

**COMMONWEALTH OF KENTUCKY  
BEFORE THE  
KENTUCKY PUBLIC SERVICE COMMISSION**

In the Matter of:

The Application of Duke Energy Kentucky, )  
Inc., for (1) a Certificate of Public )  
Convenience and Necessity Authorizing )  
the Construction of an Advanced Metering ) Case No. 2016-00152  
Infrastructure; (2) Request for Accounting )  
Treatment; and (3) All Other Necessary )  
Waivers, Approvals, and Relief. )

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**DIRECT TESTIMONY OF  
ALEXANDER "SASHA" J WEINTRAUB PH.D.  
ON BEHALF OF  
DUKE ENERGY KENTUCKY, INC.**

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April 25, 2016

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**Attachment:**

SJW-1

**I. INTRODUCTION AND PURPOSE**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Alexander J (Sasha) Weintraub, and my business address is 400  
3 South Tryon Street, Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Progress, LLC (Duke Progress) as the Senior  
6 Vice President of Customer Solutions. Duke Progress provides various  
7 administrative and other services to Duke Energy Kentucky and other affiliated  
8 companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**  
10 **BACKGROUND AND PROFESSIONAL EXPERIENCE.**

11 A. I received a Bachelor of Science degree in Engineering from Rensselaer  
12 Polytechnic Institute, a Master's degree in Mechanical Engineering from  
13 Columbia University and a Ph.D. in Industrial Engineering from North Carolina  
14 State University.

15 I assumed my current position as Senior Vice President of Customer  
16 Solutions in October 2015. Previously, I was Senior Vice President of Market  
17 Solutions for Duke Energy. I was responsible for economic development, large  
18 business customers, rate design and analysis, customer regulatory strategy and  
19 analytics, data analytics and wholesale power sales for Duke Energy. I have also  
20 served as Vice President of Fuels and Systems Optimization for Duke Energy. In  
21 this role, I led the organization responsible for the purchase and delivery of coal,  
22 natural gas and oil to Duke Energy's generation fleet, as well as the wholesale

1 trading function related to power and natural gas. I managed the fleet and system  
2 optimization, energy supply analytics and power trading and dispatch functions.

3 Prior to working at Duke Energy, I was employed by Progress Energy,  
4 Inc. (Progress Energy). I joined Progress Energy in 1999 and held various  
5 leadership roles, including Director of Business Operations and Strategic  
6 Planning, and was employed as an operational auditor for Progress Energy  
7 Service Company. From 2003 to 2005, I was Director of Coal Marketing and  
8 Trading for Progress Fuel Corporation, a former subsidiary of Progress Energy,  
9 where I managed the marketing activities of the unregulated coal and synthetic  
10 fuel operations of Progress Energy. In 2005, I became Vice President of Fuels and  
11 Power Optimization for Progress Energy. Following the Duke Energy/Progress  
12 Energy merger in July 2012, I was named Vice President of Fuels and Systems  
13 Optimization for Duke Energy.

14 **Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AS SENIOR VICE**  
15 **PRESIDENT OF CUSTOMER SOLUTIONS.**

16 **A.** As Senior Vice President of Customer Solutions, I am responsible for aligning  
17 customer-focused products, programs, and services to deliver a personalized end-  
18 to-end customer experience that positions Duke Energy for long-term growth. My  
19 duties include development of retail programs, enhanced basic services initiative,  
20 rate design and analysis, customer regulatory strategy and analytics, and data  
21 analytics for all of Duke Energy's regulated utility operations.

22 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**  
23 **PUBLIC SERVICE COMMISSION?**

1 A. No. However, I have previously testified in various fuel and merger-related  
2 proceedings before other state regulatory commissions on behalf of Duke  
3 Energy's utility operating companies in Florida, and both North and South  
4 Carolina.

