

COPY

February 2, 2005

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Advance Notice of Proposed Rulemaking Order Regarding Small
Generation Interconnection Standards and Procedures Docket No. L-
000040168

Dear Secretary McNulty:

Enclosed for filing are an original and fifteen (15) copies of the Comments of
PECO Energy Company on the above-captioned docket.

Please note that service on this filing has been made in accordance with the
attached service list.

Sincerely,



Adrian D. Newall
Assistant General Counsel
Exelon Business Service Company

FEB 2 2005

CERTIFICATE OF SERVICE

I hereby certify that I have this 2nd day of February 2005 served a true and copy of the foregoing comments of PECO Energy Company on the persons listed below, by first class mail:

Wendell F. Holland, Chairman
Pennsylvania Public Utility
Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Robert K. Bloom, Vice Chairman
Pennsylvania Public Utility
Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Glen R. Thomas, Commissioner
Pennsylvania Public Utility
Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Kim Pizzingrilli, Commissioner
Pennsylvania Public Utility
Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Irwin A. Popowsky, Esquire
Office of Consumer Advocate
555 Walnut Street
Forum Place – 5th Floor
Harrisburg, PA 17101

William R. Lloyd, Jr.
Office of Small Business Advocate
Department of Commerce
Suite 1102
Commerce Building
300 North Second Street
Harrisburg, PA 17101

J. Edward Simms, Esquire
Office of Trial Staff
Pennsylvania Public Utility
Commission
Commonwealth Keystone
Building
400 North Street
Harrisburg, PA 17120

Robert Young, Esquire
Law Bureau
Pennsylvania Public Utility
Commission
Commonwealth Keystone
Building
400 North Street
Harrisburg, PA 17120

John Hanger, President & CEO
Citizens for PA's Future
212 Locust Street, Suite 410
Harrisburg, PA 17101



Adrian D. Newall
Adrian D. Newall
Assistant General Counsel
Exelon Business Services
2301 Market Street S23-2
Philadelphia, PA 19103

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Advance Notice of Proposed Rulemaking : Docket No. L-00040168
Regarding Small Generation Interconnection :
Standards and Procedures :

COMMENTS OF PECO ENERGY COMPANY TO THE ADVANCE NOTICE
OF PROPOSED RULEMAKING ORDER REGARDING SMALL GENERATION
INTERCONNECTION STANDARDS AND PROCEDURES

PECO Energy Company ("PECO Energy") hereby files this response to the Pennsylvania Public Utility Commission's ("Commission") Advance Notice of Proposed Rulemaking Order Regarding Small Generation Interconnection Standards and Procedures, published in the *Pennsylvania Bulletin* on November 19, 2004 ("ANOPR").

I. Introduction

In its ANOPR, the Commission has asked interested parties to submit comments on the standards and procedures by which small generation interconnects to the distribution grid. After receiving and considering the comments submitted, the Commission intends to issue a Notice of Proposed Rulemaking. PECO Energy commends the Commission for initiating the discussion of the issues surrounding small generation interconnection processes. PECO Energy hereby sets forth its thoughts on technical requirements for interconnection and interconnection procedures. PECO Energy also has highlighted for the Commission its current interconnection practices that were modified to include simplified approval processes for customer applications that meet certain requirements.

FEB 03 2005

Prior to commenting on the specifics of the Commission's ANOPR, PECO Energy would like to first call the Commission's attention to its current interconnection standards. Per the Restructuring Settlement (Docket Nos. R-00973953 and P-00971265) and subsequent Merger Settlement (Docket No. A-110550F0147), PECO Energy developed by consensus with intervening parties, modifications to its "Requirements for Parallel Operation of Non - Utility Generation" (the "Grey Book") that resulted in splitting off smaller interconnections ($\leq 40\text{KW}$) under the guidelines of the new "Requirements for Parallel Operations for Customers With Generation Not Exceeding 40kW" (the "Yellow Book"). Please note that both the Grey and Yellow books are available on our website in support of a transparent process. The revised standards simplify the interconnection process for both small and large generation facilities in order to encourage distributed generation and streamline the interconnection process without sacrificing grid reliability and integrity. Changes include incorporating IEEE and UL standards, eliminating an engineering review of inverters in photovoltaic systems that meet acceptable standards, and reduced application fees. Further modifications to the Grey Book provide for a simplified process for the larger generators ($< 300\text{KW}$ - three phase). For example, where pre-certified equipment packages that are technically acceptable (i.e. UL) are submitted, PECO Energy no longer has to review the design package and test the equipment. Additionally, the Grey Book was modified to work in conjunction with PJM interconnection practices for those generators desiring to sell into the PJM market.

In reevaluating its interconnection procedures, PECO Energy looked to the Texas and New York models, as well as the procedures adopted by National Association of Regulatory Utility Commissioners (“NARUC”). For example, PECO Energy has an expedited approval process in place for pre-certified equipment [equipment that meet IEEE 929 and UL 1741 standards] for customer generators not exceeding 40 KW as well as for larger customer facilities (< 300 KWs three phase) that are pre-certified. The Yellow Book explains the simplified process in a compact document that includes metering and billing options, applicable rate, application forms, and for further guidance, typical service and equipment arrangement diagrams. The Company has in place (and in practice) tariff provision PECO Rate RS for the small interconnecting facility (\leq 40 KWs), which provides added metering, and billing details. Moreover, PECO Energy’s business practice is to review all applications within thirty (30) business days of receipt and communicate with applicants to guide them through the process. PECO Energy believes that its current interconnection standards are simplified, transparent, technically feasible and thus reflect the best practices of the standards referenced in the Commission’s NOPR. PECO Energy encourages the Commission to incorporate flexibility, and recognize the uniqueness of each distribution system while formulating its final rule on Small Generation Interconnection Standards and Procedures.

