FILE

PUCO EXHIBIT FILING

Date of Hearing: September 11, 2019

Case No. 18-1832-EL-CSS

PUCO Case Caption: In The matter of the Complaint of Thaah and Aaron Young vs. Ohio Power Company

List of exhibits being filed:

AEP Exhibit 1

Complainants A-D

Reporter's Signature: _____

Date Submitted: _____

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the Complaint of Thaah and Aaron Young,	:	
	:	Case No. 18-1832-EL-CSS
vs.	:	
Ohio Power Company.	:	

- - -

PROCEEDINGS

before Dick Bulgrin and Michael Williams, Hearing Examiners, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-C, Columbus, Ohio, called at 10:00 a.m. on Wednesday, September 11, 2019.

- - -

ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
Columbus, Ohio 43215-5201
(614) 224-9481 - (800) 223-9481

- - -

AEP Ohio Ex. 1

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Complaint of Thaah and Aaron Young,	)	
Complainants,	)	
v.	)	Case No: 18-1832-EL-CSS
Ohio Power Company,	)	
Respondent.	)	

DIRECT TESTIMONY OF PAULA S. IGO ON BEHALF OF OHIO POWER COMPANY

Filed August 27, 2019

I. INTRODUCTION

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. My name is Paula S. Igo. My business address is 700 Morrison Road, 4th floor, Gahanna, Ohio 43232.

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

A. I am employed by Ohio Power Company ("AEP Ohio" or the "Company") in the Regulatory Consultant, Principle position.

Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?

A. I am an attorney, but I am not employed as or practicing as an attorney for American Electric Power Company ("AEP") or AEP Ohio. I received my Juris Doctorate from the University of Dayton School of Law in May 1996. I was admitted to the Ohio Bar in November 1996. Prior to that, I received a Bachelor of Arts in Psychology from Wright State University in March 1993. I have also completed my Project Management Professional certification.

I have over 10 years of electric utility experience with AEP Ohio. I started my career as a Contract Analyst supporting distribution and AEP's gridSMART projects. I then became an AEP Ohio Project Manager, responsible for the contracts that supported the AEP Ohio gridSMART Demonstration Project as well as the project reporting. Following that project's successful completion, I joined the AEP Ohio Regulatory Operations group.

Prior to joining AEP, I spent 10 years as a trial attorney for the Franklin County Public Defender's Office.

Q. WHAT WERE YOUR RESPONSIBILITIES AS A PROJECT MANAGER ON THE GRIDSMART TEAM?

A. I was responsible for the management of the contracts for the gridSMART project. This included managing Requests for Proposals and the selection of vendors, negotiating contracts, drafting contracts with the AEP Legal Department, and project reporting. With this effort, I became familiar with the technologies being deployed within the Company's service territory, including Advanced Meter Infrastructure ("AMI") meters or "smart" meters.

Q. WHAT ARE YOUR RELEVANT RESPONSIBILITIES AS A REGULATORY CONSULTANT, PRINCIPLE?

A. In my current role, I have continued to be involved with the AEP Ohio smart grid deployment. Specifically, I have provided support with the implementation of the "opt out" process for AMI meters and Automatic Meter Reading or Radio Frequency meters.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The Purpose of my testimony is to address some of the allegations and policy issues raised in the Complaint filed by Complainants Thaah and Aaron Young on December 13, 2018. Through my testimony, I will demonstrate that AEP Ohio met its obligations to provide safe, reasonable, and adequate electric service to the Youngs and otherwise acted in accordance with Ohio law and regulations and AEP Ohio's tariffs at all times. Although I am an attorney, I am not attempting to address any of the legal issues presented in this proceeding.

II. SUMMARY OF COMPLAINT

Q. PLEASE BRIEFLY DESCRIBE THE NATURE OF THE YOUNGS' COMPLAINT.

A. The Youngs' Complaint relates to AEP Ohio's deployment of AMI meters in the Company's service territory, which includes the Youngs' residence. The Complaint

indicates that the Youngs do not want an AMI meter, do not want the Company's digital non-emitting, non-communicating opt-out meter, and do not believe they should be subject to the Company's Commission-approved Advanced Meter Opt Out tariff provisions and opt-out fee. The Youngs also do not want to sign the Company's AMI Opt Out Customer Acknowledgment ("Acknowledgment"). The Youngs specifically take issue with the indemnification language contained in the second paragraph of the Acknowledgment.

III. METERING OPTIONS FOR RESIDENTIAL CUSTOMERS

Q. IS A RESIDENTIAL CUSTOMER REQUIRED TO HAVE AN AMI METER?

A. No. Under Paragraph 16 of the Terms and Conditions of Service in the Company's Commission-approved tariff, a residential customer may request to "opt-out" of having an AMI meter installed at his or her service address.[1] In such cases, the Company's typical practice is to install a non-emitting, non-communicating digital meter at the customer's premises. A customer who elects not to have an AMI meter is required to pay a $24.00 monthly opt out fee.

Q. DOES A CUSTOMER WHO DECLINES THE INSTALLATION OF AN AMI METER HAVE THE RIGHT TO KEEP HIS OR HER EXISTING METER?

A. No. It is first important to keep in mind that electric meters are owned by AEP Ohio, not by individual customers.[2] Additionally, AEP Ohio's tariff expressly provides that opt-out service does not guarantee that a customer will retain the existing meter at their premises and that the Company "maintains the right to replace meters for customers on opt-out

[1] P.U.C.O. No. 20 at 3rd Revised Sheet No. 103-12 (¶ 16).

[2] P.U.C.O. No. 20 at 3rd Revised Sheet No. 103-10 (¶ 14).

service with meters that do not have one-way or two-way communications."[3] When a customer declines an AMI meter, the Company's normal practice is to install a digital non-emitting, non-communicating meter. However, if a dispute arises regarding the type of meter installed or to be installed at a customer's residence, the Company works with the customer to try to reach a mutually-agreeable metering solution.

Q. WHY IS IT THE COMPANY'S NORMAL PRACTICE TO INSTALL A DIGITAL NON-EMITTING, NON-COMMUNICATING METER AT AN OPT-OUT CUSTOMER'S RESIDENCE?

A. Analog meters are no longer standard metering equipment. Those meters are no longer manufactured, and replacement parts and components are not available. AEP Ohio does not purchase or use such meters and, in fact, has not purchased an analog meter in over ten years. Based on these factors, the Company has moved to installing non-emitting digital meters at opt-out customers' residences. Non-emitting digital meters measure the electrons a consumer uses (like a traditional dial meter) and displays the reading on a digital display that is easier for a meter reading technician to read.

Q. DOES AEP OHIO'S TARIFF PROVIDE CUSTOMERS WITH ANY OTHER OPTIONS REGARDING SMART METER INSTALLATION?

A. Yes. Another metering solution that a customer may choose is to relocate their meter location (at the customer's expense) and have an AMI meter installed at the new location.[4] No monthly opt-out fee is required for a customer who chooses this option.

Q. WHAT TYPE OF METER IS INSTALLED AT THE YOUNGS' RESIDENCE?

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[3] P.U.C.O. No. 20 at 3rd Revised Sheet No. 103-13.

[4] P.U.C.O. No. 20 at 3rd Revised Sheet No. 103-12 (¶ 16(1)).

A. The analog meter that was installed at the Youngs' residence on October 1, 1978 continues to be in place today.

Q. WILL THE COMPANY ALLOW THE ANALOG METER AT THE YOUNGS' PREMISES TO REMAIN IN PLACE?

A. Yes. The Company is willing to allow the meter currently installed at the Youngs' residence to continue to serve the residence as long as that meter is functioning within the standards set forth in Ohio Adm. Code 4901:1-10-05 and Paragraph 14 of the Terms and Conditions of Service in AEP Ohio's tariff.[5] Consistent with the Advanced Meter Opt Out provisions set forth in Paragraph 16 of the Company's tariff, the Youngs will also be required to pay the Company's Commission-approved monthly opt-out fee.

IV. AEP OHIO'S AMI OPT OUT CUSTOMER ACKNOWLEDGMENT

Q. IS A CUSTOMER WHO DECLINES THE INSTALLATION OF AN AMI METER REQUIRED TO SIGN THE COMPANY'S AMI OPT OUT ACKNOWLEDGMENT PRIOR TO THE INSTALLATION OF A DIGITAL NON-EMITTING METER?

A. Yes. It is the Company's normal practice to require all opt-out customers to sign the Acknowledgment prior to the Company installing a digital non-emitting meter at their residence. The Company uses the Acknowledgment to establish a record of a customer's election to opt-out of AMI installation. Additionally, the Company uses the Acknowledgment to document and remind each opt-out customer that the monthly opt-out fee will be reflected in their bill on a moving-forward basis and to confirm that they understand that there is a fee associated with their opt-out election. This process helps prevent billing confusion after the opt-out fee is included in the customer's bill. Finally,

[5] P.U.C.O. No. 20 at 3rd Revised Sheet No. 103-10 and 103-11.

the Acknowledgment notifies the customer that the request for opt-out service is not complete without executing and returning the Acknowledgment to the Company, which helps ensure the customer completes the opt-out process properly.

Q. HOW DOES THE COMPANY RESPOND TO THE YOUNGS' COMPLAINT REGARDING THE ACKNOWLEDGMENT'S INDEMNIFICATION LANGUAGE?

A. The Company disagrees with the Youngs' assertion that the indemnification language is inappropriate. After reviewing the Acknowledgment in connection with this complaint, however, the Company believes it is unnecessary to include the indemnification language in the Acknowledgment moving forward. The Company has provided and continues to provide AMI opt-out service pursuant to Ohio law and regulations and the Company's Commission-approved tariff. The indemnity provision is duplicative of the Company's and customer's rights and responsibilities, as reflected in statute, regulation, and the Company's tariff. To eliminate that redundancy, the Company has removed it from all Acknowledgments the Company will send to customers who request opt-out service in the future. Should the Youngs agree to opt-out service in the future, the Acknowledgement that they will receive will not contain the indemnity provision.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was served by regular mail upon the address listed below, on this 27th day of August, 2019.

/s/ Christen M. Blend
Christen M. Blend

Thaah Young & Aaron Young
9167 Taylor Rd. SW
Reynoldsburg, Ohio 43068

Complainant

Rec'd 8/20/18

Presort First Class
US Postage Paid
Greenville, SC
Permit No. 153

AEP OHIO

Inside: Why your meter matters

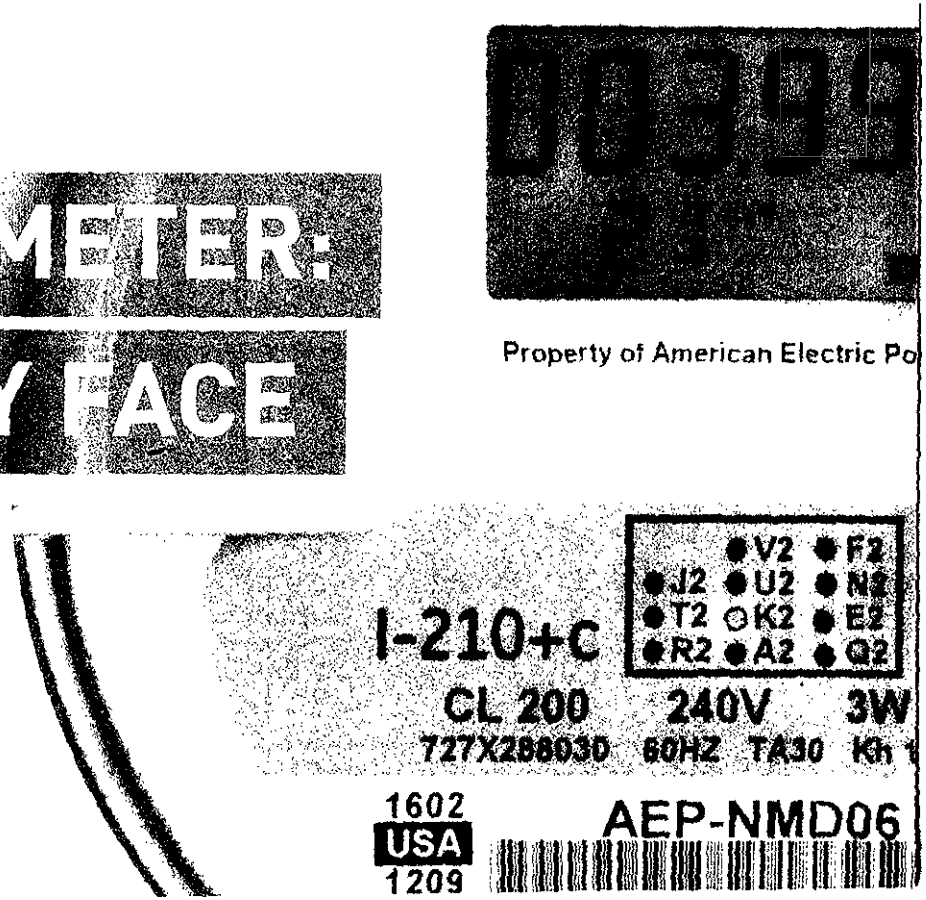
T5*P1*S1863**********5-DIGIT 43068
THAAH YOUNG
PO BOX 371
REYNOLDSBURG OH 43068-0371

EXHIBIT
tabbies
Complainant's A

Something

Priority Seating

is coming
to your
neighborhood



We know. It's just a meter. But, to our eyes, it's pretty. And, we think you'll see the beauty in it too.

Your new smart meter helps with power outage restoration by improving response times and speeding repairs. We don't have to access your property to read it, and it simplifies the billing process by eliminating estimated bills.

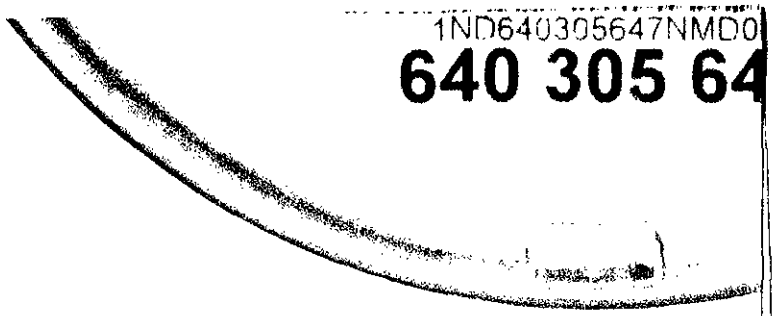
It enables customer control through the Energy Dashboard, which you can access online. It makes it easy to monitor your energy usage on a day-to-day basis.

In short, your new meter matters a lot. It will help save you money –without sacrificing your comfort.

We'll be coming to your neighborhood in the next few weeks to begin smart meter installations. It's a simple process of upgrading to a new meter, with a brief power disruption of only a few minutes. You don't even need to be available when we do it.

We hope you'll agree that as technologies go, it's truly a beautiful thing.

For more information about smart meters, visit our website at AEPOhio.com/SmartMeter or call toll-free 1-855-872-6446.



[Frequently Asked Questions]

- **What is a smart meter?**

  A smart meter is an electric meter equipped with two-way communication technology that provides near real-time meter readings and the secure transfer of customers' usage information to AEP Ohio for billing and operational purposes. The technology improves billing accuracy and eliminates the need for a meter reader to enter onto a customer's property.

- **Why is the current metering system being replaced?**

  The current electric grid is being upgraded to take advantage of emerging technologies, and offer more benefits to our customers. Smart meters will replace the current meters used in homes to record electric usage, many of which are the older, obsolete analog meters.

