall service quality standards that will allow the Commission and the utility to monitor performance and react to deterioration without repeated litigation and dispute concerning the proper response. This approach will be particularly important in the next 5-8 years because the distribution utilities will be operating with distribution and generation rate caps that will mean that traditional revenue requirement investigations will probably not occur frequently. This will mean that the Commission will be without the traditional tools associated with those proceeding and must rely on separate investigations. The OCA supports the proposed rule in its current form, but is hopeful that

the reliability criteria mandated by this rule will also be used when the Commission establishes utility-specific service quality standards.

Respectfully submitted,



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Dated: December 10, 1997
44435

CERTIFICATE OF SERVICE

Re: Notice of Proposed Rulemaking Regarding Electric Service Reliability Standards
Docket No. L-00970120

I hereby certify that I have this day served a true copy of the foregoing document, OCA's Comments upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), in the manner and upon the persons listed below:

Dated this 10th day of December, 1997.

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Attachment A

THIS ATTACHMENT CONTAIN'S THE FOLLOWING INFORMATION:

1. Cover Page. Pages 19 and 20 from OCA Comments filed on March 17. 1997 in Docket No. L-00970120.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advance Notice of Proposed Rulemaking Regarding Electric Reliability Standards	:	Docket No. L-00970120

COMMENTS OF THE OFFICE OF CONSUMER ADVOCATE

Irwin A. Popowsky
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Assistant Consumer Advocate

Counsel for:
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Dated: March 17, 1997

2. Should the Commission establish T&D inspection and maintenance requirements in addition to those set forth in §§ 57.18?

Yes. The Commission should require each T&D entity responsible for operation and maintenance of T&D systems in Pennsylvania to develop and present to the Commission its T&D Maintenance Plan. The Maintenance Plan should be a comprehensive document that specifies any and all applicable standards required for maintaining a safe and reliable system in accordance with the reliability targets established above. The Maintenance Plan could, as an example, identify:

- Any and all applicable hardware standards and how they will be complied with;
- Any and all applicable operation standards and how they will be complied with;
- Routine maintenance requirements for the T&D system, including procedures such as inspections, equipment replacement, and operational tests;
- Emergency maintenance plans for the T&D system
  Branch isolation for worker and public safety
  Widespread outage response and power restoration plans including provisions for assistance from other utilities, contractors, governmental agencies, and public information outlets;

- Since transmission system operations will be coordinated across state jurisdictional lines, transmission companies should also be required to identify in the Maintenance Plan how their operations will be coordinated with other authorities, and how the requirements of those authorities affect the safety and reliability of the system within Pennsylvania.

A complete initial Maintenance Plan could be filed with the Commission by each T&D entity, and then be updated every two years thereafter.

In addition to the Maintenance Plan, the Commission could require each T&D business entity to file an annual T&D system maintenance report. The Annual Maintenance Report could specify the following types of information for each maintenance task performed during the preceding year:

- The name of task;
- All equipment affected by the task;
- Whether the task was performed as part of routine or non-routine maintenance;
- Required task frequency e.g. monthly, semi-annually, etc.;
- Date(s) performed;
- Whether the task was completed satisfactorily;
- If the task resulted in an outage and if so, for how long and the number of affected customers.

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

IN REPLY PLEASE
REFER TO OUR FILE

December 12, 1997

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

ORIGINAL: 1893
COPIES: Nanorta
Sandusky
Legal (2)

Re: L-970120/57-185
Proposed Rulemaking
Electric Service Reliability Standards
52 Pa. Code, Chapter 57

Dear Chairman McGinley:

Enclosed is one (1) copy of comments received regarding the above regulation as required under Section 5(10)(b.1) of the Regulatory Review Act of June 30, 1989 (P.L. 73, No. 19).