5 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
6 **PROCEEDING?**

7 A. The purpose of my testimony is to provide an overview of Duke Energy's  
8 Customer Solutions Organization. I also describe the Enhanced Basic Services  
9 (EBS) or innovative customer programs and services that are enabled by an  
10 Advanced Metering Infrastructure (AMI) technology. I then explain how our  
11 Kentucky customers will benefit from the replacement and upgrade of the Duke  
12 Energy Kentucky electric and gas metering infrastructure technology (Metering  
13 Upgrade) immediately and in the future after full system-wide deployment is  
14 achieved.

## **II. OVERVIEW OF CUSTOMER CARE SOLUTIONS**

15 **Q. PLEASE EXPLAIN THE DUKE ENERGY CUSTOMER SOLUTIONS**  
16 **ORGANIZATION AND ITS PURPOSE.**

17 A. The Duke Energy Customer Solutions Organization's purpose is to deliver a  
18 personalized end-to-end customer experience by aligning customer-focused  
19 programs and services with offering our customers greater convenience, control  
20 and transparency. The Customer Solutions Organization focuses on both the  
21 collective customer base for all of Duke Energy's utility operating companies, as

1 well as the specific jurisdictions, to find ways to enhance the overall customer  
2 experience.

3 **Q. WHY IS THE DUKE ENERGY CUSTOMER SOLUTIONS**  
4 **ORGANIZATION IMPORTANT?**

5 A. Duke Energy has more than 7.4 million retail customers representing a total  
6 population of approximately 24 million across its six state utility territories. As  
7 technologies evolve and emerge, our customers have growing expectations of  
8 their utility service provider. The Customer Solutions Organization strives to find  
9 ways to meet those expectations and give customers the ability to have greater  
10 control over how they use energy and interact with Duke Energy.

11 Duke Energy's research has shown that our residential customers are  
12 concerned about reliability, cost, predictability of cost, renewable energy, and  
13 control. Our customers want better communication from their utility and Duke  
14 Energy needs to find ways to communicate more proactively with our customers  
15 and give them more options and control. Supplying customers with a higher  
16 number of updates during outages, sending them bill alerts, starting their service  
17 remotely, offering them alternative rate plans, and allowing them to choose their  
18 own monthly pay date are all ways that Duke Energy can meet those expectations  
19 and continue to be a trusted energy advisor. However, in order to provide for  
20 those customer needs, Duke Energy must begin to evolve and change the way it  
21 provides its services. That requires investment in technologies that can enable  
22 such an evolution. The Metering Upgrade is that first step for Duke Energy  
23 Kentucky.

1 **Q. PLEASE BRIEFLY EXPLAIN YOUR UNDERSTANDING OF DUKE**  
2 **ENERGY KENTUCKY'S REQUEST IN THIS PROCEEDING.**

3 A. Duke Energy Kentucky seeks a Certificate of Public Convenience and Necessity  
4 (CPCN) to replace and upgrade the existing metering infrastructure technology  
5 and also requests various accounting treatments and waivers associated with the  
6 deployment. The metering infrastructure upgrade will consist of Itron  
7 technologies that were chosen with Duke Energy Kentucky's unique customer  
8 base in mind. Duke Energy Kentucky electric customers will be receiving new  
9 AMI meters capable of two-way communication with Duke Energy Kentucky that  
10 will enable daily collection of a customer's hourly interval electricity  
11 consumption. Duke Energy Kentucky's natural gas customers who are also Duke  
12 Energy Kentucky electric customers will also receive a natural gas AMI module  
13 that will be attached to their current natural gas meter. This module will allow the  
14 Company to receive and provide the customer information on their natural gas  
15 consumption on a daily basis. Duke Energy Kentucky's natural gas-only  
16 customers will receive a different module that will enable drive-by Automated  
17 Meter Reading (AMR). Almost all active Duke Energy Kentucky customers will  
18 be included in the metering upgrades, with the exception of some large  
19 commercial and industrial accounts that currently have some form of an advanced  
20 meter.