- **Who is getting a smart meter?**

  AEP Ohio has already installed 132,000 smart meters in select areas of central Ohio as a part of the gridSMART® Demonstration Project. AEP Ohio has been approved by the Public Utilities Commission of Ohio (PUCO) to install about 900,000 additional smart meters throughout its Ohio service territory. In addition, AEP Ohio is upgrading our metering in areas where smart meters are currently technologically not feasible.

- **How will I benefit from having a smart meter?**

  Smart meters periodically report usage information to AEP Ohio through a secure wireless communication. The meter provides information to our crews that speeds response times and

outage repairs. Since we don't have to access your property to read the meter, it simplifies the billing process by eliminating estimated bills. It also enables new features that will soon be available to help you manage your energy usage from your smart phone, tablet or laptop.

- **Will I be getting a smart meter, and if so, when could I expect it?**

  If you are in an area that is to receive a smart meter, you will be notified via mail and phone within 3 weeks of the installation, and a phone call a few days prior to the meter exchange. There is an interactive map on AEPOhio.com/SmartMeter where you can search by your address for a timeline.

- **How did we decide who gets a smart meter?**

  We can achieve the most benefit for customers by installing where meters are more densely grouped. As the technology continues to mature, the vision is that economical deployments will be feasible in more sparsely populated areas.

- **Will my power be interrupted during the installation?**

  You will experience a brief power outage when we replace the meter. We expect the power outage to be no longer than a few minutes.

- **Do I need to be home when you install the new meter?**

  No. A meter technician will leave a door hanger indicating the result of the meter exchange. Appointments for special circumstances will be handled on a case by case basis.

- **What is my smart meter display telling me?**

  Your smart meter shows three separate rotating displays:

  - One display will show whether your electric service is on or off. If it says "CLOSED" your power is on. If it says "OPEN" your power is disconnected and you should contact the AEP Ohio Customer Solutions Center at 1-800-672-2231.
  - The next display shows your cumulative electric usage in kilowatt-hours (kWh). This is the amount of energy that has flowed through your meter since it was installed. AEP Ohio uses this information to calculate your bill.
  - The third rotating display, which includes a decimal point, shows the electricity demand reading in kilowatts (kW), which is used for operational purposes (it is not used for calculating your bill).

- **Will my meter still be read by a meter reader each month?**

  No, the smart meter enables us to read your meter without setting a foot on your property or disrupting your schedule. We will still periodically perform field and safety audits of AEP Ohio metering and other electric distribution equipment.

- **How can I access my energy usage?**

  There are a couple of ways. There is an app you can download called "IT'S YOUR POWER℠." You can also visit AEPOhio.com and register to use a web portal. Both will allow you to see your energy usage, which in turn will help you make decisions on how to save.

- **How will I know if the meter technician on my property really works for AEP Ohio?**

  All of our installers will be able to provide proper identification at your request. They will also be driving properly marked vehicles. Both will have the AEP Ohio logo.

- **Do I need to do anything special to get ready for my new meter?**

  You will be notified in advance when we will be in your area. Here are some helpful tips to prepare for the upgrade:

  1) **Clear Access to Meter.** Please be sure there is a clear path to your meter and the area is free of other objects and debris. If you have a locked gate or other restrictions that prevents our technicians from accessing the meter, please be sure to contact the smart meter call center for AEP Ohio at 1-855-872-6446 or email mymeter@aep.com.

  2) **Look for our door hanger.** Once the meter has been changed, a door hanger will be left indicating we have switched out your meter.

  3) **How to know it's us.** For your safety and security all of our technicians will wear uniforms identifying themselves and will be able to produce proper identification. They will be in AEP marked vehicles. These technicians will not need access inside your home and will not ask you for money or other personal information. If you have any questions about who is at your door, please call the smart meter call center for AEP Ohio at 1-855-872-6446.

- **Will I be billed differently after the meter upgrade?**

  No, you will continue to be billed as you are today.

- **What if I don't want a smart meter?**

  You can decline a smart meter. Please call 1-855-872-6446 to speak with a customer service

representative, or email mymeter@aep.com. Have your address and account information available. Please note that the Public Utilities Commission of Ohio approved a monthly fee of $24 to be charged to you for declining installation of smart meter. If you already have a smart meter installed, there is also a $43 fee to have the meter replaced with a non-emitting meter.

- **Why are there fees associated with declining a smart meter?**

  If a smart meter has already been installed on your property, you will be charged a one-time fee of $43 to have that meter replaced with a non-emitting meter. The Public Utilities Commission of Ohio has approved a monthly $24 fee for customers who have declined a smart meter. The fee covers the cost of sending a crew out to perform a meter reading. You will begin being assessed the $24 fee once the required written notification that you are declining the smart meter is completed and returned, the meter exchange fee (if required) is paid, and smart meters have been installed in your neighborhood.

- **What is the White House Green Button initiative, and are we a part of it?**

  Yes, AEP has joined the Green Button initiative, a joint effort among utilities, technology companies and the federal government to help you save energy and money. Green Button can help you make better energy and usage decisions. Green Button provides a simple, standardized way to download your energy usage information from our website. This information can then be uploaded to compatible energy efficiency applications or shared with energy efficiency consultants and others to help you analyze how you use energy.

Still have smart meter questions? Talk with a smart meter representative at 1-855-872-6446 or email us at mymeter@aep.com. Please note this phone number and email address are for smart meter questions only. For all other questions or issues, please call our Customer Solutions Center at 1-800-672-2231.

Aaron

From: MyMeter <mymeter@aep.com>
Sent: Tuesday, August 21, 2018 1:01 PM
To: Aaron
Subject: RE: [EXTERNAL] Notice of decline, opt out and non-consent for the installation of the AEP "Smart Meter"

Dear Mr. Young,

This is to confirm receipt of your email and address your concerns/requests.

There is an opt out policy for declining a smart meter which will be included at the bottom of this email. The letter and form mentioned in the process has been requested and will go out in the morning mail, is should take you 7-10 days to receive it.

Regarding - **Again, we hereby prohibit a smart meter from being installed in or around our residence.** Only a homeowner can complete the opt out process for their property, an individual does not have the ability to make decisions on another owners property.

Regarding - **We require only analog, electromechanical meters without electronic components be used in connection with this account.** Customers will no longer be able to keep their analog meters as they are obsolete and will no longer be serviced by AEP. As part of the opt out process to decline the smart meter the analog meters will be replaced with a ***NON RF*** digital meter. This meter is digital in its reading only and send no signals like an RF smart meter. It still requires a monthly read on site. **We will happily self-read our current analog meter.** This is not an option for smart meter areas. To further assist you the opt out process is followed by the approved options for service.

OPT OUT POLICY

1. An Opt Out Agreement is sent to the Customer.
2. To avoid installation of a smart meter the agreement must be received by the AEP SMARTgrid Customer Support Team in its ***original format*** by ***September 4th, 2018.*** Not responding by this time could result in installation of a smart meter.
    a. Signed agreements can be returned to the AEP SMARTgrid Customer Support Team via mail or email using the contact information on the agreement or in this email.
3. Choosing to decline a smart meter will add an additional $24.00 monthly service fee to the customer's bill for meter reading/service fees.
4. Upon the Opt Out Agreement being returned within the time guidelines outlined in the agreement, ***a meter change order will be placed for a digital non-communicating meter to be installed at the premise.***
    a. While this is a digital the meter it is a **non-communicating meter** and sends no signals, additionally as with the analog meters it still requires that a meter reader physically read the meter each month.
    b. The meter can be identified as not being a smart meter due to its white face (a smart meter is blue or red).

c. Keeping current non-standard analog

meters is not an option for service.

d. *The **TERMS AND CONDITIONS OF SERVICE**, approved by the Public Utilities Commission, states that the "Opt out service does not guarantee that customers will retain their existing meter. The company maintains the right to replace meters for customers on opt-out service with meters that do not have one-way or two-way communications."*

OPTIONS FOR SERVICE

1. A Customer has an AMI (Smart Meter) meter installed at a premise.
2. A Customer may decline from having the AMI (Smart Meter) installed, which will result in a $24.00 a month meter reading and service fee be added to an account.

a. Additionally as part of the Opt Out Process ***all non-standard analog meters will be replaced with new standard digital non-communicating meters.***

3. A Customer may make arrangements to have their metering point moved away from the residence/structure within a reasonable timeline to be determined by AEP.
   b. Note this is a cost that the customer would incur.

If desired reference material on the meters is available on request, a temporary hold has been placed on the account to allow for a response by the timeline mentioned in the opt out policy above. Please reach out with any additional questions.

Kind regards,

AEP OHIO

AEP Ohio Customer Support Coordinator
614.883.6977
2323 Citygate Road, PO Box #360894, Columbus, Ohio 43218-9998

From: Aaron [mailto:aaron2457@sbcglobal.net]
Sent: Monday, August 20, 2018 1:50 PM
To: MyMeter
Subject: [EXTERNAL] Notice of decline, opt out and non-consent for the installation of the AEP "Smart Meter"

From: 9167 Taylor Rd SW
Reynoldsburg, OH 43068-9675
Account #074-598-873-0-8

To: AEP Ohio
700 Morrison Rd
Gahanna, OH 43230
Dear AEP,

Dear AEP, we have receive your flyer regarding smart meter installation for our area.

We, Aaron Young and Thaah Young hereby prohibit an electronic or wireless monitoring device, AMI meter or AMR meter (hereafter referred to as a "smart meter") from being installed in or around our residence at 9167 Taylor Rd SW, Reynoldsburg Ohio 43068-9675. This e-mail acts as formal notice per AEP's website "/info/smartmeters/FAQs" where "What if I don't want a smart meter" explains "You can decline a smart meter. Please call 1-855-872-6446 to speak with a customer representative, or e-mail mymeter@aep.com."

We contacted "Judy" today at approximately 1130 hours per the phone number above explaining our wish to deny and opt out of the smart meter installation. We also requested a confirmation for this as acknowledgement. We were then put on hold without instruction and put into to a voice mail system.

Again, we hereby prohibit a smart meter from being installed in or around our residence. We require only analog, electromechanical meters without electronic components be used in connection with this account. We will happily self-

read our current analog meter and accurately track the usage billing for energy consumption on our property as we always have, and continue to make available the current meter for reading as needed by AEP as we always have.

This is our second attempt to notify AEP on this matter. Any liability for damage or harm resulting from these conditions being violated rests with the recipient of this e-mail, the meter manufacturer(s) and any subcontractors involved in the meter production, installation, or operation.

Please confirm acknowledgement of this opt out request.

Thank you sincerely,

Aaron and Thaah Young
614-864-5981

AEP OHIO
A unit of American Electric Power

P.O. Box 360894
Columbus, OH 43218-9998

THAAH YOUNG
PO BOX 371
REYNOLDSBURG, OH 43068-0371

Service Address:
9167 Taylor Rd SW
Reynoldsburg, OH 43068-9675

August 21, 2018

Account Number: 074-598-873-0-8

Dear Thaah Young:

You have inquired to AEP Ohio about the process to opt out of the installation of a smart meter at your home. Please complete and return the AMI Opt Out Acknowledgment (the "Acknowledgment") form enclosed with this letter to confirm your decision to opt out. **If you do not return the completed form within 10 business days from the date on this letter, we will move forward with the installation of a smart meter at your home.**

Among the many benefits smart meters offer is the ability for the meter to send regular meter readings to AEP Ohio. This increases the accuracy of your bill and allows us to collect this information without the need to send a meter reader. Additionally, smart meters provide us information which can help with restoring your electric service in the event of a power outage. Smart meters also provide you with information about your energy usage which empowers you to make decisions about reducing your energy consumption.

The Public Utilities Commission of Ohio has approved a $24.00 monthly fee for customers who elect to decline the installation of a smart meter. The $24.00 monthly fee allows the utility to recoup costs associated with sending an AEP Ohio representative to your home or business to manually read the meter. This charge will be applied to your monthly bill and payment of this fee is required to maintain service. Failure to pay may result in disconnection.

If you would like to proceed with the installation of a smart meter, you may disregard this letter.

In order to complete your request for a non-standard, digital meter, you must sign and return the attached Acknowledgment to:

AEP Ohio SMARTgrid Customer Support
PO Box 360894
Columbus, Ohio 43218-9998

You may also return the signed Acknowledgment by emailing it to AEPOHSmartGrid@aep.com

Your signed Acknowledgment must be received by AEP Ohio within 10 business days of the date on this letter. **Failure to complete these steps within those 10 business days will cancel your request to install a non-standard, digital meter.**

EXHIBIT
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Complainant's D

After you have signed and returned the Acknowledgment, AEP Ohio will remove your existing meter and install non-standard, digital metering service. The non-standard, digital meter does not have communicating abilities, but has an electronic display.

Once your signed Acknowledgment has been received, you will be required to pay the $24.00 monthly fee that will be included in your monthly electric bill from AEP Ohio.

If you have questions, please call AEP Ohio Customer Support at (614)883-6977 or email AEPOHSmartGrid@aep.com

Respectfully,

AEP Customer Support

AMI Opt Out Customer Acknowledgment ("Acknowledgment")

Account Name ("Customer"): _____

Account Number: _____

Service Address: _____

Contact Phone Number: _____

Customer hereby requests non-standard, digital metering equipment. Customer understands and acknowledges that Customer will be required to pay the approved $24.00 monthly fee that will be included their monthly bill.

Customer hereby agrees to release, hold harmless, and indemnify AEP Ohio, American Electric Power Company, Inc. and all of their affiliated companies, and any of their officers, directors, employees, and agents from and against losses, liabilities, costs, expenses, suits, actions, and claims, including claims arising out of injuries to persons or damage to property, caused by or in any way attributable to or related to Customer's request for non-standard metering service, the removal of advanced metering equipment, and/or the subsequent installation of non-standard metering equipment.

In order to complete your request for a non-standard, digital meter, you must sign and return this AMI Opt Out Customer Acknowledgment (the "Acknowledgment") to:

AEP Ohio SMARTgrid Customer Support

PO Box 360894

Columbus, Ohio 43218-9998

Customer hereby acknowledges that Customer has read, understands, and agrees to this Acknowledgment, release and indemnification.

Signed: _____ Date: _____

Name (printed): _____

Rec'd
8/27/15

First-Class Mail

GAACSMP 4306B

Go Paperless at www.AEPpaperless.com

Call AEP's automated customer service line.
1-877-237-2886


Printed on Recyclable Paper

Ohio | Public Utilities Commission

Asim Z. Haque, Chairman

Commissioners

M. Beth Trombold
Thomas W. Johnson
Lawrence K. Friedeman
Daniel R. Conway

Case Detail

Case Number: 00222942
Account Name: Aaron Young
Type:
Status: Closed
Preferred Contact Method: No Preference

Owner: Andrea Smith
Account in Question: Ohio Power Company
Account Holder:
Priority: Standard
Service Type: Residential

CASE DATES:
Date Opened: 08-20-2018
Case Age in Business Days: 1

Date Closed: 08-20-2018

Contact Information

Contact: Aaron Young

Preferred Contact Method: No Preference

Phone:
Mobile:

Preferred Contact Time:
Email:

Service Address Information

Service Account Number:
Service Address Street:
Service Address City:
Service Address Country: United States

Service Address County:
Service Address State:
Service Address Zip:
Service Address Phone:

Industry Information

AIQ Industry: Electric
AIQ Sub-Industry: Electric Distribution Utility
AIQ Sub-Sub-Industry:
Non-Jurisdictional Case: ☐

Territory Account:
General Code: Billing -- Electric
Specific Code: Billing Inquiry

Additional Information

PUCO ID: 300587
Docketing Case Number:
Legacy Case ID:

Case Formal Complaint Specialist Approved:
Case Formal Complaint Supervisor Approved:

Transportation Information

Crossing ID:
Railroad:
Railroad Street Name:

Description Information

Description:

Resolution:

explained how to get to the company tariff. showed him where to find the fee for smart meter opt out.