Very truly yours,

Barbara Bruin
Executive Director

Comments submitted by:

PECO Energy Company
UGI - Electric Service
PP&L
Enron Power Marketing, Inc.
GPU Energy
PEA
Pa. Rural Electric Assn.

cc: First Deputy Chief Counsel Pankiw
Regulatory Coordinator Leming
Assistant Counsel Burket
Mr. Loper

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Proposed Rulemaking Regarding	:	
Electric Service Reliability Standards	:	**Docket No. L-00970120**
	:	

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SUPPLEMENTAL COMMENTS OF

PECO ENERGY COMPANY

Vilna Waldron Gaston
Assistant General Counsel
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(215) 841-4265

Dated: December 10, 1997

INTRODUCTION

PECO Energy Company hereby submits these Supplemental Comments on the Pennsylvania Public Utility Commission's proposed rules regarding electric service reliability standards. PECO has also worked with other members of the Pennsylvania Electric Association ("PEA") PEA in drafting comments that are being filed separately. In general, we are in support of the comments made by the PEA on behalf of its members. However, PECO continues to have a concern regarding two aspects of the reliability standards: (1) the ability of utilities such as PECO to continue existing tracking practices in measuring reliability performance and (2) the definition and scope of a "major event" in section 57.192.

THE COMMISSION SHOULD ALLOW LDCs TO MEASURE IMPROVED PERFORMANCE THROUGH CURRENT TRACKING PRACTICES

It is our understanding that the intent of the proposed reliability regulations is to allow each Local Distribution Company (LDC) to improve upon its own record from the benchmarks it started with. To that end, we previously provided reliability performance data based on our current criteria. The proposed regulations would change the measurement criteria and would make it difficult to determine whether performance has improved or degraded.

Our current practice is to stratify interruption data into Storm and Non-Storm categories. This allows us to monitor the true status of the distribution system by removing the more volatile storm data. Our Non-Storm data was submitted in response to the Commission's request for benchmarking data earlier this year. The proposed

definition of a "Major Event" differs greatly from our current storm criteria. We strongly request that the Commission allow us to improve our own system reliability and to measure our progress based on our current practices. It is important to recognize that we still measure and track our ability to restore customers in a timely manner during storms. We also focus a considerable amount of time and resources on constructing and maintaining our system to withstand most weather events. However, by separating the data we are able to determine which interruptions on our distribution system are within our control and which are weather related.

DEFINITION OF A MAJOR EVENT SHOULD BE MODIFIED

PECO understands that the definition of a major event in section 57.192 is intended to exclude abnormal events that would skew the data and make it difficult to objectively analyze performance. While PECO understands this concept, we remain concerned that the guidelines, as written, do not fully capture the intent. Our concern involves section (i) which states "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." Establishing a threshold of 10% of the customers does not fairly compare all LDCs. Typically, geography plays a big factor in weather related events such as tornadoes and large storms. The current guidelines likely would result in a higher number of Major Events for LDCs that service smaller geographic areas. A tornado or large storm can cause outages to thousands of customers but would not meet the criteria for a Major Event depending on the overall size of the LDC. For

example, a large storm that affects 75,000 customers would be considered a Major Event in any LDC serving up to 750,000 customers. For PECO, which serves 1.5 million, this would not be a Major Event and would count against our Reliability indices. Under the current proposed guidelines, the only recent Major Event on the PECO system would have been the severe ice storm of January 1994. During this same time period, other LDCs would have reported several Major Events.

PECO offers the following proposal to better achieve the intent of this section:

(7) Major event - Must meet any of the following

(i) *A major event is declared when a local emergency management agency declares a major event such as snow emergencies, storms or flooding.*

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

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

Our choice of 5% is based on the fact that a storm affecting 75,000 customers is a major event on PECO's system. This represents approximately 5% of our customers. Any event affecting more than 5% of the customers in any one of our operating areas typically involves the relocation of crews from one operating area to another. It often involves supplementing PECO crews with contractors or crews from other utilities on under the Mutual Assistance Agreement. We believe that this is a fair cutoff point for a Major Event on PECO's system.

We do understand that a threshold of 5% may not be appropriate for each utility. One other alternative would be to set the threshold specific to each electric distribution company, based on historical performance, that would only allow a certain percentage of the worst events to be removed from the indices. This would allow for fair comparison in that each utility would be removing an equal percentage of events from their indices. Our concern with the current criteria is that the smaller distribution companies will be removing a far greater percentage of events than the larger companies.