### **III. CUSTOMER PROGRAMS AND SERVICES**

21 **Q. WHAT OTHER CUSTOMER BENEFITS ARE ENABLED AND**  
22 **ACHIEVABLE WITH THE METERING UPGRADE?**

1 A. The Metering Upgrade will allow us to gather additional information and utilize  
2 new capabilities to offer new programs, products, and services to customers that  
3 are simply not achievable through the Company's existing meters. The Company  
4 has been identifying and developing a suite of EBS to provide to customers  
5 enabled by the Metering Upgrade. These programs and services will give  
6 customers greater convenience, transparency, and control over their energy usage,  
7 while also giving them the opportunity to budget, save time, and money.

8 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY EBS.**

9 A. EBS are customer value-driven programs and services that customers want, need,  
10 and have grown to expect from their utility. As technology has developed, so too  
11 has the basic expectation of our utility customers who desire greater control over  
12 their energy consumption and billing. These programs and services are often  
13 mentioned in customer satisfaction surveys as offerings that drive higher customer  
14 satisfaction. These programs are enabled through the more frequent customer  
15 usage data collection and electric interval information that can be obtained and  
16 provided to customers through the Metering Upgrade.

17 **Q. WHAT EBS PROGRAMS AND SERVICES ARE ENABLED WITH THE  
18 METERING UPGRADE AND WILL EVENTUALLY BE AVAILABLE TO  
19 KENTUCKY CUSTOMERS?**

20 A. The Company has been identifying and developing a suite of EBS that the  
21 Metering Upgrade enables and could be provided to Duke Energy Kentucky  
22 residential electric customers. Some examples that the Company is developing  
23 and that residential electric customers could voluntarily participate in include:



1 Pick Your Own Due Date (also available to residential natural gas customers who  
2 also receive electric service from the Company), Pay As You Go, and Predictive  
3 Usage Estimator Alerts.

4 **Q. WHEN WILL THESE PROGRAMS AND SERVICES BE AVAILABLE TO**  
5 **DUKE ENERGY KENTUCKY CUSTOMERS?**

6 A. The AMI technologies selected enables the development of these programs and  
7 services. The programs and services will be available once the Metering Upgrade  
8 is completed and the individual programs are fully developed. For example, Pick  
9 Your Own Due Date and Predictive Usage Estimator Alerts are being developed  
10 for other Duke Energy jurisdictions that presently have similar AMI technology  
11 deployments as that selected by Duke Energy Kentucky. As such, those two  
12 programs are anticipated to be available immediately in Kentucky upon  
13 completion of the Metering Upgrade. Pay As You Go will have to be designed  
14 specifically for each individual Duke Energy jurisdiction given the varying rules  
15 and regulations within each state. Specific approval for this program may also be  
16 required, so its availability will be dependent upon timing of both information  
17 technology development and regulatory approvals.

18 **Q. WHICH CUSTOMERS WILL BE ABLE TO TAKE ADVANTAGE OF**  
19 **THESE PROGRAMS?**

20 A. These programs will be initially available to residential electric customers. Pick  
21 Your Own Due Date will also be available to residential gas customers who also  
22 have electric service. As these programs are enabled through AMI technologies,  
23 residential gas only customers who will be receiving an AMR device will not be

1 able to take advantage of these programs. The AMR technology does not have the  
2 capability to support these advanced services. And as explained by Duke Energy  
3 Kentucky witness Donald Schneider, the Company does not have the electric  
4 infrastructure in areas where the Company only serves gas customers making  
5 installation of AMI technology not feasible.

6 **Q. HOW DOES PICK YOUR OWN DUE DATE WORK?**

7 A. Today Duke Energy Kentucky's customers are assigned a billing cycle based  
8 upon Duke Energy Kentucky's ability to deploy and manage its meter reading  
9 personnel to attempt to manually read each and every mechanical meter on a  
10 monthly basis. The cycle is determined based upon geographical areas to more  
11 efficiently manage meter reading costs. Once a customer is assigned a specific  
12 meter reading cycle, the cycle cannot be changed. The result is a customer has no  
13 control over when they receive their utility bill during the month.

14 Pick Your Own Due Date will give customers greater flexibility, choice,  
15 and control by allowing them to shift their billing cycle and payment due date to  
16 better align with their unique financial situation (*e.g.* to coincide with paycheck  
17 dates, Social Security payments). Customers will be able to decide which day of  
18 the month they prefer to pay their electricity bill without being penalized.