Case Comments

Created Date	Comment
8/20/2018 11:27:33 AM	I asked customer for his last name and he states he did not want to give a lot of info and just had a general question. He was wanting to know if AEP can charge a monthly fee if he opts out of having a smart meter and I told him yes. I explained the charge is listed in their tariff. I explained the info and was able to find in tariff, along with case number. he thanked for help.

Web Information

Web Name:
Web Home Phone:
Web Email:.
Web Company:
Web Zip Code:

Web Account in Question:
Web US Dot #:

System Information

Created by: Andrea Smith
Tasks Correspondence Review: 0
Tasks Correspondence Review:0

Last Modified by: Sara Macey
Next Activity Date:
Case Grade Created:
Case Grade Target:

Case Emails

Ohio | Public Utilities Commission

Asim Z. Haque, Chairman

Commissioners

M. Beth Trombold
Thomas W. Johnson
Lawrence K. Friedeman
Daniel R. Conway

Case Detail

Case Number: 00223995
Account Name: Theeah Young
Type:
Status: New
Preferred Contact Method: No Preference

Owner: Andrea Smith
Account in Question: Ohio Power Company
Account Holder:
Priority: Standard
Service Type: Residential

CASE DATES:
Date Opened: 08-27-2018
Case Age in Business Days: 65

Date Closed:

Contact Information

Contact: Theeah Young

Preferred Contact Method: No Preference

Phone: 6148645981
Mobile:

Preferred Contact Time:
Email: th2457@sbcglobal.net

Service Address Information

Service Account Number:

Service Address County: Franklin

Service Address Street: 9167 Taylor Road Southwest

Service Address State: Ohio

Service Address City: Reynoldsburg

Service Address Zip:

Service Address Country: United States

Service Address Phone: (614) 864-5981

Industry Information

AIQ Industry: Electric

Territory Account:

AIQ Sub-Industry: Electric Distribution Utility

General Code: Billing -- Electric

AIQ Sub-Sub-Industry:

Specific Code: Rates & Tariffs

Non-Jurisdictional Case: ☐

Additional Information

PUCO ID: 300587

Case Formal Complaint Specialist Approved:

Docketing Case Number:
Legacy Case ID:

Case Formal Complaint Supervisor Approved:

Transportation Information

Crossing ID:
Railroad:
Railroad Street Name:

Description Information

Description:

Resolution:

sent formal complaint.

Case Comments

Created Date	Comment
8/27/2018 11:21:17 AM	Customer states she spoke with AS last week about the smart meter opt out. Caller being very vague, trying to go over AEP 14-1158-EL-ATA. advised caller about fee sched. Caller states AS directed her to the tariff but does not understand, asking to speak with AS, trans to vm. Caller would like the AEP smart meter opt out emailed to her.
8/28/2018 8:48:08 AM	Read Case notes. Customers husband, Aaron Young called last week but would not provide me with his last name. I created account 0022942. He said he had general questions and did not want to provide a lot of information. I have linked both cases.
8/28/2018 1:57:40 PM	I called the customer back and left detailed message. left call back info.
8/28/2018 3:48:18 PM	Caller was returning AS's call. transferred call to AS's vm
8/29/2018 10:26:09 AM	I called the customer back and left message that I was returning her call and left call back info.
8/29/2018 3:02:46 PM	Caller calling for A.S (states he is returning her call) A.S not avail Caller wants to leave message- Transferred to vm
9/5/2018 2:44:01 PM	Received a call transferred by AS. Discussed his concerns. Explained that the meters belong to AEP and as long as it meets ANSI standards, PUCO rules allow them. He wanted to further argue that the meters violated PUCO rules. Discussed his FC options. He would like AS to send him an FC packet. Advised that I would ask her to send it and invited a call back.

9/5/2018 2:59:48 PM	I called customer and spoke to Aaron Young, husband. He states he called last week and appreciates me calling him back. he states that he is questioning the opt out info, letter sent to him by AEP. he states he called the number that is on the website to call and opt out of smart meter. he states he spoke to a woman and she could not answer his questions about rules, but she could help him opt out. So, the told her he did not want the smart meter and she transferred him, he got a vm and left message. nobody returned his call. he states he then sent the company an e-mail and they did send him a letter. he does not like how the letter is worded. he states that the letter also states he has to respond by 9/4/18. he states letter refers to the $24.00 fee for the opting out of smart meter and that is mentions something about 85% and that he does not think they are explaining what the fee is for. I explained to him that I do not have a copy of the letter but that it is referring to the approved charge of 24.00. he states that they are violating the OAC and the Tariff. he states that the map states that the area he is in the smart meters have not been installed. I asked him to hold so that I could answer the question about the 85% that is in the Tariff and to address the map issue. I went and spoke to DR and he explained the 85% issue to me and how to get to the map. I got back to the customer and I explained that the 85% has to do with the percentage of meters in his area. for example: if there are less than 85% of people with smart meters in his area they are not going to charge the 24.00 month fee because they are going to be sending someone out anyway. But if there are more than 85% of people with smart meters they will charge because they are going to have to send someone out. he states that is not what the letter states and that he wants to know what the fee is and is the same as the Tariff and I told him it is. he disputes this. I pulled up his address on AEP website for smart meter and a mjority of the area is red and i asked DR about this and is means they are not completed. DR also explained that at the end of the day the customer needs to decided to opt our or let them install a meter. I explained that to the customer. he states that the company is violation of OAC 4901:1-10-24 Consumer Safeguards and Informatoin, I explained I do not understand as that has to do with the Rights and Responsibilities and he states they are violating rule 4901:110-02 (G) Purpose and Scope. I explained I am not sure how the company is in violation of either of these and I do not understand how these are violations. he does not like the fact that he has to agree to pay a fee and then sign to not hold the company responsible for damage (he read the information from the letter). I explained to him that the company is allowed to charge the fee the fee in the letter is the same fee in the Tariff. he wanted to dispute this. I told him to hold and I would see if there was a supervisor available to speak to him because I do not see the correlation between the two (violations and letter). I called the supervisor line and transferred the customer to MC. Phone call lasted over 30 minutes
9/5/2018 3:49:13 PM	letter approved and formal complaint sent. close case.
11/29/2018 10:32:17 AM	cust is requesting a copy of case called over to supe line spoke with C.C adv to note and send to investigation cust would like it sent as soon as possible to the email address on file

Web Information

Web Name:
Web Home Phone:
Web Email:
Web Company:
Web Zip Code:

Web Account in Question:
Web US Dot #:

System Information

Created by: Maureen Harbolt
Tasks Correspondence Review: 1
Tasks Correspondence Review:1

Last Modified by: Sara Macey
Next Activity Date:
Case Grade Created:
Case Grade Target:

Case Emails

Case Images

Created Date	Images

Ohio | Public Utilities Commission
Asim Z. Haque, Chairman

December 12, 2018

Theeah Young
9167 Taylor Road Southwest
Reynoldsburg, OH 43068

CASE ID: 00223995

Dear Ms. Young:

Thank you for contacting the Public Utilities Commission of Ohio (PUCO). Per your request, enclosed is your case history report. This information includes call notes, as well as case emails and attachments pertaining to your case. I hope this information will be sufficient for your purposes.

Please note that while the case history report contains most of the key information and records about your case, the PUCO likely retains some additional records that are administrative or technical in nature and/or impractical to routinely include as part of the case history report. If you are seeking any information or records maintained by the PUCO related to your case beyond those provided in the case history report, please make a public records request using the information provided at the following link: https://www.puco.ohio.gov/contact-us/public-records-requests-and-public-records-policy/. In order to assist you, please also see the following link to the PUCO records retention schedule: http://apps.das.ohio.gov/rims/SelectMenu/Selection.asp.

If you require further assistance or have additional questions regarding this matter, please feel free to contact our PUCO Call Center at (800) 686-PUCO (7826) or visit our website at www.PUCO.ohio.gov.

Sincerely,

Andrea Smith

Andrea Smith
Customer Service Investigator

Enclosure

Ohio | Public Utilities Commission

Asim Z. Haque, Chairman

Commissioners

M. Beth Trombold
Thomas W. Johnson
Lawrence K. Friedeman
Daniel R. Conway

Case Detail

Case Number: 00223995
Account Name: Theeah Young
Type:
Status: New
Preferred Contact Method: No Preference

Owner: Andrea Smith
Account in Question: Ohio Power Company
Account Holder:
Priority: Standard
Service Type: Residential

CASE DATES:
Date Opened: 08-27-2018
Case Age in Business Days: 73

Date Closed:

Contact Information

Contact: Theeah Young

Preferred Contact Method: No Preference

Phone: 6148645981
Mobile:

Preferred Contact Time:
Email: th2457@sbcglobal.net

Service Address Information

Service Account Number:

Service Address County: Franklin

Service Address Street: 9167 Taylor Road Southwest

Service Address State: Ohio

Service Address City: Reynoldsburg

Service Address Zip:

Service Address Country: United States

Service Address Phone: (614) 864-5981

Industry Information

AIQ Industry: Electric

Territory Account:

AIQ Sub-Industry: Electric Distribution Utility

General Code: Billing -- Electric

AIQ Sub-Sub-Industry:

Specific Code: Rates & Tariffs

Non-Jurisdictional Case: ☐

Additional Information

PUCO ID: 300587

Case Formal Complaint Specialist Approved:

Docketing Case Number:

Case Formal Complaint Supervisor Approved:

Legacy Case ID:

Transportation Information

Crossing ID:
Railroad:
Railroad Street Name:

Description Information

Description:

Resolution:

sent formal complaint.//Letter approved and mailed with case history.

Case Comments

Created Date	Comment
8/27/2018 11:21:17 AM	Customer states she spoke with AS last week about the smart meter opt out. Caller being very vague, trying to go over AEP 14-1158-EL-ATA. advised caller about fee sched. Caller states AS directed her to the tariff but does not understand, asking to speak with AS, trans to vm. Caller would like the AEP smart meter opt out emailed to her.
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8/28/2018 1:57:40 PM	I called the customer back and left detailed message. left call back info.
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8/29/2018 3:02:46 PM	Caller calling for A.S (states he is returning her call) A.S not avail Caller wants to leave message- Transferred to vm
9/5/2018 2:44:01 PM	Received a call transferred by AS. Discussed his concerns. Explained that the meters belong to AEP and as long as it meets ANSI standards, PUCO rules allow them. He wanted to further argue that the meters violated PUCO rules. Discussed his FC options. He would like AS to send him an FC packet. Advised that I would ask her to send it and invited a call back.

9/5/2018 2:59:48 PM	I called customer and spoke to Aaron Young, husband. He states he called last week and appreciates me calling him back. he states that he is questioning the opt out info, letter sent to him by AEP. he states he called the number that is on the website to call and opt out of smart meter. he states he spoke to a woman and she could not answer his questions about rules, but she could help him opt out. So, the told her he did not want the smart meter and she transferred him, he got a vm and left message. nobody returned his call. he states he then sent the company an e-mail and they did send him a letter. he does not like how the letter is worded. he states that the letter also states he has to respond by 9/4/18. he states letter refers to the $24.00 fee for the opting out of smart meter and that is mentions something about 85% and that he does not think they are explaining what the fee is for. I explained to him that I do not have a copy of the letter but that it is referring to the approved charge of 24.00. he states that they are violating the OAC and the Tariff. he states that the map states that the area he is in the smart meters have not been installed. I asked him to hold so that I could answer the question about the 85% that is in the Tariff and to address the map issue. I went and spoke to DR and he explained the 85% issue to me and how to get to the map. I got back to the customer and I explained that the 85% has to do with the percentage of meters in his area. for example: if there are less than 85% of people with smart meters in his area they are not going to charge the 24.00 month fee because they are going to be sending someone out anyway. But if there are more than 85% of people with smart meters they will charge because they are going to have to send someone out. he states that is not what the letter states and that he wants to know what the fee is and is the same as the Tariff and I told him it is. he disputes this. I pulled up his address on AEP website for smart meter and a mjority of the area is red and i asked DR about this and is means they are not completed. DR also explained that at the end of the day the customer needs to decided to opt our or let them install a meter. I explained that to the customer. he states that the company is violation of OAC 4901:1-10-24 Consumer Safeguards and Informatoin, I explained I do not understand as that has to do with the Rights and Responsibilities and he states they are violating rule 4901:110-02 (G) Purpose and Scope. I explained I am not sure how the company is in violation of either of these and I do not understand how these are violations. he does not like the fact that he has to agree to pay a fee and then sign to not hold the company responsible for damage (he read the information from the letter). I explained to him that the company is allowed to charge the fee the fee in the letter is the same fee in the Tariff. he wanted to dispute this. I told him to hold and I would see if there was a supervisor available to speak to him because I do not see the correlation between the two (violations and letter). I called the supervisor line and transferred the customer to MC. Phone call lasted over 30 minutes
9/5/2018 3:49:13 PM	letter approved and formal complaint sent. close case.
11/29/2018 10:32:17 AM	cust is requesting a copy of case called over to supe line spoke with C.C adv to note and send to investigation cust would like it sent as soon as possible to the email address on file
11/30/2018 1:45:51 PM	Letter approved and mailed with case history.

12/11/2018 4:05:38 PM	Customer called regarding the process to overnight her formal complaint to the PUCO. Customer received a notice from AEP which included the language " Refusal Process " regarding the smart meter opt out process. Customer wanted to know if the PUCO can intervene, allowing her time to send in the formal complaint. I informed the customer PUCO would not be able to intervene at this point because the informal complaint process is closed. I advised the customer to send in the formal complaint, and potentially speak with the Attorney Examiner when the case is assigned. Customer requested a copy of the transcript for this call. I advised the customer to allow 7-10 business days to receive a copy of the case. I provided my name lcb
12/11/2018 4:06:23 PM	Customer is requesting a transcript/copy of the case for her records.

Web Information

Web Name:
Web Home Phone:
Web Email:
Web Company:
Web Zip Code:
Web Account in Question:
Web US Dot #:

System Information

Created by: Maureen Harbolt
Tasks Correspondence Review: 3
Tasks Correspondence Review:3
Last Modified by: Pamela Frye
Next Activity Date:
Case Grade Created:
Case Grade Target:

Case Emails

Case Images

Created Date	Images

th2457

From: Aaron <aaron2457@sbcglobal.net>
Sent: Friday, August 30, 2019 10:51 AM
To: 'Christen M Blend'
Cc: 'Tanner S Wolffram'; th2457@sbcglobal.net
Subject: RE: [EXTERNAL] Young v. AEP Ohio (18-1832-EL-CSS)

Follow Up Flag: Follow up
Flag Status: Flagged

Thank you Christen,

As the complainant, we stand by our claim and the response of denial still stand with AEP. We believe this matter is not outside the scope of the complaint before the commission, but understand the information could be obtained through less burdensome and costly means. Therefore we respectfully request the following discovery:

A copy of all records of e-mails, letters, memoranda, notes, phone calls and the like for account number 074-598-873-0-8 (service address 9167 Taylor Road SW, Reynoldsburg, Ohio 43068 for the period from August 1, 2018 to present, specifically those of Tina J Roth of AEP in association with this account.