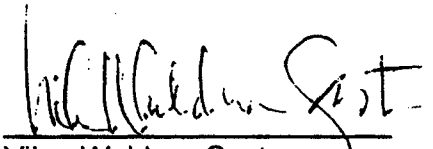
At PECO, we believe that providing safe, reliable electric service is critical to our future. We just want to ensure that we will be able to compete on a level playing field with the other companies in Pennsylvania. PECO looks forward to continuing to work with the PUC to help ensure that Pennsylvania consumers continue to receive the high quality of service that they have become accustomed to and welcomes further

discussions with interested parties on the issues addressed in these Supplemental Comments.

CONCLUSION

For the reasons stated above, the Commission should allow PECO and other local distribution companies to continue with existing tracking practices in measuring the reliability performance with PECO's system. In addition, the Commission should modify the definition of a "major event" in the manner proposed above.

Respectfully submitted,



Vilna Waldron Gaston
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2301 Market Street, S23-1
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Dated: December 10, 1997

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Proposed Rulemaking Regarding	:	
Electric Service Reliability Standards	:	**Docket No. L-00970120**
	:	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of Supplemental Comments of PECO Energy Company by first class mail, postage prepaid upon:

Pennsylvania Public Utility Commission
Bureau of Conservation, Economics and Energy Planning
8th Floor
Barto Building
Harrisburg, PA 17105

Dated at Philadelphia, Pennsylvania, December 10, 1997.

Vilna Waldron Gaston
Assistant General Counsel
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COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

IN REPLY PLEASE
REFER TO OUR FILE

December 12, 1997

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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 Rulemaking
Electric Service Reliability Standards
52 Pa. Code, Chapter 57

Dear Chairman McGinley:

Enclosed is one (1) copy of comments received regarding the above regulation as required under Section 5(10)(b.1) of the Regulatory Review Act of June 30, 1989 (P.L. 73, No. 19).

Very truly yours,

Barbara Bruin
Executive Director

Comments submitted by:

Pa. Utility Caucus, IBEW
Office of Consumer Advocate
Industrial Energy Consumers of Pennsylvania

cc: First Deputy Chief Counsel Pankiw
Regulatory Coordinator Leming
Assistant Counsel Burket
Mr. Loper

BEFORE THE
COMMONWEALTH OF PENNSYLVANIA
PUBLIC UTILITY COMMISSION

COPY

Notice of Proposed Rulemaking Regarding Electric Reliability Standards	: : :	Docket No. L-970120

ORIGINAL: 1893
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Comments of International Brotherhood of Electrical Workers' Pennsylvania Utility Caucus

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Counsel for:
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Dated: December 9, 1997

Introduction

The International Brotherhood of Electrical Workers' Pennsylvania Utility Caucus ("IBEW") files these Comments in response to the Notice of Proposed Rulemaking ("NOPR") issued by the Pennsylvania Public Utility Commission ("Commission") on June 12, 1997. 27 *Pa. Bulletin* 5262 (Oct. 11, 1997). IBEW represents employees at Duquesne Light Company, the GPU companies, Pennsylvania Power Company, Pennsylvania Power and Light Company, and several rural electric cooperatives. At most of those utilities and cooperatives, IBEW members are responsible for the actual maintenance of the transmission and distribution system. Therefore, IBEW has a direct interest in ensuring that the electric system is maintained in a manner that is safe and reliable – both for the public at large and for the utility employees who must work on that system.

IBEW commends the Commission for adopting a NOPR that makes substantial progress toward ensuring that electric service remains safe and reliable throughout Pennsylvania. The Commission has responded to many of the concerns that were raised by IBEW in its Comments on the Advanced Notice of Proposed Rulemaking ("ANPRM") in this docket. There are, however, a few areas where IBEW believes that the NOPR should be strengthened to ensure that Pennsylvania's electric service remains safe and reliable for utility workers, as well as for the public at large.

The Commission's NOPR begins to implement certain provisions of the Electric Generation Customer Choice and Competition Act, 66 Pa. C.S. § 2801, *et seq.* As the Commission properly states in the NOPR, the General Assembly recognized that it was critically important to ensure that the quality of electric service received by Pennsylvanians, and the

overall safety and reliability of the electric system, do not deteriorate when customers receive more options for purchasing electric service.

