

Lower Makefield Township
Electric Reliability Committee (ERC)
April 8, 2021
Meeting Minutes

Present: Dan Grenier
Bernard Griga
Jason Simon
John Kingham (Chairman)
Lee Pedowicz
Ted Dorand (PECO)

The April 8, 2021 virtual meeting of the Lower Makefield Township Electric Reliability Committee (ERC) was called to order at 7:32 p.m. by Chairman Kingham.

Agenda: The meeting agenda is appended to these minutes. ([Attachment 1](#)).

- 1) **Approval of past minutes:** The minutes of the meeting of January 14, 2021 were approved as circulated and corrected (Pedowicz, Griga).
- 2) **Apologies:** Jason McFarland.
- 3) **PECO – Mr. Ted Dorand.**

The Chairman welcomed Mr. Dorand to the meeting and confirmed that the committee is looking forward to his comments on the topics listed in the [letter of November 12, 2020](#) to the Board of Supervisors.

a) The Smart Meter Program: Mr. Dorand stated that the investment by PECO in the Smart Meter Program is now paying dividends, especially on the residential side of the business. PECO previously relied on a third-party entity for its meter communication. However, with the implementation of digital metering and distribution system automation, PECO has now installed its own dedicated communication infrastructure. The system has also been found to work well with other equipment so that PECO can now respond quickly and efficiently to any problem.

He explained that the system provides a good indication of the magnitude of the outage and automatically dispatches crews to the fault location. Furthermore, the trucks now carry digital equipment which provides the crews with all the necessary power circuit information. The days of printed circuit diagrams in the field are now over.

However, Mr. Dorand pointed out that, in addition to the Smart Meter feedback, outage reports from its consumers are still an integral and important part of the system. This can be done either by calling directly or through the PECO smart phone apps which also display outage maps and outage updates.

b) Outage Communications: In response to concerns about the accuracy of the messages sent to consumers during an outage, Mr. Dorand acknowledged that there are ongoing communication issues which are being addressed.

He explained that, in the event of a major outage, such as caused by widespread storm damage, it is common for “foreign crews” to respond. These are crews from other utilities that respond as part of a mutual aid program that exists between power distribution

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companies. When these crews respond, they are not equipped to operate on the same wireless communication system as the PECO crews and, instead, must communicate with a PECO supervisor. In these cases, there may be an unavoidable lag in updating the PECO system. In addition, if there is damage to a piece of equipment affecting a wide area it may mask other damage further down the line. In this case, when the known fault is repaired power may be restored to some consumers but not all because the additional damage has been hidden. So, a crew may report power restoration in an area when in fact, not all consumers are back in service due to the remote damage not being immediately apparent. Under these circumstances inaccurate messages may be sent to customers. PECO acknowledges the frustration this causes and is working towards improvements.

In response to a question from Mr. Simon, Mr. Dorand confirmed that the reliability detail provided by the Smart Meters is now allowing PECO to identify repeat outages in small areas. It has a Regional Reliability team covering Bucks and Montgomery counties which can take “a deeper dive” into the data to identify “hot” areas where there are repeat outages. The goal of this approach is to get ahead of issues before customers call with reliability complaints.

The reliability discussion continued with a question from Mr. Griga who asked about the wider issues stemming from the 2019 PUC “Electric Service Reliability in Pennsylvania” report. In this report the outage-minutes data for PECO was higher than in previous years and, as a result, the PUC told PECO to “manage the problem”. Mr. Griga asked Mr. Dorand if he anticipated an improvement in 2020. Mr. Dorand said that he did expect there to be an improvement but, at the same time, it should be recognized that two of the top ten storms experienced by PECO in its history occurred in June and August 2020 and that these will undoubtedly skew the data.

In answer to a question from Mr. Pedowicz about how PECO defines an outage Mr. Dorand stated that an outage is any interruption of two minutes or more. Anything less is defined as momentary, but it is still significant as far as reliability monitoring is concerned. A momentary interruption may be caused by automated switching that occurs when the system detects a fault or, if it occurs frequently, it may be indicative of an underlying problem that needs to be addressed.