A copy of all records of e-mails, letters, memoranda, notes, phone calls and the like for account number 074-598-873-0-8 (service address 9167 Taylor Road SW, Reynoldsburg, Ohio 43068 for the period from August 1, 2018 to present, specifically those of the AEP employee responsible for giving notice to this service address prior to the installation of an advanced meter.

A copy of all records of e-mails, letters, memoranda, notes, phone calls and the like for account number 074-598-873-0-8 (service address 9167 Taylor Road SW, Reynoldsburg, Ohio 43068 for the period from August 1, 2018 to present, specifically those of the AEP employee dispatched to change out the meter for this account on November 26, 2018 who arrived in truck #22 (aka Laura).

We respectfully request delivery of such discovery not later than September 10, 2019.

Thank you again,

Aaron Young
614-864-5981

From: Christen M Blend [mailto:cmblend@aep.com]
Sent: Monday, August 26, 2019 1:58 PM
To: Aaron
Cc: Tanner S Wolffram; th2457@sbcglobal.net
Subject: RE: [EXTERNAL] Young v. AEP Ohio (18-1832-EL-CSS)

Mr. Young,

AEP Ohio will not agree to voluntarily make the AEP Ohio employees identified below available at the September 11, 2019 hearing in this case, and it is not legally required to produce them in response to your email below. AEP Ohio further objects to your request on the grounds that the information you appear to seek from them is not relevant to your claims in this proceeding, is outside the scope of the legal issues before the Commission in this case, and could be obtained through less burdensome and costly means.

Thank you,
Christen

AMERICAN ELECTRIC POWER
BOUNDLESS ENERGY™

CHRISTEN M BLEND | SENIOR COUNSEL
CMBLEND@AEP.COM | D:614.716.1915
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

From: Aaron <aaron2457@sbcglobal.net>
Sent: Wednesday, August 21, 2019 12:32 PM
To: Christen M Blend <cmblend@aep.com>
Cc: Tanner S Wolffram <tswolffram@aep.com>; th2457@sbcglobal.net
Subject: [EXTERNAL] Young v. AEP Ohio (18-1832-EL-CSS)

Dear Christen M Blend,

AEP Ohio admits that Complainants (we) have attached multiple exhibits that purport to be copies of emails between Complainants and AEP Ohio. AEP Ohio denies the authenticity, accuracy, and relevance of all attachments to the Complaint for lack of information and knowledge to form a belief thereon.

AEP Ohio denies Complainants' allegations that any AEP Ohio employee went to Complainants' residence without prior notice to Complainants.

AEP Ohio denies Complainants' assertions related to alleged conversations with between Complainants and "Laura" for lack of information and knowledge to form a belief thereon.

We respectfully request that Tina J Roth of AEP and also the AEP employee dispatched to change out our meter on November 26, 2018 who arrived in truck #22 (aka Laura) appear and give testimony at the hearing of this case September 11, 2019. As the dispute in the matter directly involved interactions with these employees, they have knowledge or evidence to be able to provide authenticity, accuracy, and relevance either to our own evidence and allegations, or to AEP's evidence and denials. Therefore there is good cause to honor this request.

Thank you again for your time,

Aaron Young
614-864-5981

Hello Mike,

We respectfully request Public Information.

We are requesting all internal records, internal recorded phone calls, internal letters, internal memoranda, internal notes and the like specifically pertaining to contact and conversation between Aaron Young, Andrea Smith, and Supervisor Mike Cody on 09/05/2018 regarding Case 18-1832-EL-CSS , Case ID 00223995, and Case Number 00222942.

Please acknowledge this request.

Thank you again for your time,

Thaah and Aaron Young
614-864-5981

th2457

From: Donald.Leming@puco.ohio.gov
Sent: Tuesday, September 10, 2019 9:11 AM
To: th2457; PublicRecords@puco.ohio.gov
Cc: aaron2457@sbcglobal.net
Subject: RE: Public Information Request Young v. AEP Ohio (18-1832-EL-CSS)
Attachments: 20180905_1338_16147285868_+16148645981.mp3; 20180905_1352_16147285868_+16148645981.mp3; 20180905_1402_16147285868_+16148645981.mp3; 20180905_1413_16147285868_+16148645981 (1).mp3; 20180905_1413_16147285868_+16148645981.mp3; CaseReport - 00223995.pdf

Ms. Young,
In accordance with O.RC. 149.43(B)(2), we find your request to be overly broad because it is so inclusive that the PUCO is unable to identify the records sought based on the manner in which the office routinely organizes and accesses records. In particular, this request is overly broad because it requests duplication of all records having to do with a particular topic, or all records of a particular type. *State ex rel. Zidonis v. Columbus State Community College*, 133 Ohio St.3d 122, 2012-Ohio-4228, ¶27; *State ex rel. Dehler v. Spatny*, 127 Ohio St.3d 312, 2010-Ohio-5711, ¶¶1-3; *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶19.

However, as a courtesy, please see attached your Case History Report and all call recordings associated with your complaint, which the PUCO believes may be responsive to your request.

As all or portions of your request has been denied, Ohio law affords you with the opportunity to revise your request. In order to assist you, please see the following link to the PUCO records retention schedule: http://apps.das.ohio.gov/rims/SelectMenu/Selection.asp. If you require any further assistance or have additional questions, please feel free to contact me at your earliest convenience.

Donald Leming
Public Utilities Commission of Ohio
Legal Department
Associate General Counsel
(614) 644-8955
www.PUCO.ohio.gov

From: th2457 [mailto:th2457@sbcglobal.net]
Sent: Friday, August 30, 2019 9:59 AM
To: PUCO PublicRecords <PublicRecords@puco.ohio.gov>
Cc: aaron2457@sbcglobal.net; Williams.michael@PUCO.OH.gov
Subject: Public Information Request Young v. AEP Ohio (18-1832-EL-CSS)

EXHIBIT tabbies Complainant's #

8/22/18 Date Stamped

AEP Ohio - Smart Meter Instal

https://patrickco.roktech.net/aepohiocustomerviewer/

AEP OHIO Smart Meter Installation Schedule

Outage Map 1-855-872-644

Find address or place

9167 Taylor Rd SW

Blacklick
Summit Station
Pataskala
Bexley
Whitehall
Reynoldsburg
Etna
Licking
Fairfield
Franklin
Fairfield
Bolte

Completed
Scheduled
Planned
Out of Project

Sources: Esri, USGS, NOAA | Sources: Esri, Garmin, USGS, NPS

Powered by

Aaron

From: Tina J Roth <troth@aep.com>
Sent: Monday, November 26, 2018 6:38 PM
To: Aaron
Subject: Emailing: doc
Attachments: doc.pdf

Dear Thaah,

This email is a follow up to your call with the AEP call center earlier today. Attached is a copy of the opt out agreement that will need to be signed and returned in its original condition with no alterations by December 1, 2018 in order to not have a smart meter installed at your location.

Please reach out if you have additional questions.

Kind regards,

AEP OHIO
AEP Ohio Customer Support Coordinator
aeponsmartgrid@aep.com

Complainant's I

Kind regards,
Tina

AEP Ohio Customer Support Coordinator
aepohsmartgrid@aep.com

From: Aaron [redacted]
Sent: Tuesday, November 27, 2018 11:45 AM
To: Tina J Roth
Subject: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Hello Tina,

Thank you for taking our call yesterday after someone from AEP showed up to change out the meter. As you are aware we have not completed our formal complaint with the PUCO yet, though due to health, security, and privacy concerns we prohibit AEP from installing a smart meter on our property. This does not mean we refuse to allow AEP personnel access to AEP owned facilities on our property. Rather we are lawfully requesting Advanced meter opt-out service which allows us to take electric distribution service from AEP using a traditional meter. In our case the existing analog meter currently in use on our property is a traditional meter by legal definition.

In the AEP AMI Opt Out Acknowledgment, we understand and agree there will be a $24.00 monthly tariff charge for our Advanced meter opt-out service now that the Smart Meter Installation Schedule appears to be 85% or more complete in our meter reading route area. We do not agree that we are requesting non-standard, digital metering equipment. However, if there is a need for AEP to change out the existing traditional meter on our property, we would like to understand this also. Therefore we are requesting AEP test the existing meter here to verify its compliance with the ANSI C 12.1 standards within thirty business days before any meter change out takes place. Please acknowledge this request.

Also within the AEP AMI Opt Out Acknowledgment, please understand we cannot agree to release, hold harmless, indemnify, limit, or eliminate liability on the part of AEP to us as the customer or others as a result of AEP's own negligence while providing this regulated tariff service. Nor can we agree to establish liability on our part as the customer for acts or failures to act involving AEP's facilities, which are beyond our control. This is one of the key reasons we contacted the PUCO on this matter as we put our case together.

Thank you for your time and attention to this matter,

Aaron and Thaah Young
Account Number 074-598-873-0-8

Dear Aaron,

To assist you further please see the answers to some of your questions/concerns in red text.

Rather we are lawfully requesting advanced meter opt-out service which allows us to take electric distribution service from AEP using a traditional meter. In our case the existing analog meter currently in use on our property is a traditional meter by legal definition. The "traditional meter" or in some cases referred to as "standard" for your location is the smart meter (AMI). The other meter option is the digital opt out meter which is referred to as the "non-traditional" or "non-standard" meter for your location. Analog meters are being phased out and are no longer an option for service. While this meter is digital it had no RF capabilities. To help show you the differences in the meters I have attached an Ohio Meter Guide and a document that will show you the difference between the RF Smart meter and the Non-RF opt out meter.

In the AEP AMI Opt Out Acknowledgment, we understand and agree there will be a $24.00 monthly tariff charge for our Advanced meter opt-out service now that the Smart Meter Installation Schedule appears to be 85% or more complete in our meter reading route area. We do not agree that we are requesting non-standard, digital metering equipment. However, if there is a need for AEP to change out the existing traditional meter on our property, we would like to understand this also. Therefore we are requesting AEP test the existing meter here to verify its compliance with the ANSI C 12.1 standards within thirty business days before any meter change out takes place. Please acknowledge this request. Please refer to the answer provided above.

Also within the AEP AMI Opt Out Acknowledgment, please understand we cannot agree to release, hold harmless, indemnify, limit, or eliminate liability on the part of AEP to us as the customer or others as a result of AEP's own negligence while providing this regulated tariff service. Nor can we agree to establish liability on our part as the customer for acts or failures to act involving AEP's facilities, which are beyond our control. This is one of the key reasons we contacted the PUCO on this matter as we put our case together. This portion of the form is required to opt out of a smart meter as you are selecting the non-traditional meter (smart meter). Your right to contact the PUCO is respected and acknowledged however the process must move forward.

Also, because definitions between words such as "traditional", "standard" can become mixed up across electricity territories a copy of you AEP Handbook is attached, and the options for service for you location follow.

OPTIONS FOR SERVICE

1. A Customer has an AMI (Smart Meter) meter installed at a premise.

2. A Customer may decline from having the AMI (Smart Meter) installed, which will result in a $24.00 a month meter reading and service fee be added to an account.

a. Additionally as part of the Opt Out Process all non-standard analog meters will be replaced with new standard digital non-communicating meters.

b. The Customer returns the opt out agreement in its original format.

3. A Customer may make arrangements to have their metering point moved away from the residence/structure within 30 days.

b. Note this is a cost that the customer would incur.

There is a limited time that we can hold the smart meter from being installed, the form as first sent back in September far exceeding the normal 10 days. I am happy to provide you an extension of 10 additional days to review the material that was provided however at that time an option for service listed above will need to be agreed upon for service.

The microprocessor does a mathematical integration of all the instantaneous samples through time, which yields the Energy consumed.

Energy (KWH) = Power (KW) x Time (Hours)

A digital display is used to show the accumulating KWH (Energy).

Someone has to read this number from the face of the meter to create a monthly bill.

Please reach out if you have additional questions, along with your decision regarding the smart meter or opting out.

Thank you,
Tina

AEP Ohio Customer Support Coordinator
aepohsmartgrid@aep.com

From: Aaron [redacted]]
Sent: Sunday, December 02, 2018 11:22 AM
To: AEPOHsmartgrid
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Hello Tina,

If you would, please provide documentation or web resource link to technical data and features for the non RF digital meter(s) AEP would be attempting install in place of the existing meter if the PUCO is able to help us properly opt out.

We still request AEP test the existing analog meter here to verify its compliance with the ANSI C 12.1 standards before any meter change out takes place. Please acknowledge this request.

Thank you,

Aaron and Thaah

From: Tina J Roth [mailto:troth@aep.com] **On Behalf Of** AEPOHsmartgrid
Sent: Tuesday, November 27, 2018 1:02 PM
To: Aaron
Subject: FW: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

From: Aaron [redacted]
Sent: Wednesday, December 05, 2018 11:00 AM
To: AEPOHsmartgrid
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Hello Tina,

According to OAC 4901:1-10-05(F)(1) Upon request by a customer, the electric utility shall test its meter to verify its compliance with the ANSI C 12.1 standards within thirty business days after the date of the request. This is regardless of Opt Out Service and we are requesting this test because AEP is stating they need to change out our meter for reasons we still do not understand. Please confirm this request for a meter test

Regarding the digital meter, this means AEP would be attempting to install and use a computer on our property in which we do not understand the data being collected with this computer or its features unless we see it. For us to understand what this means for our privacy and security, please provide manufacturer documentation or a web resource link to this technical data and features.

Thank you,

Aaron and Thaah Young

From: Tina J Roth [mailto:troth@aep.com] **On Behalf Of** AEPOHsmartgrid
Sent: Sunday, December 02, 2018 8:28 PM
To: Aaron
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Dear Aaron,

I have attached the Opt Out meter document comparing the RF to the smart meter, and at the end of this email included some text as to the meter pulls data usage.

All analog meters are kept for a period of 90 days when replaced by a smart meter should any testing be required. Should you opt out further process steps would be required at that time if you are requesting testing.

The Electronic Meter has a power supply, a voltage sensing circuit, and it has a current sensing circuit.

A microprocessor reads the instantaneous Voltage and Current values several hundred times per second.
**At any instant of time, the KW (power) is the product of Voltage x Current.*
**At 0 amps, there is no power being consumed.*
**At 200 amps, the load is consuming the maximum power which the meter is designed for.*

There are no moving parts.

From: Aaron [redacted]
Sent: Thursday, December 06, 2018 5:23 PM
To: AEPOHsmartgrid
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Hello Tina,

Thank you for directing us to AEP Call Center for our meter test request which they now have. We ask that you please allow this test to take place before removing the existing meter for replacement as this may become relevant evidence for our case. Further, we are nearing our filing of the formal complaint with PUCO and we appreciate your patience in this matter.

As for the digital meters AEP uses, do you have manufacture name and model numbers for these? Or can you direct us to someone who can help us with that? We want to know the facts about these so we can understand why AEP wants to install these on our property.

Though we have evidence contrary to the Myth vs Facts provided, we do appreciate you providing this resource with intent to ease our concerns.

Thanks again,

Aaron and Thaah

From: Tina J Roth [mailto:troth@aep.com] **On Behalf Of** AEPOHsmartgrid
Sent: Wednesday, December 05, 2018 8:52 PM
To: Aaron
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8

Dear Aaron,

You can call the AEP Call Center on your bill and request a meter test for the meter you currently have as it is outside of the work scope for this team. Please note that any findings of the test will not impact the options for service of either a smart meter or the digital opt out meter.

In regards to your comments about data being collected – none of the meter "collect data' the record kilowatt usage only. The only difference between an opt out meter and the analog meter you have today is that one is digital and one has dials. A meter reader will still be required to access the meter and read the usage. See the reference document attached.