The General Assembly thereby recognized the concern that a utility's investment capital and other resources might be redirected from a utility's regulated operations (transmission and distribution) to its deregulated operations (generation) where the potential profits might be higher. IBEW is aware that some utilities have been reducing their transmission and distribution budgets, deferring maintenance, reducing the size and number of line crews, and taking other actions that might jeopardize the long-term reliability of Pennsylvania's electric utility system. It is vitally important that, as the General Assembly required, the Commission ensure that changes in the structure of the industry do not adversely affect the safety and reliability of electric service in the Commonwealth.

The Commission Cannot Rely on the National Electrical Safety Code and Performance Statistics to Ensure Distribution System Reliability

The statute, the Commission's existing regulations (52 Pa. Code § 57.26), and the NOPR refer to the National Electrical Safety Code ("NESC") as providing the basis for safe practices within the electric industry.[1] IBEW certainly does not dispute that fact. In addition, the Commission proposes new regulations that require utilities to measure and report performance statistics – primarily CAIDI and SAIFI – for each operating area. These standards and reporting requirements are important elements of a program to ensure the reliability of the electric distribution system. However, neither the NESC nor the reporting of operating statistics provide

[1] Throughout these Comments, references to the National Electrical Safety Code are to *National Electrical Safety Code 1997 Edition* (Institute of Electrical and Electronics Engineers, Inc. 1996).

all of the requirements that must be in place for the Commission to ensure the safety and reliability of Pennsylvania's electric system.

In the NOPR, the Commission rejected IBEW's request that the Commission adopt specific inspection and maintenance standards. 27 *Pa. Bulletin* at 5263. In so doing, the Commission states that "[u]ntil such time as prescriptive standards are deemed necessary" it will rely on reliability indicators to ensure the safety of the distribution system.

There are two significant problems with the Commission's conclusion. First, it is waiting until it is too late. Second, reliability indices and inspection and maintenance standards serve two different purposes and are not interchangeable.

The Commission's conclusion, that inspection and maintenance standards are not required, would allow distribution systems to deteriorate to the point where actual problems (outages) are being experienced. Then and only then would the effect of deteriorating practices become apparent. Further, such deterioration might not become apparent for several years, until a circuit actually falls below the Commission's standards for CAIDI or SAIFI, or until a five-year trend shows evidence of the deterioration. *See* proposed § 57.195. As a consequence, unsafe or deteriorating performance could occur for an extended period of time before it becomes apparent to the Commission.

This highlights IBEW's second concern: that operating statistics measure something different from inspection and maintenance standards. CAIDI and SAIFI look backward to measure "where you were" during an historic time period. Inspection and maintenance standards are forward-looking safeguards to ensure that system performance does not deteriorate in the future.

In addition, while it is appropriate for the Commission to rely on the NESC for certain standards, the NESC does not contain inspection and maintenance standards. Instead, for each type of equipment, the NESC simply states that the facilities "shall be inspected and maintained at such intervals as experience has shown to be necessary." *See* NESC ¶¶ 121A (electric supply stations), 214A2 (overhead lines), and 313A2 (underground lines). Similarly, for tree trimming around overhead lines, the NESC states only that: "Normal tree growth, the combined movement of trees and conductors under adverse weather conditions, voltage, and sagging of conductors at elevated temperatures are among the factors to be considered in determining the extent of trimming required." NESC ¶ 218A1.

In other words, the NESC sets forth detailed requirements for the installation of equipment, as well as other important procedures for inspecting and maintaining certain types of equipment. But it is lacking one critically important piece of information: the inspection and maintenance *intervals* for this equipment. IBEW recognizes that the appropriate interval for inspecting and maintaining certain types of equipment might vary from one geographic area to another (for example, depending on the severity of weather conditions) and, therefore, that they might not be suitable for inclusion in a national code. However, in developing reliability criteria for Pennsylvania, it is critically important that the Commission specify maintenance and inspection intervals.