19 **Q. HOW DOES PAY AS YOU GO WORK?**

20 A. Traditionally, customers pay for the energy they previously consumed. Metering  
21 technology limited the information a customer had available to prospectively  
22 control how much energy they consumed. Although budget billing programs can  
23 help streamline the monthly and seasonal volatility in utility expense, customers

1 still have to pay a lump sum this month for the energy they consumed last month.

2 Pay As You Go is a voluntary program that is designed to empower  
3 interested and eligible customers with greater choice and control regarding bill  
4 payments and deposits, with the additional benefit of greater transparency into  
5 their energy consumption and costs. Customers enrolled in this program will have  
6 the capability to pay for electricity as they use it, rather than paying a large lump  
7 sum once every month. With Pay as You Go, customers can choose the amount  
8 and frequency at which they pay for their electricity. Customers will be able to  
9 access their account on-line to view their account balance payment information  
10 and daily electricity usage to give them more insight and help them better manage  
11 their energy consumption and avoid high bill surprises. Customers will be able to  
12 know the cost of the electricity they consume as they consume it. They will be  
13 able to set monthly thresholds to manage their budgets and make more frequent  
14 payments when they know they are about to exceed that budgeted amount. Duke  
15 Energy Kentucky will be able to provide usage alerts letting customer know they  
16 are approaching their balance amount.

17 The Pay As You Go program is currently in the early stages of  
18 development and specific details pertaining to customer eligibility and other terms  
19 and conditions for participation are being evaluated. The Pay As You Go Program  
20 will be tailored specifically to Kentucky to ensure it complies with regulations,  
21 including necessary notices prior to disconnection. Therefore, this program may  
22 not be available immediately upon completion of the Metering Upgrade and Duke  
23 Energy Kentucky recognizes that separate approval for this program may be

1 necessary. The Company is not seeking approval for this program as part of this  
2 proceeding, but instead intends to seek approval at a later date assuming the AMI  
3 deployment is ultimately approved. I only mention it here as an example of the  
4 innovative programs, services, and system capabilities enabled with the AMI  
5 technology.

6 **Q. HOW DO THE PREDICTIVE USAGE ESTIMATOR AND ALERTS**  
7 **WORK?**

8 A. Predictive Usage Estimator and Alerts will offer customers greater transparency  
9 into their past and estimated future usage and will conveniently alert customers  
10 via email, text, and/or phone when they are approaching or have exceeded their  
11 pre-selected usage level for the month. Customers enrolled in this program will be  
12 able to view an estimate of the amount of electricity they have used so far during  
13 the current billing cycle, as well as the estimated cost of this usage by accessing  
14 their Duke Energy Kentucky account information on-line. This program can help  
15 customers better manage their electric usage and avoid unexpected high bills. This  
16 is not tied directly to Pay As You Go. In other words, all customers with AMI  
17 metering will be able to enroll in this program, regardless as to whether or not  
18 they are also enrolled in the Pay As You Go program.

19 **Q. WHAT OTHER NEW INFORMATION WILL BE AVAILABLE TO DUKE**  
20 **ENERGY KENTUCKY CUSTOMERS ON THE PORTAL WEBSITE?**

21 A. As mentioned above, all customers with AMI meters, both residential and non-  
22 residential, will be able to view their hourly (electric) or daily (gas) interval usage  
23 data from the previous day on the Duke Energy Kentucky customer web portal.

1 Using the existing customer portal is the most cost effective and efficient way to  
2 make interval usage data available to our customers. The portal presents electric  
3 interval data in several different ways: hourly energy use by day or week; daily  
4 energy use by billing cycle, month, or week; and average energy use by day-of-  
5 week over a billing cycle or month. Customers with multiple electric meters can  
6 choose to see their usage broken out by meter. The availability of interval usage  
7 data can empower customers to better understand their energy usage and save  
8 energy. Duke Energy Kentucky Attachment SHW-1 illustrates the customer  
9 usage information available on the customer web portal.