Kind regards,
Tina

AEP OHIO
TINA J ROTH - [illegible]
TROTH@AEPCOM

Aaron

From: Tina J Roth <troth@aep.com> on behalf of AEPOHsmartgrid <aepohsmartgrid@aep.com>
Sent: Sunday, December 09, 2018 10:03 PM
To: Aaron
Subject: RE: [EXTERNAL] RE: Emailing: doc Acct: 074-598-873-0-8
Attachments: PUCO Terms and Conditions.pdf; Diff Between Smart Meter and Reguar Meter.pdf

Dear Aaron,

Please see a response to your questions/concerns below.

Thank you for directing us to AEP Call Center for our meter test request which they now have. We ask that you please allow this test to take place before removing the existing meter for replacement as this may become relevant evidence for our case. While your concerns are acknowledged we need to follow the timelines provided within processes for each customer. The normal timeline is 10 days from notification of potential opt out. This was 8-21-18, the timeline has already far exceeded the timeline. *Further, we are nearing our filing of the formal complaint with PUCO and we appreciate your patience in this matter.* The PUCO is there for consumers for the their concerns. I have included a copy of the PUCO Terms and Conditions regarding smart meters for reference.

As for the digital meters AEP uses, do you have manufacture name and model numbers for these? Or can you direct us to someone who can help us with that? We want to know the facts about these so we can understand why AEP wants to install these on our property. All of the digital meters are I-210+c model, what makes them different is their ability or non-ability to communicate via radio frequency. For the digital non-RF opt out meter different than the smart meter is that one (smart meter) has a communications card and the non-RF (opt out meter) does not (see the document attached). The smart meters have a blue face and usually a meter number type of NMD006, the non RF meter has a white face and a meter number type of NP008

Though we have evidence contrary to the Myth vs Facts provided, we do appreciate you providing this resource with intent to ease our concerns. There is a lot of data out there and not all of it is accurate. The goal is to provide you with the accurate information that we have.

Your communication is appreciated as we have moved through this process, an additional week's extension has been provided but a decision regarding the smart meter or opting out will be need by Monday 12-17-18 to keep the account from entering the refusal process.

Kind regards,
Tina

AEP OHIO
AEP Ohio Customer Support Coordinator
aepohsmartgrid@aep.com

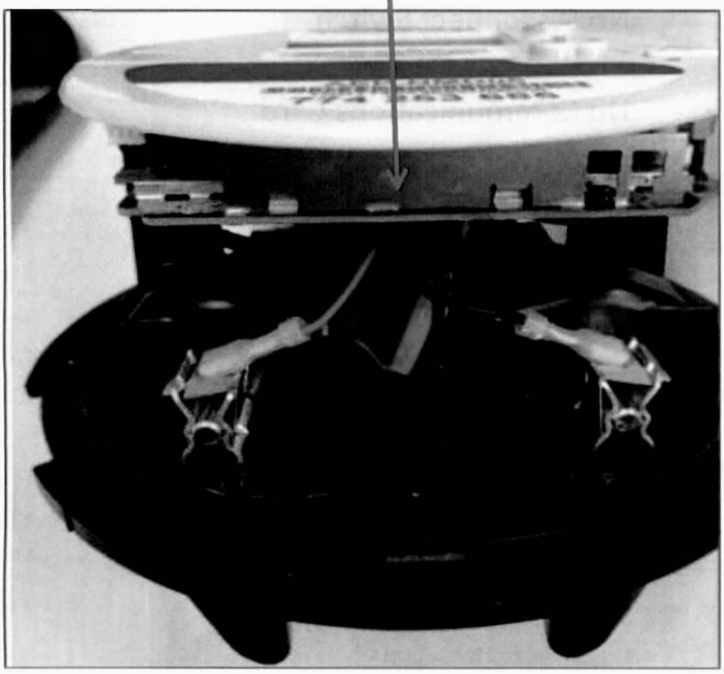
J

Differences between a Smart Meter and a Regular Meter

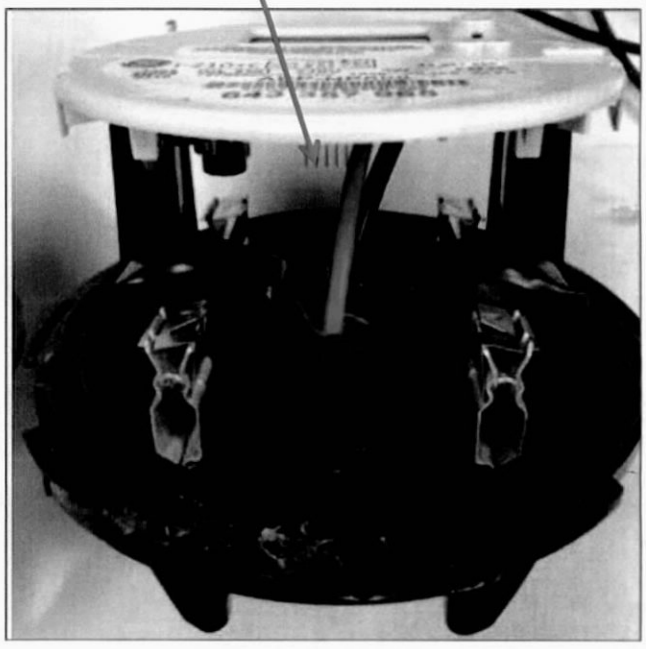
AMI Smart Meter - NMD06
Blue Label

Regular Meter - NP008
White Label

Communications Card

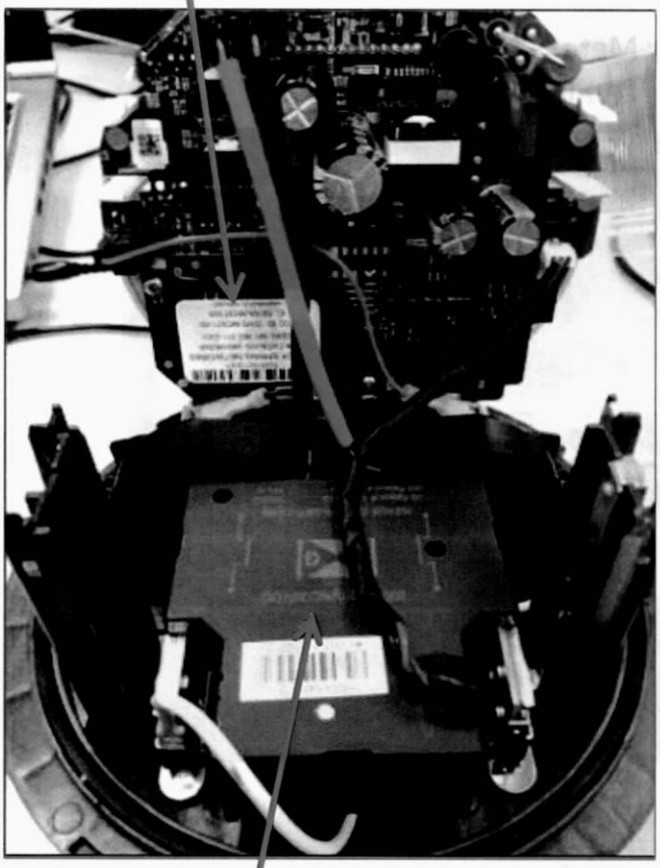


No Communications Card



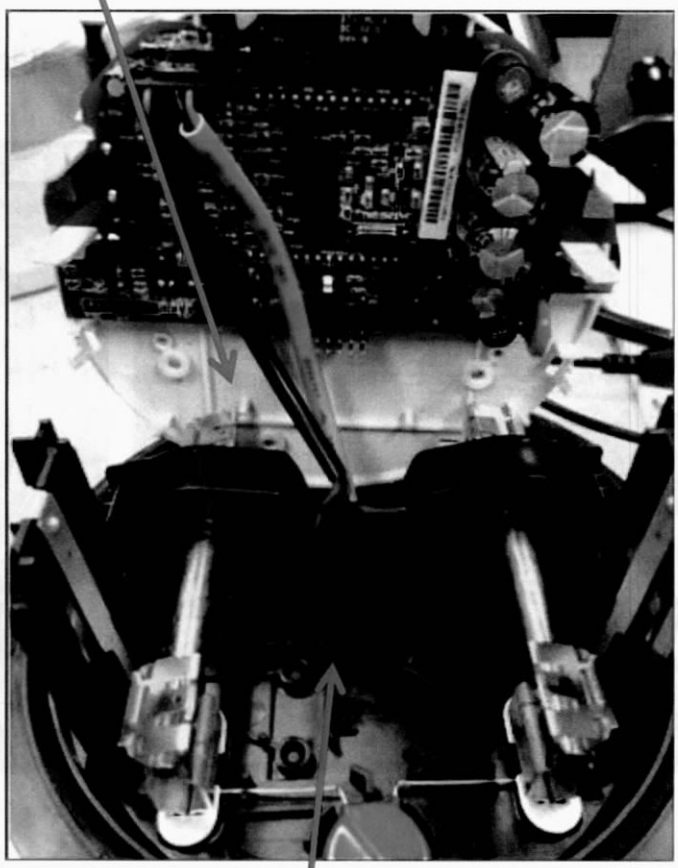
Complainant's J

Communications Card



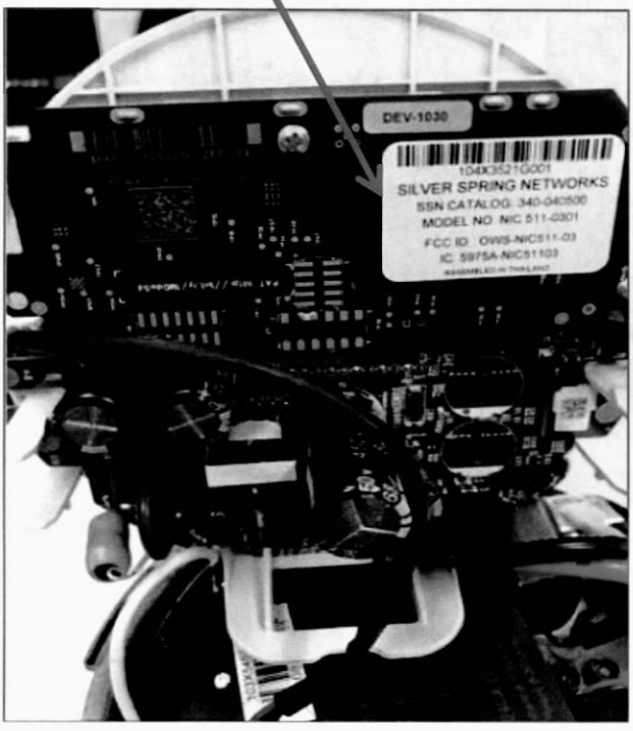
Disconnect Switch

No Communications Card

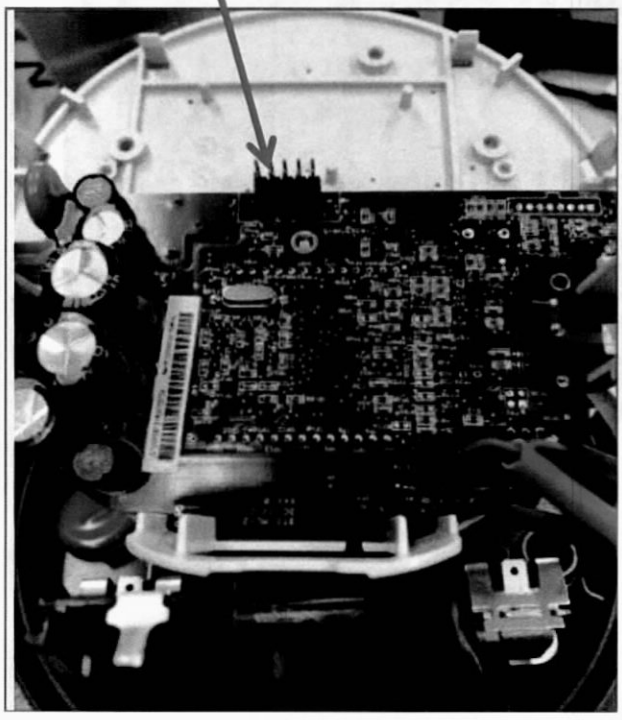


No Disconnect Switch

Communications Card



No Communications Card



This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/10/2019 8:35:24 PM

in

Case No(s). 18-1832-EL-CSS

Summary: Exhibit Opt-Out Meter I-210+C with A2 Soft Switch Enabled electronically filed by Mr. Aaron Young on behalf of YOUNG, THAAH AND AARON

K

GE
Digital Energy

Residential Electrical Metering

Advanced ANSI metering for the Smart Grid

For over 100 years, GE's metering solutions have provided utilities with a dependable partner known for our robust and quality metering platform. The I-210 product line brings innovative and flexible technology solutions that covers all your metering needs from basic electronic energy-only meters to highly-flexible smart metering solutions that provide advanced functionality to meet the evolving Smart Grid system needs.

GE's family of meters goes beyond meeting your complex business challenges. The advanced, powerful and easy-to-use meters give you an extra edge in the energy business. You can look forward to real-time instrumentation, power quality monitoring and easy access to critical information. All these add up to give you higher productivity, improved efficiency and reduced energy costs.

Key Benefits

- Reliable and accurate cash register for utilities
- AMR/AMI Plug-n-Play functionality
- Multiple communication technologies tied to AMI systems provide reliable data in a timely manner
- Smart metering functions such as Time of Use demand metering and service switch capabilities
- Demand side management through pre-payment and demand limiting features
- Advanced functions such as reactive measurement and, IEEE reliability indices measurement
- Robust meter security and standards compliance

ANSI Single Phase Meters

I-210+c Full featured, Smart Grid enabled metering
This is GE's flagship residential meter product, offering demand, load profile, TOU, service switch, and a full complement of communication options.

I-210+ Value packed Smart Grid functions
World class accuracy and reliability in a solid-state kWh meter platform package. Available with a service switch, as well as a wide array of communications options.

Communications

- Broad AMI/AMR Plug-n-Play options - RF Mesh, Power line carrier, Cellular, etc
- Allows interchangeability of AMR/AMI Plug-n-Play options
- Supports connectivity and integration with 3rd party communications solutions providers

Smart Configuration

- Ability to customize advanced metering options to suit customer's needs
- Configure load profile, time of use and demand metering capabilities
- Versatile programming Softswitches allowing the selection of advanced functionality such as power quality measurement and reactive power measurement
- Service Switch option improves operational efficiency and addresses issues such as demand side management, remote repayment systems, and controlled outage restoration

Reliability

- Robust revenue-grade watt-hour and demand meters
- Based on GE's cutting edge technology providing typical 0.2% accuracy, and reliability
- Enable utilities with tools to lower operational cost and provide accurate metering solutions

imagination at work

Complement's K

Reliable Metering

In this dynamic time of regulatory scrutiny and customer engagement, you can be assured of the product and the company behind the product. We have ANSI and ISO certified labs to ensure that our product design and manufacturing processes yield a robust product every time.

Our testing procedures go well beyond the ANSI and IEC requirements for which we design to, including some of the most aggressive internal standards in the market place today. We now have included world-class Radio Frequency (RF) communications expertise to ensure that our meter products are hardened to withstand even the harshest of RF environments without sacrificing the quality or integrity of the metrology or the communications technology.

Accurate & Dependable

Typically measured at +/- 0.2%, the GE I-210 family of meters provides best-in-class capabilities for accuracy. Combined with the low starting watts, the utility can have confidence in the metered value and measured electricity usage.