Other states have recognized the need to have inspection and maintenance standards in addition to operating statistics. *See, e.g., Pacific Gas and Electric Co.*, Decision 96-09-045 (Cal. PUC Sept. 4, 1996) (establishing reliability standards) and *Pacific Gas and Electric Co.*, Decision 96-11-021 (Cal. PUC Nov. 6, 1996) (establishing inspection and maintenance standards); *Connecticut Light and Power Co.*, 92 PUR4th 50 (Ct. DPUC 1988) (establishing

standards for reliability, inspection, and maintenance); 83 Ill. Admin. Code Part 410 (establishing standards of service and reliability reporting requirements). Similarly, in its recently enacted electric restructuring legislation, Massachusetts recognizes the need for both service standards and inspection and maintenance requirements, stating: "It is hereby found and declared that ... since reliable electricity service depends on conscientious inspection and maintenance of transmission and distribution systems, to continue and enhance the reliability of the delivery of electricity, the regional network and the commonwealth, the department of telecommunications and energy should set stringent and comprehensive inspection, maintenance, repair, replacement, and system service standards." *An Act Relative To Restructuring The Electric Utility Industry In The Commonwealth, Regulating The Provision Of Electricity And Other Services, And Promoting Enhanced Consumer Protections Therein*, Mass. Chap. 164 of the Acts of 1997, § 1(p).

IBEW recommends that the Commission include a new subsection under proposed Section 57.194 (Distribution system reliability), which would read as follows:

> **(i) An electric distribution company shall inspect and maintain its facilities in accordance with inspection and maintenance standards that the Commission will issue from time to time. An electric distribution company or any other interested party may, at any time, petition the Commission for modification of these inspection and maintenance standards.**

In addition, IBEW recommends that the Commission include a new subsection under proposed Section 57.195 (Reporting requirements), which would read as follows:

> **(f) The report shall include a table documenting the utility's compliance with inspection and maintenance standards that are established by the Commission pursuant to § 57.194(i).**

These provisions follow the same regulatory structure as other portions of the NOPR. Simply, they require the Commission to issue standards and they require utilities to comply with

those standards and report on their compliance efforts. Importantly, though, it also gives the Commission the flexibility to modify those standards over time.

The Commission Cannot Yet Rely on NERC, Regional Councils, and Independent System Operators to Ensure the Reliability of the Transmission System and the Supply of Generation

At least at the present time, it is not sufficient to rely on NERC and the regional reliability councils to regulate the reliability of electric generation supply in Pennsylvania. IBEW identified this concern in its Comments on the ANPRM in March 1997. Since that time, little progress has been made by NERC and the regional reliability councils in developing reliability standards that would apply to generation suppliers. IBEW recognizes that this area is in flux and may change significantly over time. At present, though, neither NERC nor the regional reliability councils include all of the entities that may supply generation and transmission facilities to Pennsylvania consumers. In addition, there are no enforcement mechanisms or other sanctions that would be imposed by NERC and the regional councils.

IBEW endorses the NOPR's proposal, in § 57.196, that the Commission continue to have a role in ensuring the reliability of the supply of electricity. In addition, though, the Commission should clarify that it retains certain authority over the supply of electricity within Pennsylvania. Specifically, the Commission should make the following provisions applicable to generation suppliers that operate generating facilities larger than a certain size (IBEW would suggest 25 megawatts) within Pennsylvania:

- Annual reports from generation suppliers similar to the generation-related aspects of the Annual Resource Planning Report currently required by 52 Pa. Code §§ 57.141 to 57.154;
- Reserve margin requirements for generation suppliers;
- Adherence to emergency operating procedures by generation suppliers, which may require changes or expansion in 52 Pa. Code § 57.52;

- Membership on regional reliability councils by generation suppliers (when available);

- Continued exercise of authority over generating plants owned by public utilities (plant retirements and fuel conversions pursuant to 66 Pa. C.S. §§ 517-521);

- Immediate oral or electronic notification of serious accidents involving all generation facilities (whether owned by a public utility or otherwise), followed by detailed written reports, as is currently required for public utilities by 52 Pa. Code § 57.11.

Of particular concern to IBEW is that the Commission have the ability to ensure that generation suppliers have trained personnel responsible for operating and maintaining generating stations in Pennsylvania. With a wholly competitive market for electricity supply, the incentives will be great to cut corners on plant operations or, perhaps, even to fail to comply with emergency procedures that are required to ensure the integrity of the electric grid at large. It must be remembered that we are moving out of a system of cooperation among utilities to a system of cut-throat competition among utilities and other enterprises. No one knows how that transition will work or if the mechanisms that have ensured the reliability of the system in the past will continue to work in the future.