To move on from the reliability and smart meter data discussion Mr. Kingham noted that it is encouraging because previously, in 2014, PECO had to undertake a good deal of manual data sorting to detect and address what were called “pocket areas” within LMT that were experiencing frequent outages.

c) PECO Infrastructure in LMT:

i) Upgrades since 2015: As far as PECO activity within LMT is concerned Mr. Dorand outlined some of the work that PECO has been carrying out within Lower Makefield. He stated that some underground cable has been replaced, generally with heavier cable. In addition, heavier poles have been installed along with upgrades to the overhead distribution system. Notably the Morgan substation retirement included a primary

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voltage upgrade from 4kV to 34kV (4000Volts to 34000Volts) together with circuit reconfiguration and switching to improve the reliability of the supply.

Mr. Dorand confirmed that upgrade work is still ongoing, such as around Lower Hilltop. He also clarified that the PECO view of LMT was broadly split between Yardley East and Yardley West even though, as Mr. Simon pointed out, that is not how residents know the area.

Mr. Simon asked what percentage or how many of the residents have benefitted from the upgrade work. Mr. Dorand said that he could not describe it in percentage terms, but he estimated that some of the targeted work may only affect several dozen homes while larger upgrades, such as a primary voltage increase and improved circuit switching, may benefit several thousand customers. He also emphasized that, in its reliability assessment, PECO is looking for the worst cases. It is looking for customers that may experience perhaps seven, eight or nine interruptions in a year and these are addressed first even though the defect may only include a small number of consumers.

Mr. Simon also raised the issue of standby generators installed by residents. Based on information from the Township Mr. Simon stated that, in 2019, permits were issued for 84 generators. This means that, at a conservative estimate of \$6000 for each installation, around a half million dollars has been invested by residents. He added that this expenditure indicates, firstly, a significant outlay by individual homeowners that probably exceeds their annual billing from PECO and, secondly, it shows a level of frustration with the length of time that is being taken by PECO to carry out its improvement work.

In response to Mr. Simon, Mr. Dorand stated that he understands the frustration but, at the same time, in his career with PECO, he has seen a significant decrease in the number of customers that experience multiple interruptions. However, especially when severe weather is considered, there will never be a time when the reliability is 100%. Even so, PECO is continuing to harden its system with the goal of reducing the number and duration of interruptions to be as small as is practical. To this end PECO is spending around one billion dollars per year on distribution system “hardening” and improvements and will continue to do so.

During the discussion Mr. Dorand emphasized that, as always, he is open to addressing any matters raised by the ERC but requested that all questions or issues be channeled through the Township Manager.

In an ongoing discussion Mr. Grenier raised the question of power generation and transmission which is a matter of overall reliability interest even though PECO is not a power generator and has limited high voltage transmission equipment. Mr. Grenier asked if there is anything related to reliability that has come from PJM Interconnection and other bodies aside from the PUC which oversee PECO’s distribution performance.

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In response, Mr. Dorand stated that there are no transmission issues which are causing problems for PECO. Even so, he added that PECO does comply with any applicable rules laid down by NERC (North American Electric Reliability Corporation) and FERC (Federal Energy Regulatory Commission). In addition, the supply of energy to PECO is overseen by PJM which coordinates and manages the wholesale electricity market in a large area of the Northeast. Mr. Dorand pointed out that, as part of its oversight role, PJM was able to quickly disconnect and isolate its region of responsibility from the cascading effects of the major blackout in 2003. Nonetheless, for its high voltage transmission lines, perhaps 230kV, PECO does carry out “re-conductoring” work on a routine basis which, in general, has no effect on the power distribution system within LMT.

Mr. Grenier continued by asking Mr. Dorand about PECO’s involvement with the moves being taken by Bucks County to promote renewable energy. Mr. Dorand said that he is familiar with the efforts being taken by Bucks County and has participated in meetings with the County to establish and support green-energy goals. He anticipated that the County moves would make it easier for solar consumers, for example, to connect to PECO. Furthermore, given the moves now underway by Exelon (the parent company of PECO) to spin-off power generation, PECO anticipates that it will be able to participate in power generation in a way from which it is currently prohibited.