Integrity of Supply

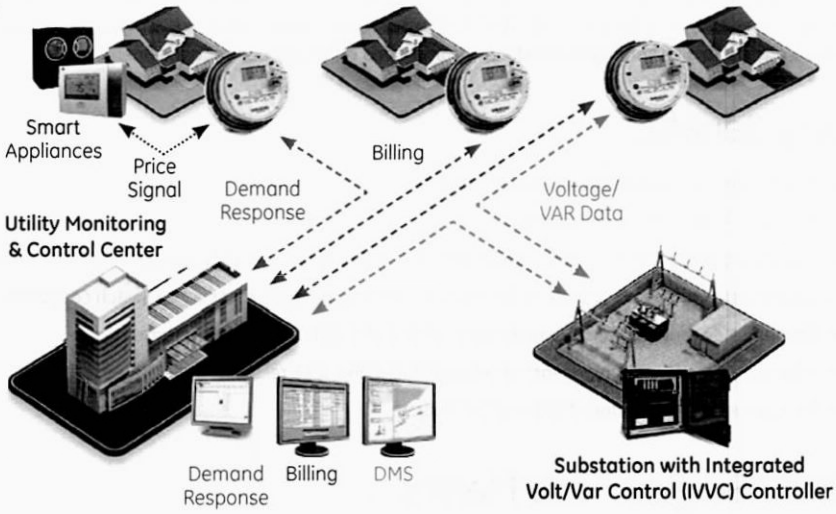
Having a partner that can provide assurance in supply is critical when a utility begins a mass deployment of meters. GE's process focus and rigor around supply chain excellence minimizes the risk to the utility, giving them confidence to manage installation crews and provide accurate scheduling to customers.

Broad Communications Support

The I-210 family has been designed to allow for the interchangeability of AMR/AMI modules and cover the broadest range of possible AMI communication technologies including RF Mesh, Cellular, Power Line and Ethernet. Modules can be added at the GE factory, after the fact, or replaced with another compatible module if the meter is redeployed.

Billing & Smart Applications

Traditional billing continues to be a vital component of today's solid state meters, but they are also now a vital part of your grid operation. We've leveraged the strength and knowledge of GE Digital Energy around distribution automation, volt-var control, demand optimization, and distributed generation to develop a line of metering products that are designed to integrate and provide the critical information needed to optimize all of these grid operation solutions. As GE continues to build on its Smart Grid solutions, you can count on GE Digital Energy and our new metering products to include innovative and unique capabilities you never thought possible.



Leading the way on integrated appliances for demand response

One of the most compelling benefits of the Smart Grid is the promise of delivering demand management or load control. Utilities will save energy, lower costs, and defer additional transmission and generation expenses with the ability to shave peak load, shape load and curtail load to mitigate grid events. Additionally, consumers will be able to conserve energy and shift energy use to benefit from time of use or time based rate structures. Various studies have shown that these actions can generate customer savings from 5% to 15% of their monthly electricity use.

GE, through our Digital Energy and Appliance businesses, is continuing to work on integrated solutions for electricity metering and smart appliances in the home. This is an exciting time for our business as we pioneer a new generation of electricity smart meters and smart appliances that work seamlessly together to deliver energy savings never thought possible.

Full featured, Smart Grid Meter

I-210+c

Smart Grid enabled, consumer friendly metering

GE's most advanced residential electricity metering product line, the I-210+c, delivers Smart Grid capability for today and the future. Derived from our industry leading commercial and industrial product line, the kV2c, the I-210+c benefits from our advanced metrology capability and lessons learned from over 10 years of solid state metering design. All the way down to the advanced microprocessor, the I-210+c contains much of the advanced polyphase functionality that GE has been known for. We have also added capability that makes the I-210+c the referenced residential product line in the industry.

Capability

Designed for today's dynamic rate structures, the I-210+c provides capability for demand, load profile, and TOU recording, along with a number of other power quality and demand response related functions. Configurable to support various metering quantities, this meter supports delivered (+), received (-), and net metering for distributed generation.

Advanced Functionality

With the addition of the fully rated 200 amp service switch, the meter is capable of pre-payment metering without all the historical cost associated with card readers or other legacy pre-payment technology. Load limiting and emergency conservation modes set this meter apart when working in conjunction with a demand response program. Having the capability to be remotely configured, as well as being firmware upgradeable, this product serves today's needs, as well as tomorrow's evolving requirements.

Communications

Designed to specifically accommodate the communications technology required to support a Smart Grid, the I-210+c has the same electrical and mechanical interface as our I-210+ platform, making communications interchangeable and interoperable between these two residential metering platforms. Designed with an enhanced power supply, the platform is ideally optimized for RF Mesh, PLC, and 3G/4G point-to-point communication technologies.

Features & Benefits

- Customize advanced metering options through SoftSwitches
- AMR/AMI Plug-n-Play designed to accommodate:
  - Radio Frequency Mesh (RF Mesh)
  - Power Line Communications (PLC)
  - Cellular (GPRS/CDMA) communications
  - Ethernet
- Advanced functionality such as:
  time-of-use, insensitive demand load profile recording, event logging.
- Typical accuracy: within +/- 0.2%
- Service Switch to improve operational efficiency and address issues such as:
  - Demand side management
  - Remote prepayment systems
  - Controlled outage restoration
- Low starting watts; capture energy consumption at levels typically not registered by electromechanical meters
- Low burden, which minimizes utility system losses
- Patented tamper algorithm to detect tamper-by-meter inversion
- Meets or exceeds ANSI C12.1, C12.10, C12.20, C37.90.1
- Communications Options:
  - Silver Springs Networks NIC
  - Trilliant SecureMesh
  - Itron Cellular
  - Itron 57ESS ERT

AMR/AMI Plug and Play Communications

Multiple communication options on the I-210+c allows greater customer choice. Ideally optimized for RF Mesh, PLC, 3G/4G point-to-point communication technologies, the I-210+c can cover a wide variety of communication scenarios.

Residential Communication

- ZigBee ESI 802.15.4 SEP 1.0

I-210+c

Utility Communication

- Radio Frequency Mesh (RF Mesh),
- Power Line Communications (PLC),
- Cellular (GPRS/CDMA) communications
- Ethernet

Utility Monitoring & Control Center

Value packed, Smart Grid Meter

I-210+

Load Management

The I-210+ is one of the most popular single phase meters among US utilities for residential metering installations. Equipped with a fully-rated 200A service switch, this meter platform is ideal to provide basic load management functionality.

Reliability

The I-210+ has enjoyed tremendous success in the marketplace for smart meters, with over 3.5 million units shipped since 2009. This product is the industry benchmark for quality and reliability, having passed both internal and external validation tests for billing accuracy. At GE, we have an unprecedented testing and validation process to ensure that our products are robust and exceed the industry standard ANSI requirements.

We have substantial expertise in wireless communications and the testing that is required to ensure that our meters perform flawlessly, even in the harshest of radio frequency (RF) environments.

Communications

The I-210+ has the same electrical and mechanical interface as our I-210+c platform, designed to specifically accommodate Smart Grid communications technology, making communications interchangeable and interoperable between these two residential metering platforms. Multiple RF Mesh and PLC communication technologies are supported with a newly updated power supply.

Features & Benefits

- AMR/AMI Plug and Play designed to accommodate: RF Mesh, PLC, Cellular (GPRS/CDMA), Ethernet
- Communications Options:
  - Grid IQ P2MP
  - SSN NIC
  - Trilliant SecureMesh
  - Aclara UMT-R
  - Itron 54ESS ERT, 55ESS ERT, 56ESS ERT
  - Tantalus TC-I210
- Advanced functionality such as; time-of-use, insensitive demand load profile recording, event logging.
- Customize advanced metering options through SoftSwitches
- Service Switch to improve efficiency and address:
  - demand side management
  - remote prepayment systems
  - controlled outage restoration

AMI Technology Selection for I-210+ and I-210+c Meters

AMI Technologies	Type	I-210+	I-120+c
Aclara UMT-R	PLC	X	
Grid IQ P2MP	RF P2MP	X	
Itron 54ESS ERT, 55ESS ERT, 56ESS ERT	1-way RF AMR	X	
Itron 57ESS ERT	1-way RF AMR		X
Itron Cellular	Cellular Network		X
Silver Springs Networks NIC	RF Mesh	X	X
Tantalus TC-I210	RF Mesh	X	
Trilliant SecureMesh	RF Mesh	X	X

Full featured, Secure Metering Software

MeterMate™

GE's innovative MeterMate software suite enables meter administrators to easily configure and manage GE meters. Each software component in the MeterMate suite is optimized to address the different aspects of a meter's lifecycle. MeterMate program creation software enables the user to effortlessly configure the meter's basic and advanced functionality, ranging from creating a simple demand program and setting up the meter display to configuring the meter's I/O and alerts. With MeterMate reading and programming software, a user can read, program and perform real-time instrumentation and power quality monitoring on a meter, via a variety of different communication methods such as local OPTOCOM, remote telephone, RS-232/485 and IP communications.

The suite also provides the MeterMate Batch Control, MeterMate Load Profile (MMLp) and MeterMate XTR utilities. MeterMate Batch Control enables the user to automate remote meter reading. MeterMate Load Profile (MMLp) provides analysis of load profile data and MeterMate XTR supports the export of meter data to the MV-90 HHF format.

Features & Benefits

- One software suite to configure and read from the GE portfolio of meters: kV family, I-210 family and SGM3xxx family
- Supports the ANSI C12.19 communication protocol
- Multiple methods to communicate with meters: USB & RS232 OPTOCOM, RS485, Modem
- Modular configuration workflow that enable the reuse of frequently used configuration settings and measurements
- Various reports to display information for meter management, auditing, billing and monitoring power quality
- Command line interface and batch-control enabling automated and scheduled meter operations
- Configurable role-based access control security

With GE meters, your business case just got a whole lot better

At GE, we've leveraged our expertise to ensure you get the most out of your investment in GE products and solutions. The capability available in the GE Smart Meter's provide for data that can be used to optimize a number of utility operational systems outside of traditional billing. These integrated solutions include:

- Outage events and alarms integrated into PowerOn™, GE's Outage Management Solution
- Voltage and Var data, provided in real-time, to enhance distribution automation solutions for Conservation Voltage or Integrated Volt/Var Coordination
- Integration with GE's GridIQ™ Demand Optimization Solution for coordinated load control and demand response for surgical implementation of load shedding and load deferral

The strength of metering products come from our broad knowledge of electrical utilities and their operational systems. We will continue to provide metering products that build on this knowledge and provide differentiated value for both the utilities and the consumer.

Residential Meter Selector

	Product Characteristics	I-210+ Basic Energy	I-120+c
1	Meter Functionality	• Real Energy Consumption Management	• Real Energy Consumption Management • Reactive Energy Consumption Measurement • Apparent Energy Consumption Measurement • Voltage Measurement (Min, Avg, Max) • Sag/Swell Measurement • Outage Count and Duration
2	ANSI Models	Form / Class / Volts 1S / 100 / 120 & 240 2S / 200 & 320 / 240 3S & 3CS / 20 / 120 & 240 4S / 20 / 240 12S / 200 & 320 / 120 & 240 25S / 200 & 320 / 120 & 240	Form / Class / Volts 1S / 100 / 120 & 240 2S / 200 & 320 / 240 3S & 3CS / 20 / 120 & 240 4S / 20 / 240 12S / 200 & 320 / 120 & 240 25S / 200 & 320 / 120 & 240
3	Soft-Switches to upgrade meter function	• Optional Softswitches can be loaded in the factory or by the user to activate advanced functions O — Activates communication capability with AMR/AMI modules S_2 — AMI/AMR calculated demand displayed on meter LCD V_2 — Simple Voltage Event monitor in addition to a display of RMS momentary voltage on the 3 lower LCD digits	• Optional Soft-switches can be loaded in the factory or by the user to activate advanced functions A_2 — Activates communication capability with AMR/AMI modules E_2 — Activates Event Log Recording (up to 200 Events) K_2 — Activates Reactive/Apparent Energy Consumption recording N_2 — Activates Demand Q_2 — Activates Power Quality (Min, Avg, Max Voltage) recording R_2 — Activates LP recording (up to 4 channels) T_2 — Activates TOU recording V_2 — Activates Sag/Swell monitor and recording
4	AMR Interface (Factory enabled or installed by customer)	• Quadrature Pulse • SPI Format-1 data • SPI Format-2 data • PSEM Communications	• PSEM Communications
5	Energy Accumulation	• Must specify at time of order either: - Delivered only - Delivered + Received - Delivered – Received - Received only • Customer can change selection later using MeterMate	• Specified at time of order for factory programmed meters or configured by the customer using MeterMate. Any two or four of the following energy measurements can be selected: - Delivered only kWh - Received only kWh - Delivered + received kWh - Delivered – received kWh - Lagging only kvarh; requires K_2 Soft-switch - Leading only kvarh; requires K_3 Soft-switch - Lagging + Leading kvarh; requires K_4 Soft-switch - Lagging - Leading kvarh; requires K_5 Soft-switch - Phasor apparent VAh; requires K_6 Soft-switch
6	Cycle Insensitive Demand	• Not available	Requires T_2 & N_2 Soft-switches to be enabled • Provides an alternative method for calculating the maximum demand in meters equipped with one-way AMR system. • The meter maintains the daily maximum demands and the two peaks for the period. • Demand is calculated using the programmed method (Block, rolling or thermal). • The daily maximum demands are stored in a circular queue. • Each entry in the circular queue contains a date.
7	Power Quality	• With V_2 Softswitch enabled, provides a count of Sag/Swell Events. Value and duration thresholds are programmable.	• With Q_2 and R_2 Softswitches enabled, Min, Max and Average Voltage recording is possible. • With V_2 Softswitch enabled, provides counts and magnitude recording of Sag/Swell Events with date and time stamped. Value and duration thresholds are programmable. This Sag/Swell Event Log is separate from the Event Log recording provided by the E_2 Softswitch • With E_2, R_2 and T_2 Softswitches enabled, recording of sustained and total outage counts and duration is possible to permit calculation of IEEE Reliability indices.
8	MeterMate Reading and Programming access	• Available	• Available
9	Service Switch (provide remote controllable disconnection and reconnection of electrical service for residential applications)	• A switching device intended to provide remote controllable disconnection and reconnection of electrical service for residential applications. • Factory installed option, specify at time of order. • Full functionality requires two-way AMI module • Switch is installed under standard size cover • Typical applications include: - Remote disconnect and reconnect of service - Energy conservation demand limiting - Demand limiting as an alternative to service disconnection - Prepayment metering - Outage management/restoration Note: Energy conservation demand limiting and prepayment metering functionalities are not available on forms 12S and 25S.	• A switching device intended to provide remote controllable disconnection and reconnection of electrical service for residential applications. • Factory installed option, specify at time of order. • Full functionality requires two-way AMI module • Switch is installed under standard size cover • Typical applications include: - Remote disconnect and reconnect of service - Energy conservation demand limiting - Demand limiting as an alternative to service disconnection - Prepayment metering - Outage management/restoration

Technical Specifications

I-210+c

Basic Functions
Single Phase Demand Meter
- Energy management, 4 quantities
- Demand, block, or rolling demand
- Fundamental plus harmonic measurements
- Bi-directional energy measurements
Load Profile recording
Time of Use Billing Measures
Four Energy options (Delivered, Received, Delivered+Received, Delivered-Received)
Tamper detect capability
Broad communication module options
Network applications
Models available for 120 or 240 volt CL 20, CL 100, CL 200, CL 320 applications.
50 or 60 Hz operation

