



Capital at the point of impact.

TRF Energy

718 Arch Street - Suite 300 North
Philadelphia, PA 19106-1591

phone: 215.574.5800

fax: 215.574.5900

e-mail: energy@trfund.com

web: www.trfund.com/energy

Understanding PECO's General Service Tariff

If you feel that you do not really understand the PECO bill that your company or organization receives each month, you are not alone. In TRF Energy's experience, probably less than 2% of PECO's General Service (GS) customers really understand how their electricity costs are computed. A surprising amount of information can be learned by evaluating the energy bills of a building and facility operators and management need to understand the GS rate if they hope to successfully reduce their electric bills. This document is written to help building owners understand their electric bill and the key provisions of the GS tariff.¹

The Meter Information Section of the PECO GS Bill

The place to start is with your PECO bill. Get out a recent bill and follow along. The Meter Information section of the PECO bill is near the top on the first page and it contains the important information about the customer's monthly electricity consumption. The graphic below is from the sample PECO GS bill:

Meter Information									
Read	Meter	Load	Reading	Meter Reading					
Date	Number	Type	Type	Previous	Present	Diff	Mult X	Usage	
04/07	01234567	General Service	Tot kWh	4172 ACT	4294 ACT	122	40	4880	
04/07	01234567	General Service	Pk kW	0.0 ACT	0.47 ACT	0.47	40	18.72	
Total kW Billed.....		18.7							
Total kWh Used.....		4880							

Tot kWh (Total kilowatt-hours) is a measurement of the customer's electricity consumption for the month, measured in kilowatt-hours (kWhs). In the sample bill above, the customer used 4,880 kWh. The GS customer's meter records the number of kWhs used each month, just as a car's odometer records the number of miles a car has been driven. The measurement of kWh in the GS bills is similar to the information given homeowners on their residential electric bills.²

Pk kW (Peak kilowatts) is a second measure of energy use, called demand, that appears on commercial bills under the General Service rate. Demand is a measurement of the rate at which a customer uses electricity at a given

¹ For folks who really want to dig deep, the PECO General Service tariff is available online at www.exeloncorp.com/NR/rdonlyres/DF4E94D2-14F6-4495-98D7-7AB2FCE4CA2A/2601/RateGS2007.pdf.

The PECO website has a webpage entitled *Understanding Your Bill* that is available at: www.exeloncorp.com/ourcompanies/peco/pecobiz/your_account/energyatwork/YourService/How+to+Understand+Your+Bill.htm. Parts of this document are based on that document.

The sample bill used in this document is from the PECO website. The front sample page is available at: www.exeloncorp.com/NR/rdonlyres/FD6616FF-F9DB-4F30-A3C4-DCD714C3D3C1/3630/billfront.gif. The back sample page is available at www.exeloncorp.com/NR/rdonlyres/FD6616FF-F9DB-4F30-A3C4-DCD714C3D3C1/3631/billback.gif.

² Customers with electric heat usually have two meters – one for the HVAC equipment and one for the general load, so the Meter Information section of their bills will show Tot kWh and Pk kW readings for both meters.

instant. When the air conditioning is turned on and all the lights and computers and appliances and other electrical equipment are using electricity, the demand is higher than in the evening when the building is vacant and most things are shut off for the night. Returning to the car analogy, demand is like the speedometer, which measures the speed or rate that the car is traveling. Whereas electric consumption was measured in kWh, electric demand is measured in kilowatts (kW). The electric meter for nonresidential customers is continually measuring a building's demand and is doing a running calculation of the 30 minute average of these instantaneous demand readings. The highest 30 minute average is used as the peak demand for each month.

In the sample bill, the Pk kW for the month was 18.72 kilowatts. The Total kW billed is usually equal to the Pk kW, unless a customer is subject to the summer ratchet³ or has electric heat and is under the GS electric heating tariff.⁴

The Billing Information Section of the PECO GS Bill

In the middle of the first page of the PECO GS bill is the billing information that shows the costs of the customer's electricity usage. The graphic below is from the sample PECO GS bill:

Current Period				
ELECTRIC COMMERCIAL SERVICE		Services 03/08/2007 to 04/07/2007 - 31 days		
Customer Charge				\$23.82
Generation Charges	1,149 kwh	x	\$0.12770	191.04
Generation Charges	3,384 kwh	x	0.05020	169.88
Transmission charges	1,149 kwh	x	\$0.01290	19.30
Transmission charges	3,384 kwh	x	0.00380	12.86
Distribution Charges	1,149 kwh	x	\$0.033650	54.60
Distribution Charges	3,384 kwh	x	0.01090	36.89
Transition charges	1,149 kwh	x	\$0.07230	108.16
Transition charges	3,384 kwh	x	0.02150	72.99
State Tax Adjustment				-0.99
Sales tax				48.18
Total Current Charges				\$736.50

The first item on the list is Customer charge, which is a fixed amount each month that covers the costs of servicing a customer's account for fixed costs of metering, billing, and customer service.

The next four categories of charges – Generation Charges, Transmission Charges, Distribution Charges and Transition Charges – are where things get complicated because each is based both on the total kWh consumption and the customer's peak demand.