- ii) **Have the changes to the PECO distribution system in the northern part of LMT performed as expected?** Mr. Dorand said that he believes the improvements have benefitted the area served by the reconfigured and upgraded circuits. Mr. Grenier supported the positive viewpoint of Mr. Dorand but asked what is being done to address the lingering small pockets of low reliability in the area. Mr. Dorand stated that there is additional work in the plan which will either upgrade the primary lines to 34kV or where it cannot be done, additional switches and other moves are being planned.

The issue of secondary lines at the rear of properties was raised. Mr. Dorand said that the relocation of the backyard lines is being studied. Line relocation is a long term goal and will be implemented on a project-by-project basis. However, he emphasized during the meeting that line-removal is a long-term goal and does not mean that the old lines will be replaced anytime soon.

- iii) **Status of the tree trimming program:** Mr. Dorand advised the committee that the tree trimming program for LMT is scheduled to re-commence in the Fall. In addition, the program has been accelerated to be done every three years instead of five because of the preponderance of fast-growing trees, especially pines.

Mr. Simon asked if there are any other municipalities that have taken steps to support or help PECO in its vegetation management efforts. Mr. Dorand said no but there is advice on the PECO website under the “Plant the Right Tree in the Right Place” banner which also gives recommendations on species, planting distances and other advice. Mr. Simon also asked whether the moving of lines from the rear of properties to the front will help.

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Mr. Dorand said that it would but, again, cautioned that the moving of those lines is a long-term goal and is not in the immediate future.

In further discussion Mr. Griga referred again to the PUC 2019 reliability report in which it indicated that the minutes per failure where vegetation is involved far exceeds the minutes the time-to-restore for equipment failure. Mr. Griga asked, from his personal experience, where he had to wait three days for a tree limb to be removed from lines, whether there is sufficient tree-service availability. Mr. Dorand stated that there is no shortage of tree trimming service availability. Most likely the long wait would be due to the priority assigned to the outage. Broadly, municipal and health related facilities such as hospitals and care homes are at the top of the list followed by restoration based on the number of consumers involved. Restoring power to thousands of customers would be deemed more important than smaller groups. However, the availability of tree service companies is not an issue.

- iv) **Underground vs. overhead distribution:** From the discussion on tree damage Mr. Simon asked whether the moving of lines from the rear of properties would also include laying the cables underground. Mr. Dorand said that the placement of distribution lines underground could cost more than one-million dollars per mile and is not being considered due to that cost. It would also include communication cable relocation bearing in mind that the PECO poles are shared by the communication cable companies (Verizon, Comcast etc).

Mr. Simon stated that the situation would not be viewed sympathetically by residents. In response, Mr. Dorand added that, in the construction of electric distribution lines in new subdivisions, PECO will continue to place lines underground in compliance with individual municipal regulations.

Based on the observable underground cable work that has occurred in Yardley Hunt, Mr. Kingham questioned whether the failure rate of underground cables is increasing especially since some of the cables have now been underground for more than forty years. Mr. Dorand acknowledged the concern and added that PECO is aware of the age and construction of the underground cables and includes it in its reliability analysis. He also added that any new cable would be heavier.

- v) **Any planned upgrades such as overhead primary hardening against tree damage?**

From his observation of the bare overhead primary and secondary cable service common in LMT, Mr. Pedowicz asked whether, in its upgrade work, PECO is insulating its conductors. Mr. Dorand affirmed that any new cable work will include insulation, and, in some cases, it may include tree-hardened bundled conductors. On this point Mr. Kingham, as an example, referred the committee to Black Rock Road where bundled conductors can be seen in an area of tall trees.