10 **Q. HOW CAN A CUSTOMER USE THIS INFORMATION?**

11 A. The Company expects that some customers will use this increased information to  
12 take action to reduce their energy consumption on a timelier basis than if they had  
13 to wait until the end of a billing cycle to know how much energy they were using.

14 **Q. ARE THESE CUSTOMER OFFERINGS MANDATORY FOR**  
15 **CUSTOMERS TO USE?**

16 A. No, it is not mandatory for customers to use, enroll, or participate in any EBS  
17 customer offerings. While these offerings are all enabled by the Metering  
18 Upgrade, it is still the customer's decision to participate in these offerings.

19 **Q. ARE THERE OTHER POTENTIAL PROGRAMS, PRODUCTS, AND**  
20 **SERVICES THAT YOU FORESEE BECOMING ENABLED THROUGH**  
21 **THE METERING UPGRADE BEING PROPOSED BY DUKE ENERGY**  
22 **KENTUCKY?**

23 A. Yes, there are other potential programs, products and services that we foresee

1 becoming enabled, such as mobile applications, and AMI enabled rate offerings,  
2 but these are still in early design and evaluation phases.

3 **Q. IS DUKE ENERGY KENTUCKY SEEKING COMMISSION**  
4 **AUTHORIZATION TO BEGIN OFFERING ALL OF THESE**  
5 **PROGRAMS IN THIS PROCEEDING?**

6 A. Duke Energy Kentucky is not specifically seeking the Commission's  
7 authorization to begin offering all of these programs in this proceeding. Some of  
8 the programs I described, such as Pick Your Own Due Date, will be available  
9 upon completion of the Metering Upgrade, while others, like Pay As You Go, are  
10 still in the design phase. Duke Energy Kentucky recognizes that some of the  
11 programs I described may require Commission approval before the Company can  
12 offer the services to its customers. Accordingly, the Company has not provided  
13 estimates for costs or benefits associated with these programs and services in this  
14 filing.

#### IV. CONCLUSION

15 **Q. WAS ATTACHMENT SJW-1 PREPARED BY YOU OR UNDER YOUR**  
16 **DIRECTION AND CONTROL?**

17 A. Yes.

18 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

19 A. Yes.



# Customer Usage Data From Duke Energy Customer Portal



Online Services

Contact Us

Messages

(Log Out)



Add an Account

Account Number

Address

My Account Home

Billing & Payment

Pay Bill

View Bill

Payment Activity

Compare Bills

Bill Inserts

Billing FAQs

Third Party Notification

My Bill Preferences

Energy Analysis

My Products & Services

Water Reading

## Account Summary

### Account status as of 9/9/2014

Last Payment Received \$200.00

7/31/2014 - Thank you!

Amount Due \$0.00

Pay

### Bill Summary ending 7/18/2014

View

Previous Balance/Other Charges \$0.00

Budget Billing/Equal Payment Plan Amount \$173.00

Last bill amount due 8/11/2014 (\$63.14)

For more detailed information on your bill, please see the links under Billing & Payment.

## Bill Highlights

Out with the old.  
In with the new.

Phase into energy-saving CFLs and LEDs for up to 92% off retail.

Shop now



## How does my home use energy?

Get personalized information on how you use your energy.

Complete a quick home profile for personalized information!