The starting place for explaining how these charges are calculated is to understand that PECO's General Service tariff puts the kWh consumption into multiple buckets (or rate blocks) which have different prices. PECO's tariff has declining block rates, meaning the first bucket of kWhs costs the most and is filled first, then the second bucket, which is lower in cost. To repeat, the first concept to keep in mind is that kWhs are poured into different buckets that have different prices.

³ PECO's GS Rate includes a summer ratchet, which sets a minimum demand charge for customers that is 40% of their peak demand the previous summer (June through September). For example, if the peak demand in one of the summer months was 50 kW, the Total kW billed the following winter months (October through May) would never be below 20 kW (50 kW times 40%), regardless of whether the Pk kW, or the actual measured demand, was lower for any of the winter months.

⁴ For customers on the GS tariff with electric heat, the metered demand on the heating meter is ignored during the winter months (October through May) and the Total kW billed is based only on the Pk kW reading of the general service meter. In the summer months, the Pk kW numbers from both meters are added together to determine Total kW billed and the bill is calculated as with a normal GS customer.

The second fundamental concept is that the sizes of the buckets are determined by the billed demand each month. A lower demand in a month will mean fewer kWhs in the first, most expensive bucket and more kWhs in the less expensive buckets. The PECO GS tariff does not have an explicit line in the bill for the demand charge, but the Total kW Billed is used to calculate the size of the rate blocks.

With PECO's GS rate, the size of the first block is equal to 80 times the peak demand (Total kw billed in the bill). In the sample bill, the first block contains 1,496 kWh, which is equal to 80 x 18.7 (the Total kw billed for the month). If this was a summer bill (the bills from June through September), there would be an intermediate block, also equal to 80 times the peak demand (another bucket of 1,496 kWh). Because the sample bill is a winter bill, all of the kWh's that do not fit in the first bucket are in the third bucket (3,348 kWh in the sample bill).

These rate blocks or buckets apply to four parts of the PECO bill: the Generation Charge, the Transmission Charge, the Distribution Charge and the Transition Charge.

The Generation charge covers the production of electricity. The sample bill shows a customer buying electricity from PECO. If a customer is buying electricity from a competitive supplier rather than PECO, the supplier's charge will be listed separately on the PECO bill.

The Transmission charge covers moving high-voltage electricity from a power plant to the PECO system. Transmission prices and services, because transmission is interstate, are regulated by the Federal Energy Regulatory Commission (FERC).

The Distribution charge covers PECO's delivery of electricity from high-voltage lines to customers, including maintenance of electric substations, distribution circuits and other equipment.

The Transition charge (also called the Competitive Transition Charge) is a short-term charge that Pennsylvania utilities are authorized to collect for stranded costs under the utility deregulation rules.

The charges per kWh for each of these charges for the different blocks are shown in the following table:

Block	Number of kWh in Block	Generation Charge	Transmission Charge	Distribution Charge	Transition Charge	Total kWh Charges
First Block	80 x peak demand	12.77 ¢	1.29 ¢	3.65 ¢	7.23 ¢	24.94 ¢
Second Block	80 x peak demand	6.93 ¢	0.61 ¢	1.72 ¢	3.41 ¢	12.67 ¢
Third Block	Balance of kWh	5.02 ¢	0.38 ¢	1.09 ¢	2.15 ¢	8.64 ¢
Fourth Block	Over both 400 hours' use of billing demand and 2,000 kWh	3.19 ¢	0.17 ¢	0.48 ¢	0.95 ¢	4.79 ¢
GS Heating	All kWh on the heating meter	4.33 ¢	34 ¢ per kW	0.86 ¢	1.70 ¢	--

Adding all four of these charges together gives kWhs in the first rate block cost 24.94¢ per kWh. The next block of kWh costs almost half that price or 12.67¢ per kWh and the third block is 8.64¢ per kWh.⁵ Obviously it is in the customer's interest to have the first block be as small as possible so as many kWhs as possible spill over into the less

⁵ As noted earlier, the middle block is not used in the winter months, only the first and third blocks. But all three blocks apply in the summer months.

expensive blocks. As block size is determined by the level of peak demand, it is in the customer's interest to reduce its peak demand each month. Under the current PECO rates, a reduction of just **1 kW in demand** over the year reduces a customer's electric bill by **approximately \$150** even though the total number of kWhs is the same.

The economic theory supporting the demand charge is that utilities must have generating plants available to meet the highest demand of its customers, even if that level of demand is needed only a short time of the year. A customer that sets a high demand requires more services from the utility--additional generating plant capacity and more expense in lines, transformers and substation equipment. Demand charges assign to each customer the cost of the power supplies needed to satisfy its maximum demand. Like it or not, the demand charge is an important component of a GS bill.

Returning to the elements of the electric bill, the State Tax Adjustment is a line of the bill that reflects any tax rate adjustments in the current bill. The adjustment factor is currently a credit of 0.003 times the total bill.

The Sales Tax is 7% for Philadelphia customers, 6% for the suburban counties and 0% for tax exempt entities.