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Additional Discussion

Mr. Simon asked Mr. Dorand for any recommendations on what to say to residents that may have lost a lot of food during an extended outage or may have spent a large sum on a generator. Mr. Dorand said that he typically tells customers who have experienced frequent outages or who have spent a large sum on a generator that, despite PECO's best efforts to minimize outages, PECO cannot guarantee 100% reliability. This is especially true when severe storms are considered. Mr. Simon concurred but added that the information fed back to customers during an outage is possibly more important than the restoration of power. As annoying as a power outage may be, accurate communication allows a resident to plan and minimize the impact of the power loss. Mr. Dorand agreed with Mr. Simon and pointed out that, prior to 2020, PECO restoration estimates were, at times, less than accurate. This was particularly the case during major storms affecting a substantial number of customers. However, PECO is now focused on efforts to improve restoration time accuracy.

Mr. Grenier added that, since the Township is generally the focus of resident's frustration, anything that can be done between the Township and PECO to help with the communication will be a positive factor. To this end Mr. Grenier asked Mr. Dorand to offer his suggestions in the future on the possible steps the Township could take in cooperation with PECO to improve the situation.

The session with Mr. Dorand concluded with thanks from the committee for his time and his willingness to address the reliability concerns and the hope that we can continue to meet with him in the future.

4) The way forward for the ERC:

In the light of the meeting with PECO, it was agreed that the way forward for the ERC is to work to implement the items discussed in this meeting including prominent information for residents on the website in relation to electric power supply and what to do in an outage. The committee should work to develop a list of recommendations to improve the communications which are paramount during an outage.

5) Other Items: No other items were raised.

6) Next Meeting: The next scheduled meeting of the ERC is on July 8, 2021 at 7:30 p.m.

7) Motion for Adjournment: The meeting was adjourned at 9:25 p.m.

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Attachments:

1. [Agenda](#)
2. [Letter of November 12, 2020 to the BOS](#)

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Attachment 1

ERC Agenda Apr 8, 2021 Meeting – 7:30pm LMT Remote:

1. Approval of minutes of January 14, 2021 meeting - Kingham
2. Apologies
3. PECO – Mr. Ted Dorand
 - I. The status of the smart meter program with an emphasis on the reliability metrics being gathered by the new system.
 - II. PECO outage communications – inaccuracies and misleading information.
 - III. Status of the PECO infrastructure in LMT
 - i. Upgrades since 2015?
 - ii. Have the changes to the PECO distribution system in the northern part of LMT performed as expected?
 - iii. Status of the vegetation trimming program.
 - iv. Underground vs. overhead distribution - are underground system failures becoming more prevalent?
 - v. Any planned upgrades such as overhead primary hardening against tree damage?
4. The way forward for the ERC
5. Other items
6. Set date, time, place for next ERC meeting
7. Motion for adjournment

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Attachment 2:

Supervisor D. Grenier
Lower Makefield Township
1100 Edgewood Road
Yardley
PA 19067

November 12, 2020

Dear Mr. Grenier,

Re: Electric Reliability – PECO Virtual Meeting

As discussed with you at the Electric Reliability Committee (ERC) on November 12, 2020 I am writing to seek the assistance of the Board in establishing a virtual meeting with PECO.

From our communications with PECO in years past, notably with Mr. Ted Dorand and representatives of the PECO engineering department, we believe that, given the recent spate of power outages, it is now time to reacquaint ourselves with PECO in a virtual meeting with the following questions/topics on the agenda:

1. The status of the smart meter program with an emphasis on the reliability metrics being gathered by the new system.
2. PECO outage communications – inaccuracies and misleading information.
3. Status of the PECO infrastructure in LMT
 - a. Upgrades since 2015?
 - b. Have the changes to the PECO distribution system in the northern part of LMT performed as expected?
 - c. Status of the vegetation trimming program?
 - d. Underground vs. overhead distribution - are underground system failures becoming more prevalent?
 - e. Any planned upgrades such as overhead primary hardening against tree damage?

In 2019 Mr. Dorand requested that all future communications go through the Township. Consequently, we are asking for your assistance in setting up a virtual meeting with the audience limited to the ERC and Township officials.

We look forward to the assistance of the Board.



John Kingham
215-805-7666