Lighting

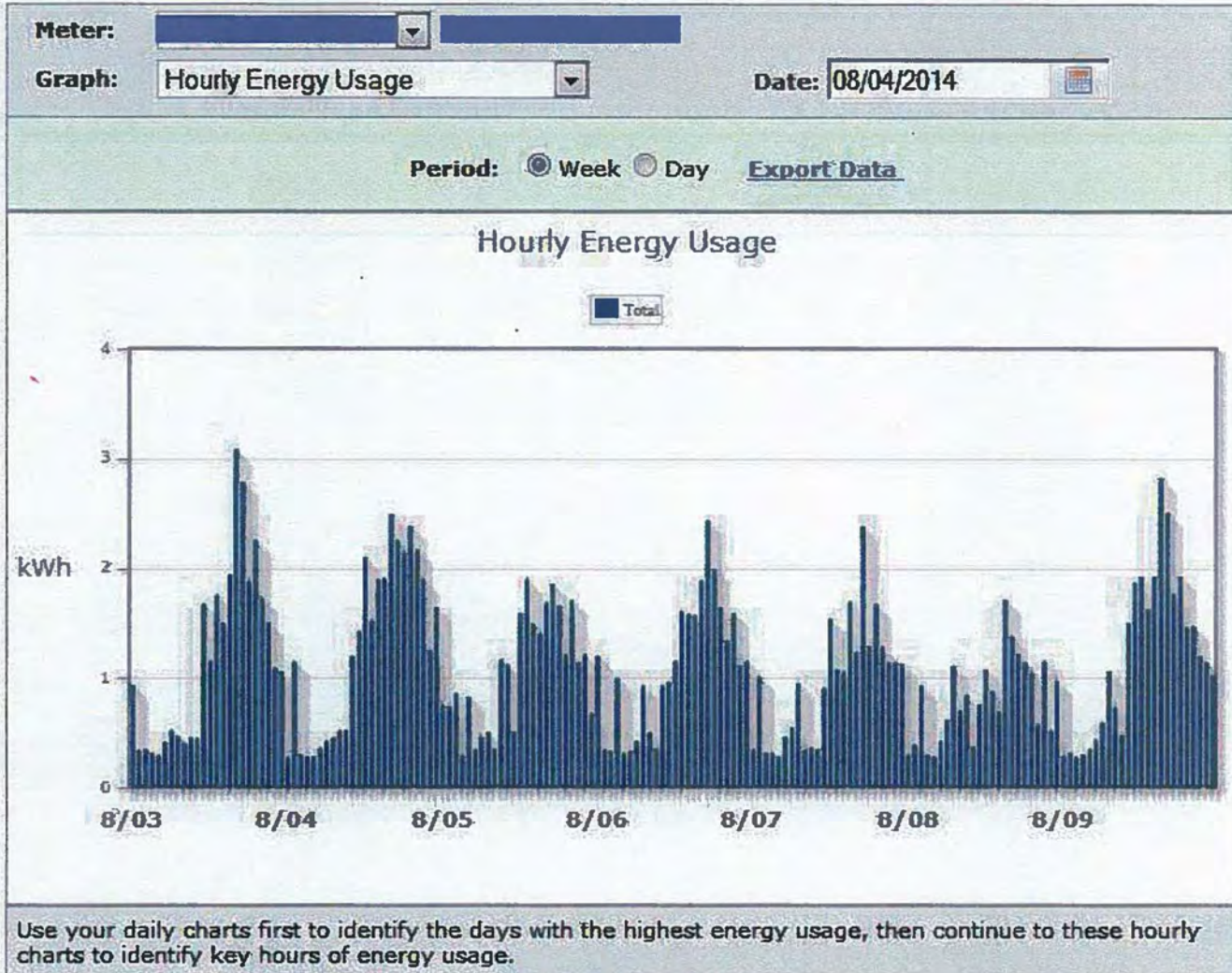


# Hourly Energy Usage

Viewable over a Day or Week Timeline

## Daily Energy Usage

To change Meter, Graph, or Date, make new selections from the options below.