Optional Functions
Factory integrated Service Switch Capability

Soft-Switch Functions
A_2 Soft-switch
- The Alternate Communication Soft-switch allows a communication option board to communicate with the meter
E_2 Soft-switch
- The Event Log Soft-switch allows the meter to track the most recent 200 events. Use MeterMate™ Program Manager, Diagnostics Editor, to select the event types to be logged and how many occurrences should be tracked, up to a maximum of 200 events. Date and time stamps are included on logged events for Demand/LP or TOU meters
K_2 Soft-switch
- The kVA and kvar Soft-switch adds kVA(h) and kvar(h) measurement capability.
N_2 Soft-switch
- The Demand (N_2) Soft-switch adds billing demand calculations.
Q_2 Soft-switch
The Power Quality Measurements Soft-switch enables
- Voltage (L-N): VA (max, min, store) for summations, demand, and load profile recording
- RMS voltage measurement for reading and display
- Low potential caution
R_2 Soft-switch
- The Load Profile Soft-switch activates up to 4 channels of LP recording
T_2 Soft-switch
The Time-of-use Soft-switch enables TOU operation
- Up to four TOU periods and four Seasons
- Up to three daily rate schedule types and one holiday schedule
- Up to 80 TOU schedule set points
- Up to 50 programmable dates:
- Holidays, season changes, Daylight Savings Time (DST), self-read, and demand reset
- Perpetual calendar handles most dates
- Up to two billing and two demand measures per TOU period
- Self-read actions on specified dates, with or without a demand reset
V_2 Soft-switch
- The voltage Soft-switch activates Sag/Swell monitor and recording

Accuracy
Typical Accuracy: Within +/- 0.2%
Starting Watts: 12W @ 240V, 6W @ 120V
Typical Watt Loss: 0.7 Watts

Rating
Voltage: 120 V –240 V
Current: Class 100, Class 200, Class 320, Class 20
Frequency: 50 or 60 Hz

Cover Options
Polycarbonate cover with molded sunshield
- Plain cover without RESET OR "D" ring
- With Optocom "D" ring
- With RESET latch and Optocom "D" ring

Operating Range
Voltage: +/- 20%
Operates over a broad temperature range (–40°C through +85°C)

Available Models
ANSI Form 1S, 2S, 3S, 4S, 12S, 25S
CL 20, CL100, CL200, CL320

Applicable Standards
Performance meets or exceeds industry standards
ANSI C12.19
ANSI C12.1
ANSI C12.10
ANSI C12.20
ANSI C37.90.1

I-210+

Basic Functions
Basic function as electronic single phase Revenue Meter
Four Energy options (Delivered, Received, Delivered+Received, Delivered-Received)
Tamper detect capability
Broad communication module options
Network applications
Models available for 120 or 240 volt CL 20, CL 100, CL 200, CL 320 applications.
50 or 60 Hz operation.

Optional Functions
Factory integrated Service Switch Capability
- Soft Switch Functions
- AMR/AMI Communications (AMR/AMI Interface formats include quadrature pulse, PSEM, SPI Format-1 data, SPI Format-2 Data)
- Display AMR calculated Demand value shown on the lower 3 LCD digits
- Simple Voltage Event monitoring in addition to RMS momentary voltage display

Accuracy
Typical Accuracy: Within +/- 0.2%
Starting Watts: 12W @ 240V, 6W @ 120V
Typical Watt Loss: 0.7 Watts

Rating
Voltage: 120 V –240 V
Current: Class 100, Class 200, Class 320, Class 20
Frequency: 50 or 60 Hz

Cover Options
Polycarbonate cover with molded sunshield
- Plain *cover* without RESET OR "D" ring
- *With Optocom "D" ring*

Operating Range
Voltage: +/- 20%
Operates over a broad temperature range (–40°C through +85°C)

Available Models
ANSI Form 1S, 2S, 3S, 4S, 12S, 25S
CL 20, CL100, CL200, CL320

Applicable Standards
Performance meets or exceeds industry standards ANSI C12.1
ANSI C12.10
ANSI C12.20
ANSI C37.90.1
ANSI C12.20
ANSI C37.90.1

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Atlanta, GA 30339
Toll Free (NA Only): 1-877-605-6777
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gedigitalenergy@ge.com

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in

Case No(s). 18-1832-EL-CSS

Summary: Exhibit AEP Opt-Out Meter (GE I-210+C) electronically filed by Mr. Aaron Young on behalf of YOUNG, THAAH AND AARON

Aclara

Residential Electrical Metering

Advanced ANSI metering for the Smart Grid

Aclara's I-210 product line continues the tradition to bring innovative and flexible technology solutions that cover all your metering needs from basic electronic energy-only meters to highly-flexible smart metering solutions that provide advanced functionality to meet the evolving Smart Grid system needs.

Aclara's family of meters go beyond meeting your complex business challenges. The advanced, powerful and easy-to-use meters give you an extra edge in the energy business. You can look forward to realtime instrumentation, power quality monitoring and easy access to critical information. All these add up to give you higher productivity, improved efficiency and reduced energy costs.

KEY BENEFITS

- Reliable and accurate cash register for utilities
- AMR/AMI Plug-n-Play functionality
- Multiple communication technologies tied to AMI systems provide reliable data in a timely manner
- Smart metering functions such as Time of Use demand metering and service switch capabilities
- Demand side management through pre-payment and demand limiting features
- Advanced functions such as reactive measurement and, IEEE reliability indices measurement
- Robust meter security and standards compliance

COMMUNICATIONS

- Broad AMI/AMR Plug-n-Play options - RF Mesh, Power line carrier, Cellular, etc
- Allows interchangeability of AMR/AMI Plug-n-Play options
- Supports connectivity and integration with 3rd party communications solutions providers

Single Phase Meters

I-210+c

FULL FEATURED, SMART GRID ENABLED METERING

This is Aclara's flagship residential meter product, offering demand, load profile, TOU, service switch, and a full complement of communication options.

I-210+

VALUE PACKED SMART GRID FUNCTIONS

World class accuracy and reliability in a solid-state kWh meter platform package. Available with a service switch, as well as a wide array of communications options.

Complainant's

SMART CONFIGURATION

- Ability to customize advanced metering options to suit customer's needs
- Configure load profile, time of use and demand metering capabilities
- Versatile programming Softswitches allowing the selection of advanced functionality such as power quality measurement and reactive power measurement
- Service Switch option improves operational efficiency and addresses issues such as demand side management, remote repayment systems, and controlled outage restoration

RELIABILITY

- Robust revenue-grade watt-hour and demand meters
- Based on Aclara's cutting edge technology providing typical 0.2% accuracy, and reliability
- Enable utilities with tools to lower operational cost and provide accurate metering solutions

RELIABLE METERING

In this dynamic time of regulatory scrutiny and customer engagement, you can be assured of the product and the company behind the product. We have ANSI and ISO certified labs to ensure that our product design and manufacturing processes yield a robust product every time.

Our testing procedures go well beyond the ANSI and IEC requirements for which we design to, including some of the most aggressive internal standards in the market place today. We now have included world-class Radio Frequency (RF) communications expertise to ensure that our meter products are hardened to withstand even the harshest of RF environments without sacrificing the quality or integrity of the metrology or the communications technology.

ACCURATE & DEPENDABLE

Typically measured at +/- 0.2%, the Aclara I-210 family of meters provides best-inclass capabilities for accuracy. Combined with the low starting watts, the utility can have confidence in the metered value and measured electricity usage.

INTEGRITY OF SUPPLY

Having a partner that can provide assurance in supply is critical when a utility begins a mass deployment of meters. Aclara's process focus and rigor around supply chain excellence minimizes the risk to the utility, giving them confidence to manage installation crews and provide accurate scheduling to customers.

BROAD COMMUNICATIONS SUPPORT

The I-210 family has been designed to allow for the interchangeability of AMR/AMI modules and cover the broadest range of possible AMI communication technologies including RF Mesh, Cellular, Power Line and Ethernet. Modules can be added at the Aclara factory, after the fact, or replaced with another compatible module if the meter is redeployed.

ACLARA'S iiDEAS® OPERATIONAL DATA MANAGEMENT PLATFORM

iiDEAS integrates head-end and meter data management into one unified application. Iideas aggregates AMI meter data with existing utility applications and offers a single, customizable interface for personnel to access the critical data they need to better manage their distribution infrastructure, optimize operations and improve service reliability.

AMI meter data is significantly enhanced by the aggregation of data from such systems as GIS, OMS, CIS and SCADA. iiDEAS uses standard interfaces such as MultiSpeak and CIM to integrate with these systems. iiDEAS also provides a range of advanced analytics including loss analysis, transformer analysis, voltage analysis and fault detection and localization.

Full featured, Smart Grid Meter

I-210+c

SMART GRID ENABLED, CONSUMER FRIENDLY METERING

Aclara's most advanced residential electricity metering product line, the I-210+c, delivers Smart Grid capability for today and the future. Derived from our industry leading commercial and industrial product line, the kV2c, the I-210+c benefits from our advanced metrology capability and lessons learned from over 10 years of solid state metering design. All the way down to the advanced microprocessor, the I-210+c contains much of the advanced polyphase functionality that Aclara has been known for. We have also added capability that makes the I-210+c the referenced residential product line in the industry.

CAPABILITY

Designed for today's dynamic rate structures, the I-210+c provides capability for demand, load profile, and TOU recording, along with a number of other power quality and demand response related functions. Configurable to support various metering quantities, this meter supports delivered (+), received (-), and net metering for distributed generation.

ADVANCED FUNCTIONALITY

With the addition of the fully rated 200 amp service switch, the meter is capable of pre-payment metering without all the historical cost associated with card readers or other legacy pre-payment technology. Load limiting and emergency conservation modes set this meter apart when working in conjunction with a demand response program. Having the capability to be remotely configured, as well as being firmware upgradeable, this product serves today's needs, as well as tomorrow's evolving requirements.

COMMUNICATIONS

Designed to specifically accommodate the communications technology required to support a Smart Grid, the I-210+c has the same electrical and mechanical interface as our I-210+ platform, making communications interchangeable and interoperable between these two residential metering platforms.

FEATURES & BENEFITS

- Customize advanced metering options through SoftSwitches
- AMR/AMI Plug-n-Play designed to accommodate: -
  Radio Frequency Mesh (RF Mesh)
  - Radio Frequency Point-to-Multipoint
  - Cellular communications
  - Ethernet
- Advanced functionality such as:
  time-of-use, insensitive demand, load profile recording, event logging, voltage sag/swell recording
- Typical accuracy: within +/- 0.2%
- Service Switch to improve operational efficiency and address issues such as:
  - Demand side management
  - Remote prepayment systems
  - Controlled outage restoration
- Low starting watts; capture energy consumption at levels typically not registered by electromechanical meters
- Low burden, which minimizes utility system losses
- Patented tamper algorithm to detect tamper-by-meter inversion
- Meets or exceeds ANSI C12.1, C12.10, C12.20, C37.90.1 and and UL 2735

AMR/AMI PLUG AND PLAY COMMUNICATIONS

Multiple communication options on the I-210+c allows greater customer choice. Ideally optimized for RF Mesh, PLC, 3G/4G point-to-point communication technologies, the I-210+c can cover a wide variety of communication scenarios.

I-210+c

Utility Communication

- Radio Frequency Mesh (RF Mesh),
- Power Line Communications (PLC),
- Cellular Communications
- Ethernet

Utility Monitoring & Control Center

Value packed, Smart Grid Meter

I-210+

LOAD MANAGEMENT

The I-210+ is one of the most popular single phase meters among US utilities for residential metering installations. Equipped with a fully-rated 200A service switch, this meter platform is ideal to provide basic load management functionality.

RELIABILITY

The I-210+ has enjoyed tremendous success in the marketplace for smart meters, with over 10 million units shipped since 2009. This product is the industry benchmark for quality and reliability, having passed both internal and external validation tests for billing accuracy. At Aclara, we have an unprecedented testing and validation process to ensure that our products are robust and exceed the industry standard ANSI requirements.

We have substantial expertise in wireless communications and the testing that is required to ensure that our meters perform flawlessly, even in the harshest of radio frequency (RF) environments.

COMMUNICATIONS

The I-210+ has the same electrical and mechanical interface as our I-210+c platform, designed to specifically accommodate Smart Grid communications technology, making communications interchangeable and interoperable between these two residential metering platforms. Multiple RF Mesh and PLC communication technologies are supported with a newly updated power supply.

FEATURES & BENEFITS

- AMR/AMI Plug and Play designed to accommodate: RF Mesh, RF Point-to-Multipoint, PLC, Ethernet
- Typical accuracy: within +/-0.2%
- Service Switch to improve efficiency and address:
  - demand side management
  - remote prepayment systems
  - controlled outage restoration
- Low starting watts; capture energy consumption at levels
- typically not registered by electromechanical meters
- Low burden, which minimizes utility system losses
- Meet or exceeds ANSI C12.1, C12.10, C12.20, C37.90.1

Factory Integrated Communication Options for I-210+ and I-210+c Meters

AMI Technologies	Type	I210+	I210+c
Aclara TWACS	PLC	•	
Aclara Synergize® RF	RF P2MP	•	
Itron Single ERT HP (54-56ESS)	1-way RF AMR	•	
Itron Triple ERT HP (57ESS)	1-way RF AMR		•
Itron EVDO & HSPA	Cellular (3G)		•
Sensus Flexnet™	RF P2MP		•[1]
Silver Springs Networks© NIC 410	RF Mesh		•[1]
Silver Springs Networks© NIC 510	RF Mesh		•[1]
Silver Springs Networks© MicroAP	Cellular & RF Mesh		•[1]
Trilliant RPMA	RF P2MP	•	•[1]
Trilliant SecureMesh™	RF Mesh	•	•

Note 1 : Optional UL Certified Meter

Full featured, Secure Metering Software

MeterMate

SMART GRID ENABLED, CONSUMER FRIENDLY METERING

Aclara's innovative MeterMate™ software suite enables meter administrators to easily configure and manage Aclara meters. Each software component in the MeterMate suite is optimized to address the different aspects of a meter's lifecycle. MeterMate program creation software enables the user to effortlessly configure the meter's basic and advanced functionality, ranging from creating a simple demand program and setting up the meter display to configuring the meter's I/O and alerts. With MeterMate reading and programming software, a user can read, program and perform real-time instrumentation and power quality monitoring on a meter, via a variety of different communication methods such as local OPTOCOM, remote telephone, RS-232/485 and IP communications.

