

# Demand Response/Energy Efficiency: Saving Energy While on the Go

*The latest innovations that help members monitor their energy use through “Smart Home” technology and mobile applications.*

*Moderator:*

*Michael Hyde*

*IT Manager*

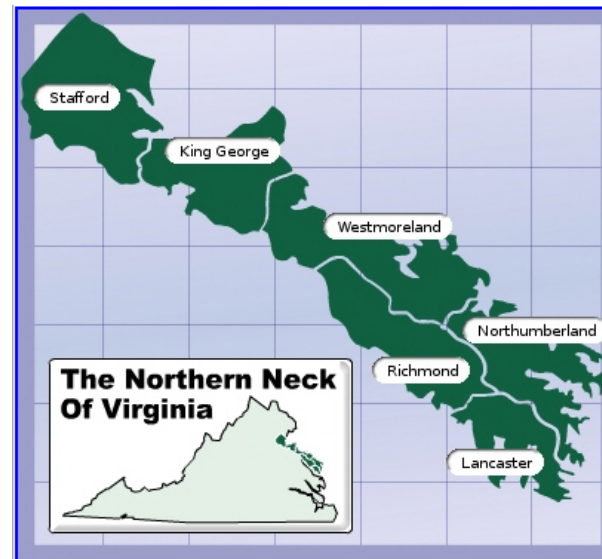
*Northern Neck Electric Cooperative*

*Warsaw VA*

# Northern Neck Electric Cooperative

Warsaw, VA

- ❖ 18,999 meters
- ❖ 6 Counties
- ❖ 1,900 miles of line
- ❖ 20 Substations
- ❖ 25% Residential



# NNEC IT Mission Statement

## **To the Coop -**

Provide Cooperative employees the tools and technology to help them perform their job more efficiently and safely

## **To the Members -**

Provide members with tools to help them reduce energy consumption, save money and preserve the environment

*“If you cannot measure it,  
you cannot improve it.”*

*-- Lord Kelvin*



A X I S



SECO-LARM®



LUX / GEO™



# eMail Notifications

- ❖ Hourly Usage (Sent Daily)
- ❖ Daily Usage
- ❖ Monthly Usage (*Sent out weekly*)
- ❖ High Usage (Alert)
- ❖ Comparative Usage (TBD)
- ❖ Outage Alert

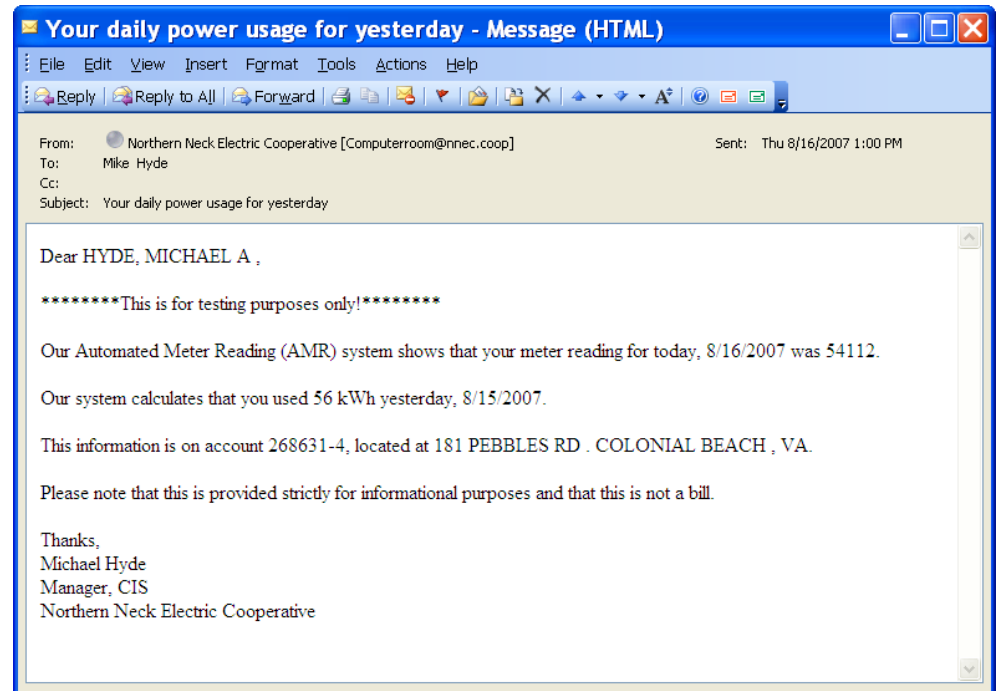
# Daily Usage eMail Notifications

## August 2007

- ❖ Very Basic information
  - ❖ Provided reading
  - ❖ Calculated usage
- ❖ Sent to:

*Employees*

*Board Members*



# Daily Usage eMail Notifications

March 2009

## ❖ Added information

❖ Provided reading

❖ Calculated usage

❖ Dollar value

❖ Hi/low temp

❖ Energy Tip

## ❖ Data pulled from CIS

From: Northern Neck Electric Cooperative [info@nneec.coop]  
To: Mike Hyde  
Cc:  
Subject: Your daily power usage for yesterday  
Sent: Thu 3/5/2009 1:13 PM

Dear MICHAEL A HYDE

\*\*\*\*\*NNEC Member Alert and Notification System\*\*\*\*\*

Our Automated Meter Reading (AMR) system shows that your meter reading for today, 3/5/2009 was 71612.

Our system calculates that you used 56 kWh yesterday, 3/4/2009.

### Costs:

Based on this, we calculate the cost of electricity used yesterday was:

Charge	Amount
Access Charge:	\$0.52
Delivery Charge:	\$1.76
Supply Charge:	\$2.73
Fuel Cost Adjustment (FCA):	\$2.16
Power Cost Adjustment (PCA):	\$0.40
<b>Total:</b>	<b>\$7.57</b>

### Temperatures:

The recorded high and low temps in Fredericksburg for yesterday were 39 and 10

### Energy tip of the day:

Run full loads in the washing machine and dishwas her

This information is on account 268631-4, located at 181 PEBBLES RD . COLONIAL BEACH , VA.

Please note that this is provided strictly for informational purposes and that this is not a bill.



# Daily Usage eMail Notifications

2012

A member requested: “This is great info, can you provide it every day and tell me when the billing cycle begins. This will be very helpful in my budgeting and the bill will not be a surprise.”

Subject: Your daily power usage for yesterday -268631-4

Dear MICHAEL A HYDE

Our Automated Meter Reading (AMR) system shows that your meter reading for today, 10/10/2012 was 23682.

Our system calculates that you used 25 kWh yesterday, 10/9/2012.

**Current Billing Cycle:**  
Your last billed reading of 23420 on 10/2/2012, (8 days ago), indicates that you have used 262 kWh (23682 - 23420) during this billing cycle.

**Costs:**  
Based on this, we estimate the cost of electricity used was:

Charge	Amount	
	Yesterday	Current Cycle
kWh	25 kWh	262 kWh
Access Charge:	\$0.72	\$22.23
Delivery Charge:	\$0.64	\$6.70
Supply Charge:	\$1.22	\$12.76
Fuel Cost Adjustment (FCA):	\$0.69	\$7.23
Power Cost Adjustment (PCA):	\$0.16	\$1.72
<b>Total:</b>	<b>\$3.43</b>	<b>\$50.64</b>

Please note that this estimated amount does not include security lights, surge protection, county taxes or non standard fees.

**Temperatures:**  
The recorded high and low temps in Fredericksburg for yesterday were 59 and 49

This information is on account 268631-4, located at 181 PEBBLES RD . COLONIAL BEACH , VA.

Please note that this is provided strictly for informational purposes and is not a bill.

Thanks,  
Michael Hyde  
IT Manager  
Northern Neck Electric Cooperative

# Weekly Usage eMail Notifications

- ❖ 30 days prior usage
- ❖ Hi/Low temp
- ❖ Data pulled from CIS
- ❖ Added in 2008

From: Northern Neck Electric Coop [info@nneccoop.com]  
To: Mike Hyde  
Cc:  
Subject: Monthly Power Usage 268631-4  
Attachments: mychart.jpg (97 KB)