Unless and until it is clear that the reliability councils will have the authority, and be able to enforce the authority, to order generation suppliers to undertake certain operating and maintenance procedures, the Commission must use its powers to ensure that the integrity of the electric system is not jeopardized.

In addition, as Commissioner Hanger noted (27 *Pa. Bulletin* at 5265), it is not appropriate to rely on the existence of Independent System Operators (ISO) throughout Pennsylvania. The Federal Energy Regulatory Commission recently granted conditional approval to establish an

ISO in the MAAC region[2], but IBEW is not aware of any significant movement to establish an ISO for the ECAR region – or even for that portion of ECAR that lies within Pennsylvania. Moreover, given the very recent nature of these developments, it is not possible to determine whether the new MAAC ISO will be truly "independent" of the utilities that own the transmission facilities in the region. IBEW would note that in the western United States, a major generation supplier recently announced its intention to form an alternative ISO because it does not believe that the utility-sponsored ISO is truly independent. "Enron Regulation Expert Eyes Transmission-Customer Council," AP-Dow Jones News (Dec. 1, 1997), attached hereto as Appendix 1.

Given the current level of uncertainty over the existence and independence of transmission system operators, the Commission cannot rely on ISOs to ensure the reliability of the transmission system. The NOPR should be modified, therefore, to ensure that the Commission continues to have a role in ensuring the reliability of the transmission system. At a minimum, IBEW would suggest that the Commission require all transmission owners within Pennsylvania to continue to abide by the requirements of 52 Pa. Code § 57.11, which requires immediate oral or electronic notification of serious accidents involving transmission facilities, followed by detailed written reports.

Conclusion

IBEW respectfully submits that, with a new, competitive structure for the electric industry, it is no longer appropriate to rely on cooperative efforts and cost-plus budgeting to ensure the reliability of electric service. Instead, as the General Assembly recognized, it is

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[2] *Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997).

necessary for the Commission to adopt regulations and more directly oversee the safety and reliability of Pennsylvania's generation, transmission, and distribution facilities. The Commission has made substantial progress toward meeting these goals in its Notice of Proposed Rulemaking. A few additional modifications to the Commission's regulations are necessary in order to ensure that Pennsylvania's electric service remains safe and reliable for many years into the future.

Respectfully submitted,

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3 Lost Creek Drive
Selinsgrove, PA 17870
(717) 743-2233

Counsel for:
International Brotherhood of Electrical Workers' Pennsylvania Utility Caucus

Dated: December 9, 1997

Appendix A

Dow Jones Newswires -- December 1, 1997

Enron Regulation Expert Eyes Transmission-Customer Council

LOS ANGELES (AP-Dow Jones)--An Enron Corp. (ENE) specialist on regulatory matters is seeking to form a coalition of power-grid users to give them a role in determining the fate of the new regional authorities being set up in the Western U.S. to oversee the transmission system.

"We need a force to fight back against the people creating the ISOs," said Tom Delaney, director of federal government affairs for Enron in Portland, Oregon.

Delaney tentatively plans to call his group the Western States Power Trading Council.

ISOs, or Independent System Operators, are transmission supervisors being formed across the U.S. to assure fair access to the high- voltage power grid.

The U.S. Federal Energy Regulatory Commission encouraged, but did not mandate, the formation of ISOs in its landmark 1996 orders on restructuring the nation's power industry.

Delaney has invited 50 people representing power marketers and large end-users of electricity to a meeting Dec. 8 in San Francisco to discuss the best ways for transmission customers to protect their interests as the formation of ISOs moves forward.

Some power industry stakeholders have questioned how neutral the ISOs will actually be, since their development is being steered mainly by the investor-owned utilities who have operated their transmission lines in a highly proprietary manner over the years.

Though many investor-owned utilities have taken measures to dilute their powerful roles in the market, Delaney said the attitudes of incumbency have not been entirely rooted out.

Based on discussions in the West regarding ISOs in the Northwestern states and in California, Delaney said he believes some utilities are still treating transmission customers "like we're guests in their house."

-By Allyson LaBorde; 1-213-658-3872