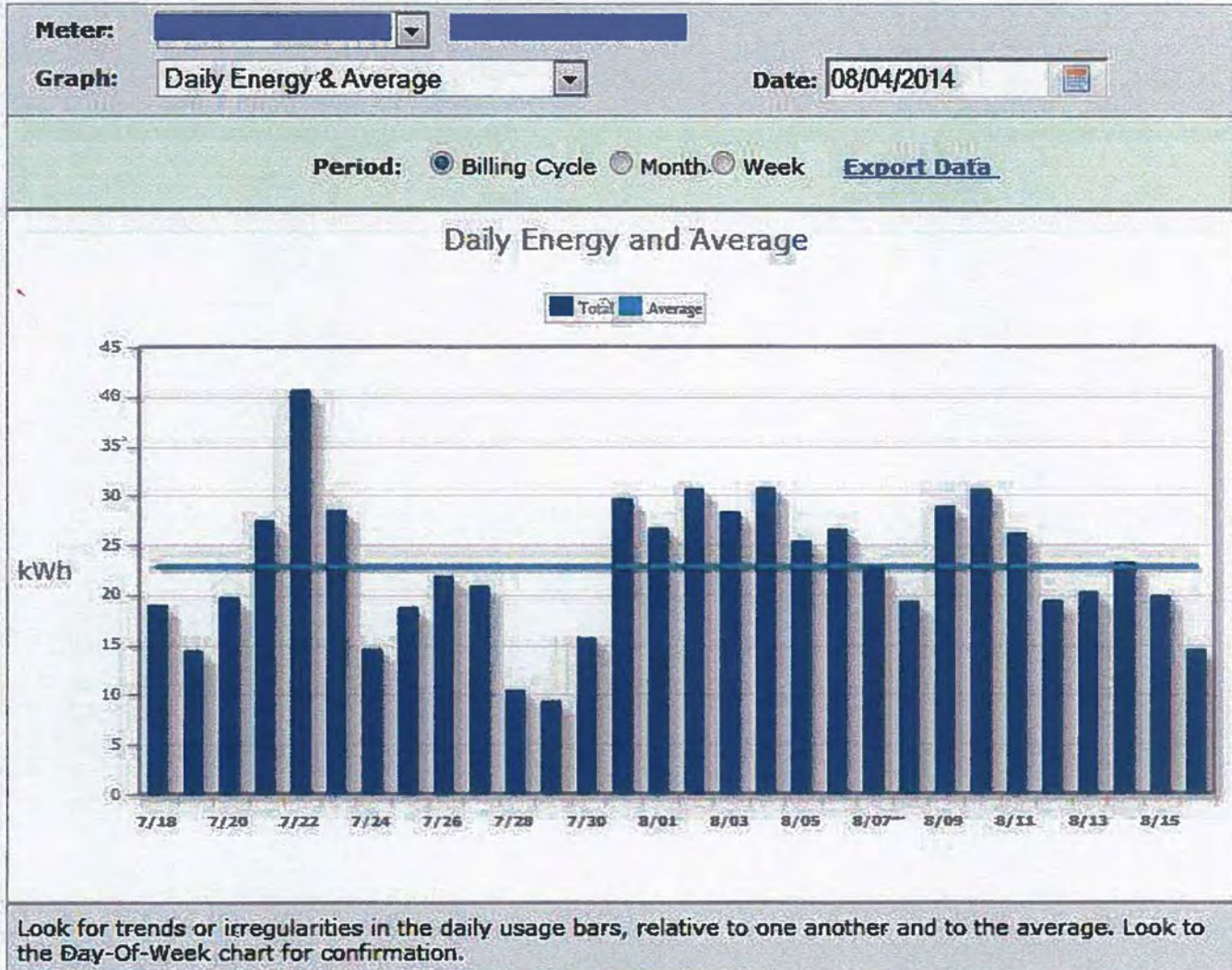
[Terms And Conditions](#)

# Daily Energy Usage

Viewable over a Billing Cycle, Month or Week Timeline

## Daily Energy Usage

To change Meter, Graph, or Date, make new selections from the options below.



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# Average Energy Usage

Viewable by Day-of-Week over a Billing Cycle or Month Timeline

## Daily Energy Usage

To change Meter, Graph, or Date, make new selections from the options below.

**Meter:**

**Graph:**  **Date:**

**Period:**  Billing Cycle  Month. [Export Data](#)

### Average Energy by Day-of-Week

Day	Total kWh
Sun	25
Mon	24
Tue	24
Wed	23
Thu	23
Fri	21
Sat	22

Look for trends or irregularities. Are your weekdays pretty even or does one stand out? How about weekends?

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