Dear MICHAEL A HYDE

\*\*\*\*\*This is for testing purposes only!\*\*\*\*\*

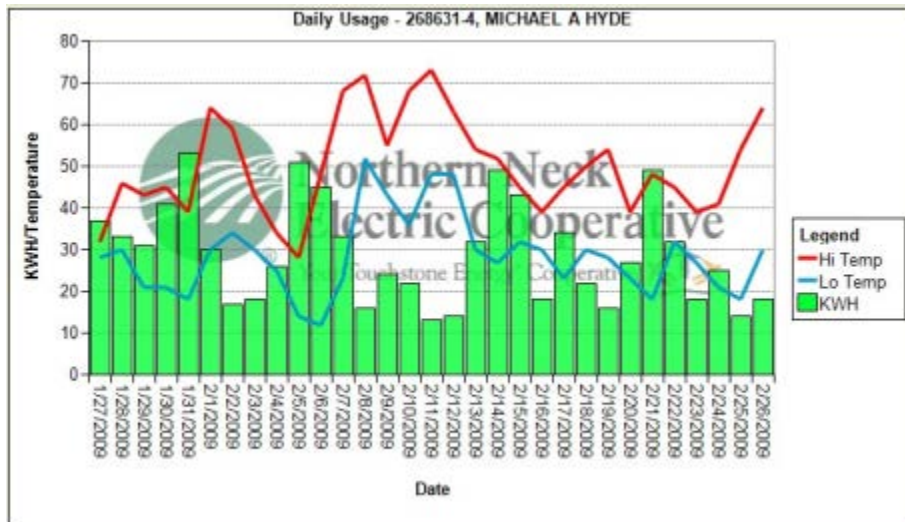
The following information was obtained from our Automated Meter Reading (AMR) system

This information is on account: (268631-4),  
located at 181 PEBBLES RD . COLONIAL BEACH , VA.

Please note that this is provided strictly for informational purposes and that this is not a bill.

Energy tip of the day: Install a programmable thermostat that is compatible with your heating system.

Thanks,  
Michael Hyde  
Manager, CIS/IT  
Northern Neck Electric Cooperative



# Hourly Usage eMail Notifications

- ❖ Hour-by-hour usage
- ❖ Pulled from TWACS
- ❖ Added in 2008

From: Northern Neck Electric Coop [info@nneccoop.com]  
To: Mike Hyde  
Cc:  
Subject: Hourly Power Usage for Account: 268631-4  
Attachments: mychart.jpg (63 KB)

Dear MICHAEL A HYDE

The following information was obtained from our Automated Meter Reading (AMR) system

This information is for:

Account: 268631-4

Address:

181 PEBBLES RD .

COLONIAL BEACH , VA.

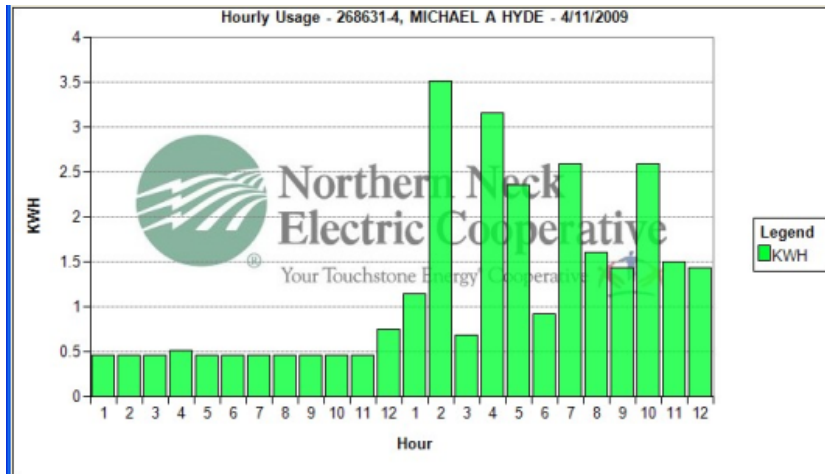
Our records show this is a HOUSE

Please note that this is provided strictly for informational purposes and that this is not a bill.

**Energy tip of the day:**

Learn how to set power management on your computer

Thanks,  
Michael Hyde  
Manager, CIS/IT  
Northern Neck Electric Cooperative



# Current MANS eMail



NNEC@nec.coop <info@nec.coop>  
to me

Apr 16 (2 days ago) ☆

Dear BARRACK CHARLES R ,

**Messages of the Day:**

**Maintenance at Sanders substation:** System maintenance is being performed at our Sanders Substation. Members fed by that substation may receive "estimated" reads and usages until 4/18/2018. Sorry for the inconvenience.

**MANS Profile** - Your Member Alert and Notification System (MANS) profile:

Alert	Subscribed	Change
<a href="#">Hourly</a>	Yes	<a href="#">Unsubscribe</a>
<a href="#">Daily</a>	Yes	<a href="#">Unsubscribe</a>
<a href="#">Weekly</a>	Yes	<a href="#">Unsubscribe</a>
<a href="#">Beat-the-Peak</a>	Yes	<a href="#">Unsubscribe</a>

**Hourly:** - Below is your hourly usage data.

kWh Usage by Hour																									
Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
kWh	0.90	1.22	0.58	0.70	0.77	0.64	0.58	3.78	4.80	0.90	0.83	1.15	1.02	2.88	0.77	0.58	1.15	3.14	1.22	0.77	0.96	0.90	0.58	0.64	31.42