PECO Energy is also supportive of PJM’s effort to create a standardized process for small generation interconnection through the creation of a Small Generation Interconnection Working Group. PJM has established several technical requirements for interconnection (including the acceptance of IEEE 1547 standards) that PECO Energy supports with some comment as discussed herein.

II. Comments

a. Appropriate Generation Size

With distribution systems' stability in mind, PECO Energy strongly recommends the Commission clearly define what it considers a "small interconnection customer" and recognize the appropriateness of imposing limitations on the size of customer's facilities eligible for expedited review.

b. Technical Requirements

PECO Energy has several comments regarding the technical requirements that it believes constitute "best practices" for small generation interconnection. For example, any final rule issued by the Commission should include IEEE 1547 and UL 1741 certification standards. In that regard, rotating machinery applications should not qualify for expedited review. These larger, synchronous generators pose a greater threat to the reliability and safety of the grid, including the potential for overloading distribution system equipment. In addition, since not all distribution companies track their systems by circuit, PECO Energy proposes that any language included in a final rule concerning aggregate capacity limitations be broad enough to represent distribution circuit sections. In the same vein, the capacity of the transformer must be considered and not exceeded (i.e. on a single phase shared secondary). A customer's generator kVA should never exceed the transformer nameplate kVA otherwise a transformer change-out would be required and would eliminate it from an expedited plan.

When the Commission considers what the appropriate point of common coupling should be, it must consider the impact such connections may potentially have on other customers as well as the potential damage to the grid. PECO Energy does not believe

that the point of common coupling should be on a transmission line or area network grid for this reason. If the Commission approves interconnections to distribution secondary networks – an action that the Company does not advocate, any limitations on spot network grids ultimately adopted by the Commission should include capacity limits (less than 50kW) as well as a percent of the spot network’s maximum load.

c. Protection of Personal Safety and System Reliability

Equipment and life safety implications of low-voltage network interconnection, use of synchronous and induction generators, and aggregate generation on system elements must be reinforced. Requiring isolation devices (i.e. accessible outdoor disconnect switches) on all interconnection types is a necessary safety and reliability measure that is not unfair to interconnection customers and should not be compromised. Without proper isolation devices, the risks posed upon emergency response and utility personnel due to back-feed potential are too large to bare especially when compared to the relatively minor cost of installing such devices.

d. Process

PECO Energy also has general comments regarding the process for interconnection for small generation facilities. Although PECO Energy understands the Commission’s desire to standardize the interconnection process, the Commission must consider the different systems of the electric distribution companies (“EDCs”) and transmission owners in Pennsylvania. All of the procedures ultimately adopted by the Commission should be broad enough to encompass these differences while also encouraging interconnection. In addition, PECO Energy hereby reserves its right to

review any standard forms or interconnection agreements prior to their adoption by the Commission.

In its procedures, PECO Energy does utilize an expedited review process for eligible facilities. Although many types of applications are eligible for expedited review, PECO Energy does not believe that all applications should be considered in this manner. For example, spot network or area network applications should be subject to full review by the EDC. Also any installation that must be reviewed by PJM should not be in the expedited process. Moreover, relays cannot be placed on a fast track due to the fact that they are not UL listed and require field-testing. Most importantly, all review times should be reasonable and adequate to ensure the safety and reliability of the EDC's system, as well as the grid in general.

PECO Energy makes every effort to provide applicants with the most accurate cost estimates of interconnection. Some of the factors affecting costs include size of the generator, location of the interconnection, line voltage and the amount of load on the line segment. There is no set flat rate that can be used as a "cookie -cutter" approach since these cost factors vary based on the individual application. To ensure timely yet relevant reviews, PECO Energy proposes the Commission require all EDCs provide "good faith" estimates and not subject them to onerous accuracy limitations. Also, the EDC conducting any system impact study should have the flexibility to decide what type of study is necessary on a case-by-case basis. Each application may require different studies in order to determine the effect on the EDC's system. Therefore, Commission standardization of the type of system impact study that must be performed would not be the best practice.

In addition, the Commission should require a minimum application fee from all applicants in order to avoid nuisance applications. Such applications waste the time and resources of the EDCs, time that could be dedicated to considering serious applications.

II. Conclusion

PECO Energy Company supports the Commission's efforts to establish uniform standards and procedures for small generation interconnections to distribution systems. We propose the Commission issue final rules that are flexible and incorporate the different types of distribution systems in Pennsylvania. The Commission's final rules should define small interconnections; recognize IEEE 1547 and UL 1741 as the acceptable certification standards; discourage interconnections to distribution secondary networks; repudiate measures that would jeopardize the safety of first responders as well as company personnel (i.e., not requiring readily accessible disconnect switches); provide flexibility based on the unique characteristics of each distribution system; support standard business review periods (30 days) and require practical fees on all applications and interconnection studies.