Taking Action: Next Steps

So what should you do now? TRF Energy recommends the following actions:

1. Start paying real attention to you utility bills. Enter all of your electric and other energy bills on TRF Energy's Energy Bill spreadsheet (available at www.trfund.com/energy). Make this data available to all of your staff and help them understand what is at stake. Each month check what is happening to the kWh consumption and the kW demand and talk about it. Look for periods of unusually high or abnormal energy use and determine the cause.
2. Benchmark your energy consumption on a square foot per year basis with similar buildings in the region. How do you compare? Are your energy consumption and billed costs low enough to place you in the top 25th percentile in efficiency? Visit the ENERGY STAR performance rating website (www.energystar.gov/index.cfm?c=spp_res.pt_neprs_learn) to learn more about benchmarking.
3. Set goals and targets for both energy consumption reduction and demand reduction.
4. With the input of all of your staff, develop a comprehensive plan to reduce energy consumption and costs. Make sure everyone knows about the goals and understands what needs to be done. Educate each other about the issues.
5. Implement energy efficiency measures and demand measures.

TRF Energy can assist you with all of these steps, including favorable financing for energy efficiency and demand reduction measures.

TRF Energy

The Reinvestment Fund (TRF) offers both financing and technical support for customers working to reduce their energy bills. TRF Energy offers a range of flexible financial products designed to help businesses and nonprofit organizations implement energy conservation and efficiency improvements. TRF Energy also provides technical assistance for customers interested in reducing their energy costs. To learn more, visit the TRF Energy web site – www.trfund.com/energy or contact the TRF Energy staff:

Rob Sanders (financial issues)
rob.sanders@trfund.com
215.574.5850

Roger Clark (technical issues)
roger.clark@trfund.com
215.574.5814





Emergencies & Repairs: 1-800-841-4141 This is the number to call to report power outages, gas leaks or odors, and safety hazards related to PECO Energy equipment. For all other business, call 1-800-220-7326.

Page 1

Name: ABC Company
 Service Address: 444 Hairy Drive, Philadelphia, PA
 Phone Number: 215 987-6543
 Account Number: 89898-22222
 Issue Date: 04/11/2007

General Information

Next scheduled meter reading: May 8, 2007
 Payment Information: PECO Energy, 2301 Market St, Philadelphia, PA, 19101, walk-in business hours Monday through Friday 8:30AM to 5:00PM. For additional payment options, go to www.peco.com/ehome. If you have any questions or concerns, please call 1-800-220-7326 before the due date. To pay by phone, call 1-877-432-9384. (A convenience fee will apply.)
 Si tiene alguna pregunta, favor de llamar al numero 1-800-220-7326 antes de la fecha de vencimiento.

Meter Information

Read Date	Meter Number	Load Type	Reading Type	Meter Reading		Diff	Mult X	Usage
				Previous	Present			
04/07	001234567	General Service	Tot kwh	4172 ACT	4294 ACT	122	40	4880
04/07	001234567	General Service	Pk kW	0.0 ACT	0.47 ACT	0.47	40	18.72
Total kW Billed.....				18.7				
Total kWh Used.....				4880				

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Distribution Charges	3,384 kWh	X	0.01090	36.89
Transition Charges	1,496 kWh	X	\$0.07230	108.16
Transition Charges	3,384 kWh	X	0.02150	72.99
State Tax Adjustment				-0.99
Sales tax				48.18
Total Current Charges				\$736.50

When paying in person, please bring the entire bill.

Return this portion with your check made payable to PECO. Please write your account number on your check.



Account Number
89898-22222

Payment Amount	Please pay this amount by 05/01/2007	\$736.50
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Check here to pledge a donation to MEAF and complete form on reverse side.

Check here to enroll in Power Pay automatic account debit and complete form on reverse side.

008001 1 AB 0.301 0001/008001/000002 0247 2 H001180
 ABC COMPANY
 444 Hairy Drive
 PHILADELPHIA PA 19000-0000

PECO ENERGY
 PAYMENT PROCESSING
 PO BOX 13439
 PHILADELPHIA PA 19162

0000000173845937204947000

0860948264562514



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Page 2

Name: ABC Company
 Service Address: 444 Hairy Drive, Philadelphia, PA
 Phone Number: 215 987-6543
 Account Number: 89898-22222
 Issue Date: 04/11/2007

Other Basic Charges

Thank you for your payment of \$699.83

Total Amount Due

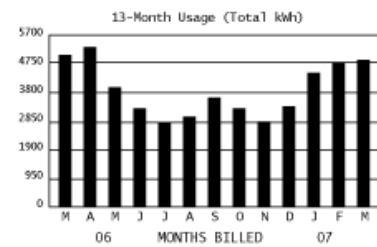
\$736.50

Message Center

5.90% estimated Gross Receipts Tax of \$40.61 included in new charges. PECO Energy's new charges contain \$136.89 Intangible Transition Charges.
 Thank you very much for paying your bill on time.

Your Usage Profile

Electric Commercial Service



Month Billed	Avg. Daily Usage	Avg. Daily Temp
Current	162.6	34
Last Month	138.8	44
Last Year	180.6	42

Avg. kWh per Month	3773
Total Annual Kwh Usage	45280