**Daily:** The daily usage data you have requested is shown below:

Daily Usage		
Your average daily usage over the past 14 days is 30 kWh.		
Your current calculated reading of 74951 indicates that yesterdays usage was 31 kWh.		
Current cycle estimates are based off of your last billing read of 73966 on 03/20/18.		
Charge	Amount	
	Yesterday	Current Cycle
kWh	31 kWh	985 kWh
Access Charge:	\$0.93	\$29.00
Delivery Charge:	\$0.96	\$30.41
Supply Charge:	\$2.23	\$70.75
Power Cost Adjustment (PCA):	\$0.21	\$6.58
<b>Total:</b>	<b>** \$4.33</b>	<b>** \$136.74</b>

\*\* Please note that this is an estimated amount, and does not include security lights, surge protection, county taxes or non-standard fees.

**Weekly:** You will receive your Weekly graph on Friday.

**Temperatures:**

The recorded high and low temps in Fredericksburg for yesterday were 63 and 72 with an average of 67.

**Energy tip of the day:**

Insulate the first 6 feet of the cold and hot water pipes connected to your water heater.

**Disclaimer**

Please note that this is provided strictly for informational purposes and is not a bill.

Thanks,  
Michael Hyde  
mhyde@nec.coop  
Manager, IT

# Tools

- Belkin WEMO
- Amazon Alexa
- Google Home
- The Energy Detective
- Lutron Caseta
- SimpliSafe

# The Energy Detective (TED)



**Settings Export Advanced Help**

**TED** Technology Solutions

**LIVE DASHBOARD HISTORY GRAPHING SPYDER**

**Month History**

This Year		Last Year	
Month	Energy	Month	Energy
Mar 18	950.0 kWh	Mar 17	741.0 kWh
Feb 18	871.7 kWh	Feb 17	208.1 kWh
Jan 18	878.9 kWh	Jan 17	778.8 kWh
Dec 17	952.8 kWh	Dec 16	843.0 kWh
Nov 17	888.6 kWh	Nov 16	728.9 kWh
Oct 17	805.3 kWh	Oct 16	631.0 kWh
Sep 17	995.8 kWh	Sep 16	842.0 kWh
Aug 17	1300.9 kWh	Aug 16	1204.4 kWh
Jul 17	1053.7 kWh	Jul 16	17.4 kWh
Jun 17	1120.3 kWh	Jun 16	16.9 kWh
May 17	738.8 kWh	May 16	17.4 kWh
Apr 17	694.5 kWh	Apr 16	16.8 kWh

**Hour History**

Today		Yesterday	
Hour	Energy	Hour	Energy
04:18:03	1.0 kWh	04:17:03	1.2 kWh
04:18:02	1.1 kWh	04:17:02	1.2 kWh
04:18:01	1.0 kWh	04:17:01	1.2 kWh
04:18:00	1.0 kWh	04:17:00	1.2 kWh
04:18:59	0.9 kWh	04:17:59	1.2 kWh
04:18:58	1.7 kWh	04:17:58	1.2 kWh
04:18:57	1.9 kWh	04:17:57	1.2 kWh
04:18:56	1.7 kWh	04:17:56	1.2 kWh
04:18:55	0.9 kWh	04:17:55	1.2 kWh
04:18:54	0.8 kWh	04:17:54	1.2 kWh
04:18:53	0.8 kWh	04:17:53	1.2 kWh
04:18:52	0.9 kWh	04:17:52	1.2 kWh
04:18:51	0.9 kWh	04:17:51	1.2 kWh
04:18:50	0.9 kWh	04:17:50	1.2 kWh
04:18:49	1.0 kWh	04:17:49	1.2 kWh
04:18:48	1.0 kWh	04:17:48	1.2 kWh
04:18:47	1.8 kWh	04:17:47	1.2 kWh
04:18:46	1.3 kWh	04:17:46	1.2 kWh

**Day History**

This Week		Last Week	
Day	Energy	Day	Energy
Tue 04:17	29.8 kWh	Tue 04:10	29.9 kWh
Mon 04:16	29.9 kWh	Mon 04:09	29.9 kWh
Sun 04:15	29.9 kWh	Sun 04:08	29.9 kWh
Sat 04:14	29.9 kWh	Sat 04:07	30.7 kWh
Fri 04:13	29.9 kWh	Fri 04:06	30.0 kWh
Thu 04:12	29.9 kWh	Thu 04:05	30.0 kWh
Wed 04:11	29.9 kWh	Wed 04:04	30.0 kWh

