

MEMORANDUM

TO: Public Safety Works & Services Committee



FROM: Paul A. Leonard, Township Manager

DATE: February 26, 2010

RE: Street Lights

RECOMMENDATION

That the Committee provides critical evaluation and comment to a township staff proposed program to "Turn Off" selected street lights for economic and energy conservation reasons. In order to meet budget mandates, over time all streetlights throughout Township will be evaluated for need based upon the public safety criteria detailed below.

BACKGROUND

The township has obtained professional review of its street lighting costs and the recent rate increases. Attached please find an email from Howard Woods and a letter from the township's lighting consultant, both of which provide details about this almost \$250,000 per year program. It is recommended that the Township begin with a modest replacement and retirement (read removal) program. The replacement approach is relatively straight forward based upon the costs. Township should as time and budget might permit replace all mercury vapor lights with sodium vapor, a much more efficient light under the tariff (\$1,173 per month savings if all mercury vapor lights were replaced). The removal program is a more difficult and predictably a sensitive matter to some residents.

RETIREMENT

The street lights in Upper Dublin Township have been installed incrementally over many decades. In some cases the street lights went in either contrary to standard practice without genuine or well establish reasons based up a single complaint, concern about crime that may have passed or as reacting to the concept that lights are free when installed by developers. Of the 2,019 lights, it has been suggested that 72 be our target for the year 2010 for retirement/removal. This number is somewhat arbitrary in that it would be a method to offset the recent tariff increases from PECO as approved by the

PUC. However, it is believed that it will be easy to find a significant number of lights where removal this year would be quickly justified. (Read low hanging fruit).

The basic requirements for evaluating a light for removal would be as follows:

1. A mid-street light, not specifically covering an intersection.
2. Located on a straight-a-way of roadway, not on a curve.
3. Not covering areas with significant on street parking.
4. Not at the end of a cul-de-sac.
5. Not providing lighting for township property, facilities or parkland.
6. Located on relatively low speed roadways.
7. Not located in a high crime area.
8. Not an area with routine or frequent vehicle accidents.

Another essential element of evaluating retirement of street lights is the essential understanding that the township provides the street lighting to light public ways for motorist and pedestrian safety. The township does not provide street lighting to provide security for any individual private property. For example, in many instances private property owners already provide their own security lighting. An equity issue that I might raise is that if a citizen wants to have security lighting on their property that they should provide it directly- the same way that many others do. In the course of reviewing and removing some street lights will need to remain mission focused on lighting the public ways.

The township staff is suggesting that the residents be involved in that a street light that is evaluated and determined to meet the criteria for removal be posted as such and turned off without having the physical structure removed. Without significant complaint or challenge to the removal on some thirty days later, the removal would be scheduled and the township would apply to PECO for having it removed from its tariff utility bills. The costs go down only if the light is removed. Finally there are costs associated with removal, and they do vary based upon type of light.

From: Howard Woods [howard@howardwoods.com]
Sent: Monday, February 01, 2010 12:31 PM
To: Bleemer, Jonathan
Cc: Leonard, Paul; Ritter, Deb
Subject: RE: Street Light Billing Information



Schedule SL-E
Revised Tariff ...

Dear Jonathan:

I obtained a copy of the new PECO street lighting tariff, which is now effective. Your January bills will be based on this tariff because these rates went into effect on January 1, 2010. A copy of the street lighting tariff is attached. If you want all 137 pages of the tariff, let me know and I'll send it over.

I calculated the monthly rate based on the 1,760 service points and 2,007 lamps of varying sizes and types that have been historically used to compute your bill. The only item I ignored in the calculation is the variable State Tax Adjustment applied to reduce your bill each month. Using the old rates, I calculate a monthly street lighting bill of \$18,817.42 (this is \$87.42 per month more than the amount quoted in Suzanne's e-mail below). I then applied the new tariff to the same billing determinants to get a new monthly bill of \$19,618.02 (this is \$85.02 more than Suzanne's amount). The overall increase is \$800.60 per month or 4.25%.

There are some elements of the tariff that are increasing while others are decreasing. The generation load charges are down by 14.29% and the generation use charges are down by 8.20%. The Competitive Transition Charge Load Rate is up 21.74% and the Competitive Transition Charge Energy Rate is up 19.86%. Transmission charges are unchanged. The fixed service charge for each service point is up by 6.47%. This charge accounts for 68% of your monthly bill and the only way to impact this is to eliminate street lights. Changing the type of bulb will have no impact at all on this amount.

The increase in the fixed service charges amounts to \$809.60 per month. This is slightly offset by a net decrease in load and energy charges. If you want to try and offset the \$800.60 per month overall increase in the bill, you will need to replace inefficient bulbs to generate an additional net decrease in the load and energy charges.

Previously, I looked at the possibility of changing the mercury lamps with something more efficient. If you change the mercury lamps for sodium lamps, you can expect a load savings of about 49,000 watts. At the new tariff rates, this is worth \$315 per month. The related energy savings amounts to about 16,800 kWh per month and this has a value of \$858 per month at the new tariff rates. So, if you change out all 601 mercury lamps with sodium lamps having the same lumen output, you can expect to save \$1,173 per month at the new tariff rates. The estimated cost of the change out program at an average of \$275 per unit is \$165,275. If your cost of capital is 4%, the debt service amount, estimated at \$1,013 per month, will nearly wipe out the savings but this would still leave you \$160 per month ahead of where you are with the rate increase alone. That is, you can reduce the 4.25% increase to a 3.4% increase in total cost by spending \$165,275 on mercury lamp replacements.

Another approach to take is to look for lamps you simply don't need and eliminate them. The average all-in cost per lamp is \$11.15 per month. This is your total monthly bill at the new tariff rate divided by the number of service points. At this rate, if you could eliminate 72 lamps, you could offset the entire increase.

The best approach is probably a combination of replacements and retirements. First, get rid of the lamps you no longer need to have (at one point, you had two layers of lamps on Pennsylvania Ave when the decorative lamps were first installed - if this is still the case, get rid of the old luminaries). After the unnecessary lamps are removed,

then look at the programs Suzanne is talking about to see what PECO will pay for in regard to change outs. The mercury lamps are the best targets because these are so much less efficient than sodium lamps.

With regard to the \$81 per month traffic light increase, I believe you are stuck with this since you have already changed to LED lamps at nearly every location.

Please give me a call if you would like to discuss this or if you have any questions.

Regards,

Howard

-----Original Message-----

From: Bleemer, Jonathan [mailto:jbleemer@upperdublin.net]
Sent: Friday, January 29, 2010 10:43 AM
To: budwoods@earthlink.net
Subject: FW: Street Light Billing Information

Howard:

I received this email from PECO yesterday. Please let me know if this provides the rate increase information you need.

Jonathan

----- Original Message -----

From: cristsandra.penn@peco-energy.com
<cristsandra.penn@peco-energy.com>
To: Leonard, Paul
Cc: suzanne.ryan@peco-energy.com <suzanne.ryan@peco-energy.com>
Sent: Wed Jan 27 18:58:46 2010
Subject: Street Light Billing Information

Dear Mr. Leonard:

At PECO we understand how your electric service impacts you, and we are committed to providing you with the information you need to manage the many changes in our state's energy market. This letter contains important information about a change to your electric bill.

In 2008 the Pennsylvania legislature required utilities state-wide to develop programs to help customers reduce energy use by 1 percent by May 31, 2011 and 3 percent by May 31, 2013. Utilities also must help customers reduce energy demand during the 100 highest use hours of the year by 4.5 percent by May 31, 2013.

As part of this effort, in January 2010 the Pennsylvania Public Utility Commission approved customer charges to reimburse the utility's costs for these programs. These costs will result in about a 2 percent increase to the general service portion of your electric bill and about a 5 percent increase to the portion of your bill that covers street and traffic lighting. The chart below provides the anticipated impact to your lighting accounts.

Street Lighting

2009 Monthly Charge: \$18,730

2010 Monthly Charge: \$19,533

Percent Increase: 4.29%

Traffic Lighting

2009 Monthly Charge: \$1,082

2010 Monthly Charge: \$1,161

Percent Increase: 7.32%

These charges cover the cost of nearly 20 new programs to help customers save money by using energy more efficiently. Our municipal programs include discounts for converting to energy efficient street and traffic lighting, and rebates and incentives on energy efficient equipment. You can reduce, or potentially offset this increase, by taking advantage of PECO's energy efficiency and conservation programs.

PECO's suite of energy saving products, including specific discounts on energy saving improvements for our municipal customers will be available beginning in March 2010.

Right now we are forming a team, including energy consultants that will be able to help you take full advantage of these programs and maximize your savings. We also will be holding seminars and sending you valuable information in our municipal newsletter, Common Ground.

From these programs, to the expiration of rate caps, to new technology like Smart Meters, there will be many changes this year as we complete the transition to a competitive electric market in Pennsylvania. We are here to help you through every step of the process and will continue to be in touch regularly throughout the year. As always, please feel free to call me at 610-941-1504 if you have any questions.

Sincerely,

Suzanne Ryan

Montgomery County External Affairs Manager

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STUBBE CONSULTING LLC

1438 Shaner Drive
Pottstown, PA 19465



Phone: 610 972-9803
FAX: 610 326-1402

StubbeConsulting@cs.com

February 5, 2010

Mr. Paul Leonard, Manager
Upper Dublin Township
801 Loch Alsh Ave.
Port Washington, PA 190341697

Subject: Street Lighting Criteria

Paul:

I have received your request for a suggested set of criteria that the Township could use to help evaluate whether existing street lights might be deactivated and removed from PECO's bill.

While not having a close familiarity with the configuration of the Townships' existing subdivision street lighting, it is suggested that initially the street lighting within residential developments, rather than Township or state roads, be examined as prime candidates for fixture reduction. The recommended criteria would be to retain street lighting at the following locations:

- intersection of development entrance roads with main roads
- road intersections within developments
- sharp curves in roads
- parking areas with 6 or more contiguous spaces
- end of cul-de-sac bulbs
- village commercial and recreational venues within subdivisions where people congregate during hours of darkness

That would suggest that lighting that does not meet any of those criteria, e.g., intermediate roadway lighting in particular, be considered as a viable candidate.

However, a few caveats should be considered. Where any of the following conditions exist in developments, the candidates for deactivation should be moved lower on the priority list:

- interior roads with no posted speed limit
- excessive crime areas
- roads where there are no sidewalks and on-street parking is allowed on both sides of the street
- locations with a heightened accident rate

As for street lighting in non-development locations, if the Township wishes to tackle that task, I would be prepared to offer additional criteria after learning more about your current street lighting configurations.

Sincerely,

Stubbe Consulting LLC

C. Stanley Stubbe

Copy: Mr. James Rudolph, Metz Engineers