The MeterMate software also supports many functions such as:

- Analysis of load profile data
- Firmware upgrades
- Exporting of meter data to the MV-90 HHF format
- Configuration for automatic remote meter reading
- Direct table reads
- Conversion of meter configuration to an XML file format for AMI over-the-air configuration
- Comparison of a configuration from the database to a configured meter
- Opening and closing the meter service switch
- Importing and exporting of load profile data, event log data, configurations and security codes

FEATURES & BENEFITS

- One software suite to configure and read from the Aclara portfolio of meters: kV family, I-210 family and SGM3xxx family
- Supports the ANSI C12.19 communication protocol
- Multiple methods to communicate with meters: USB & RS232 OPTOCOM, RS485, Modem
- Modular configuration workflow that enable the reuse of frequently used configuration settings and measurements
- Various reports to display information for meter management, auditing, billing and monitoring power quality
- Command line interface and batch-control enabling automated and scheduled meter operations
- Configurable role-based access control security

Residential Meter Selector

<table>
<tr><th></th><th>Product Characteristics</th><th>I-210+ Basic Energy</th><th>I-120+c</th></tr>
<tr><td>1</td><td>Meter Functionality</td><td>• Real Energy Consumption Management</td><td>• Real Energy Consumption Management
• Reactive Energy Consumption Measurement
• Apparent Energy Consumption Measurement
• Voltage Measurement (Min, Avg, Max)
• Sag/Swell Measurement
• Outage Count and Duration</td></tr>
<tr><td>2</td><td>ANSI Models</td><td><table><tr><th>FORM</th><th>CLASS</th><th>VOLTS</th></tr><tr><td>1S</td><td>100</td><td>120 & 240</td></tr><tr><td>2S</td><td>200 & 320</td><td>240</td></tr><tr><td>3S & 3CS</td><td>20</td><td>120 & 240</td></tr><tr><td>4S</td><td>20</td><td>240</td></tr><tr><td>12S</td><td>200 & 320</td><td>120 & 240</td></tr><tr><td>25S</td><td>200 & 320</td><td>120 & 240</td></tr></table></td><td><table><tr><th>FORM</th><th>CLASS</th><th>VOLTS</th></tr><tr><td>1S</td><td>100</td><td>120 & 240</td></tr><tr><td>2S</td><td>200 & 320</td><td>240</td></tr><tr><td>3S & 3CS</td><td>20</td><td>120 & 240</td></tr><tr><td>4S</td><td>20</td><td>240</td></tr><tr><td>12S</td><td>200 & 320</td><td>120 & 240</td></tr><tr><td>25S</td><td>200 & 320</td><td>120 & 240</td></tr></table></td></tr>
<tr><td>3</td><td>Soft-Switches to upgrade meter function</td><td>• Optional Softswitches can be loaded in the factory or by the user to activate advanced functions
O — Activates communication capability with AMR/AMI modules
S2 — AMI/AMR calculated demand displayed on meter LCD
V2 — Simple Voltage Event monitor in addition to a display of RMS momentary voltage on the 3 lower LCD digits</td><td>• Optional Soft-switches can be loaded in the factory or by the user to activate advanced functions
A2 — Activates communication capability with AMR/AMI modules
E2 — Activates Event Log Recording (up to 200 Events)
K2 — Activates Reactive/Apparent Energy Consumption recording
N2 — Activates Demand
Q2 — Activates Instrument Recording
R2 — Activates LP recording (up to 4 channels)
T2 — Activates TOU recording
V2 — Activates Sag/Swell monitor and recording</td></tr>
<tr><td>4</td><td>AMR Interface

(Factory enabled or installed by customer)</td><td>• Quadrature Pulse
• SPI Format-1 data
• SPI Format-2 data
• PSEM Communications</td><td>• PSEM Communications</td></tr>
<tr><td>5</td><td>Energy Accumulation</td><td>• Must specify at time of order either:
- Delivered only
- Delivered + Received
- Delivered – Received
- Received only
• Customer can change selection later using MeterMate</td><td>• Specified at time of order for factory programmed meters or configured by the customer using MeterMate. Any two or four of the following energy measurements can be selected:
- Delivered only kWh
- Received only kWh
- Delivered + received kWh
- Delivered – received kWh
- Lagging only kvarh; requires K2 Soft-switch
- Leading only kvarh; requires K2 Soft-switch
- Lagging + Leading kvarh; requires K2 Soft-switch
- Lagging - Leading kvarh; requires K2 Soft-switch
- Phasor apparent VAh; requires K2 Soft-switch</td></tr>
<tr><td>6</td><td>Cycle Insensitive Demand</td><td>• Not available</td><td>Requires T2 & N2 Soft-switches to be enabled
• Provides an alternative method for calculating the maximum demand in meters equipped with one-way AMR system.
• The meter maintains the daily maximum demands and the two peaks for the period
• Demand is calculated using the programmed method (Block, rolling or thermal)
• The daily maximum demands are stored in a circular queue.
• Each entry in the circular queue contains a date</td></tr>
<tr><td>7</td><td>Power Quality</td><td>• With V2 Softswitch enabled, provides a count of Sag/Swell Events. Value and duration thresholds are programmable</td><td>• With Q2 and R2 Softswitches enabled, Min, Max and Average Voltage recording is possible.
• With V2 Softswitch enabled, provides counts and magnitude recording of Sag/Swell Events with date and time stamped. Value and duration thresholds are programmable. This Sag/Swell Event Log is separate from the Event Log recording provided by the E2 Softswitch
• With E2, R2 and T2 Softswitches enabled, recording of sustained and total outage counts and duration is possible to permit calculation of IEEE Reliability indices.</td></tr>
<tr><td>8</td><td>Back-up power</td><td>• Not available</td><td>Back-up power is used to maintain the meter clock during outages. If the R2 or T2 softswitch is required, one of the following back-up power options must be selected.
• Battery
• Supercap
• Batteryless operation. For batteryless operation, the AMI system must be able to re- synchronize the meter clock after a power outage</td></tr>
<tr><td>9</td><td>Service Switch

(provide remote controllable disconnection and reconnection of electrical service for residential applications)</td><td>• A switching device intended to provide remote controllable disconnection and reconnection of electrical service for residential applications.
• Factory installed option, specify at time of order.
• Full functionality requires two-way AMI module
• Switch is installed under standard size cover
• Typical applications include:
- Remote disconnect and reconnect of service
- Energy conservation demand limiting
- Demand limiting as an alternative to service disconnection
- Prepayment metering
- Outage management/restoration
Note: Energy conservation demand limiting and prepayment metering functionalities are not available on forms 12S and 25S.</td><td>• A switching device intended to provide remote controllable disconnection and reconnection of electrical service for residential applications.
• Factory installed option, specify at time of order.
• Full functionality requires two-way AMI module
• Switch is installed under standard size cover
• Typical applications include:
- Remote disconnect and reconnect of service
- Energy conservation demand limiting
- Demand limiting as an alternative to service disconnection
- Prepayment metering
- Outage management/restoration</td></tr>
</table>

Technical Specifications

I-210+ c

Basic Functions

Single Phase Demand Meter
- Energy management, 4 quantities
- Demand, block or rolling demand
- Fundamental plus harmonic measurements
- Bi-directional energy measurements

Load Profile recording
Time of Use Billing Measures
Four Energy options (Delivered, Received, Delivered+Received, Delivered -Received)
Tamper detect capability
Broad communication module options
Network applications
Models available for 120 or 240 volt CL 20, CL 100, 200, CL 320 applications
50 or 60 Hz operation

Optional Functions

Factory integrated Service Switch Capability

Soft-Switch Functions

- The Alternate Communication Soft-switch allows a communication option option board to communication with the meter

E, Soft-switch

- The Event Log Soft-switch allows the meter to track the most recent 200 events. Use MeterMate™ Program Manager, Diagnostics Editor, to select the event types to be logged and how many occurences should be tracked, up to a maximum of 200 events. Date and time stamps are included on logged events for Demand/LP or TOU meters

K_2 Soft-switch

The kVA and kvar Soft-switch adds kVA(h) and kva(h) measurement capability.

N_2 Soft-switch

- The Demand (N_2) Soft-switch adds billing demand calculations

Q_2 Soft-switch

The Instrumentation Measurements Soft-switch enables
- Voltage (L-N): VA (max, min store) for summations, demand, and load profile recording
- RMS voltage measurement for reading and display
- Low potential caution
- Temperature (max, min,avg) load profile recording

T_2 Soft-switch

The time-of-use soft-switch enables TYOU operation
- Up to four TOU periods and four Seasons
- Up to three daily rate schedule types and one holiday schedule
- Up to 80 TOU schedule set points
- Up to 50 programmable dates
- Holidays, season changes, Daylight Savings Time (DST), self-read, and demand reset
- Perpetual calendar handles most dates
- Up to two billing and two demand measures per TOU period
- Self-read actions on specified dates, with o4r without a demand reset

V2 Soft-switch

- The voltage Soft-switch activates Sag/Swell monitor and recording

Accuracy

Typical Accuracy: Within +/- 0.2%
Starting Watts: 12W @ 240V, 6W @ 120V
Typical Watt Loss: 0.7 Watts

Rating

Voltage: 120V -240V
Current: Class 100, Class 200, Class 320, Class 20
Frequency: 50 or 60 Hz

Cover Options

Polycarbonate over with molded sunshield
- Plain cover without RESET or "D" ring
- With Optocom "D" ring
- With RESET latch and "D" ring

Operation Range

Voltage: +/- 20%
Operates over a broad temperaure range (-40C through +85C under the cover)

Available Models

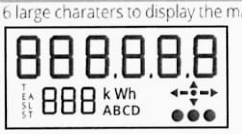
ANSI Form 1S, 2S, 3S, 4S, 12S, 25S
CL20, CL100, CL200, CL320

Applicable Standards

Performance meets or exceeds industry standards
ANSI C12.19
ANSI C12.1
ANSI C12.10
ANSI C12.20
ANSI C37.90.1
UL 2735

LCD Display

6 large charaters to display the main programmed metering quantities



Weights and Dimensions

Approximate Weight

Meters with service disconnect
- Individual meter 2.0 - 2.4 lbs
- 4 meter pack 9.0 - 10.6 lbs
- Pallet (120 meters) 285 - 340 lbs

Meters without service disconnect
- Individual meter 1.3 - 1.7 lbs
- 4 meter pack 6.2 - 7.8 lbs
- Pallet (120 meters) 200 - 255 lbs

I-210+

Basic Functions

Basic function as electronic single phase Revenue Meter
Four energy options (delivered, received, delivered+received, delivered -received)
Tamper detect capability
Broad communication module options
Network applications
Models available for 120 or 240 volt CL 20, CL 100, 200, CL 320 applications.
50 or 60 Hz operation

Optional Functions

Factory integrated Service Switch Capability

Soft-Switch Functions

AMR/AMI Communications (AMR/AMI Interface formats include quadrature pulse, PSEM, SPI Format-1 data, SPI Format-2 Data)
Display AMR calculated Demand value shown on the lower 3 LCD digits
Simple Voltage Event monitoring in addition to RMS momentary voltage display

Rating

Voltage: 120V - 240V
Current: Class 100, Class 200, Class 320, Class 20
Frequency: 50 or 60 Hz

Cover Options

Polycarbonate cover with molded sunshield
- Plain cover without RESET or "D" ring
- With Optocom "D" ring

Operating Range

Voltage +/- 20%
Operates over a broad temperature range (-40C through +85C under the cover)

Available Models

ANSI Form 1S, 2S, 3S, 4S, 12S, 25S
CL20, CL100, CL200, CL320

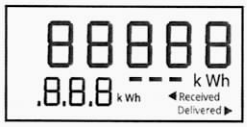
Applicable Standards

Performance meets or exceeds industry standards ANSI C12.1
ANSI C12.10
ANSI C12.20
ANSI C37.90.1

Technical Specifications

I-210+ (cont'd)

Soft-Switch Functions
5 large characters to display the billing quantities



Weights and Dimensions
Dimensions 6.94 in. Max

Approximate Weight	
Meters with service disconnect	
- Individual meter	2.0 - 2.4 lbs
- 4 meter pack	9.0 - 10.6 lbs
- Pallet (120 meters)	285 -340 lbs
Meters without service disconnect	
- Individual meter	1.3 - 1.7 lbs
- 4 meter pack	6.2 - 7.8 lbs
- Pallet (120 meters)	200 -255 lbs

Aclara is a world-class supplier of smart infrastructure solutions (SIS) to more than 800 water, gas, and electric utilities globally. Aclara SIS offerings include smart meters and other field devices, advanced metering infrastructure and software and services that enable utilities to predict and respond to conditions, leverage their distribution networks effectively and engage with their customers. Aclara is owned by an affiliate of Sun Capital Partners.

Visit us at Aclara.com, phone 800 297 2728 or contact us at info@aclara.com and follow us on Twitter @AclaraSolutions.

Summary: Exhibit AEP Opt-Out Meter (Aclara I-210+C) electronically filed by Mr. Aaron Young on behalf of YOUNG, THAAH AND AARON

Young Ex M

iP500-302

Laptop **RS232** Universal Optical Probe

Features:

- Designed for Desktop and Laptop computers
- Compatible with virtually all utility meters, registers and recorders
- Supports **ANSI C12.18-1996, GE OPTOCOM**
- Serial RS232 & EIA232D communication
- Powered by computer's PS/2 mouse port, battery pack, AC adapter or optional USB port
- Designed with rugged Aluminum housing (head)
- Power switch in head to control power
- Rugged and long lasting Polyurethane coiled cord (64" long, Ext. to 25 feet)
- Lightweight for reduced fatigue, wear and tear
- Powerful magnets in probe head for attaching to meter's optical port

Overview

The iP**500-302** Laptop Optical Probes are designed for reading and programming electrical power meters employing the **ANSI Type 2** optical port. These probes are specifically configured for use with desktop and laptop computers employing the Serial Communication Ports with DB9 and DB25 connectors and derive power from their PS/2 mouse or keyboard ports. Its optical circuitry supports **ANSI C12.18-1996** and **General Electric OPTOCOM** communications protocols by switching automatically from one to the other depending on the meter type being read. The power to this probe is controlled by the **"power switch"** mounted in the probe head. When probe not in use, the switch turns off and power is conserved, extending the laptop's battery charge.

The iP**500-302** Optical Probes use advanced optical sensors to collect meter data and transmit it to the laptop computers. This allows metering data to be recorded more simply, accurately and efficiently. In addition, the iP**500-302** probes incorporate a universal compatibility design to read virtually all utility meters, registers and recorders.

The iP**500-302** Optical Probes solve problems relating to mechanical wear-out due to the demanding environment under which probes are constantly subjected to. We address this problem using the most rugged mechanical and electrical design in the industry. These probes are designed with an almost indestructible aluminum head that contains powerful magnets that ensure a good retention when attached to the meter's optical port. They are also designed with a high-endurance polyurethane molded cable 64" long that withstands the outside rugged environment. This claim is backed with an aggressive warranty and service policy.

WWW.INTELLIPROBE.NET

intelliprobe

2041 Industrial Drive | McAllen, Texas 78504 | Phone: 956-630-1833 | Fax: 956-630-2241

Technical Specifications

Mechanical Specifications

Physical size	Height 2.44"; Length 1.68"; Width 1.38"
Cable Type	Coiled, Polyurethane and Hytrel construction, Flexible and Rugged
Cable Length	18" Coiled, extends to 10 Feet
Connector	DB9 9-pin w/housing and DTR switch 6-pin mini-DIN (PS/2 mouse/keyboard)
Weight	Complete assembly weighs a maximum of 9 ounces
Finish	Probe head has either a Clear Anodized Outer Coating per MIL-A-68625, Type 2 or a Hard Black Anodized Outer Coating per MIL-A-8625, Type 3

Electrical Specifications

Signal Spec.	Serial RS232, EIA232D, V28, V32
Power Req.	Operating Supply Voltage: 4.5 to 6.0 VDC (from computer's PS/2 port)
Data Rate	Controlled by meter for OPTOCOM interface, 0 to 19,200 baud for Non-OPTOCOM meters
Optical	880 nm bi-directional IR interface, ANSI C12.18, GE OPTOCOM

Environmental Specifications

Temperature	Operating -30° to 60° C; Storage -40° to +85° C
Ruggedness	Meets the requirements of a numbers of tests including those for Thermal Shock, Humidity, Water Resistance, RF Susceptibility, ESD, Drop, Random Vibration, Solar Radiation, Salt, Fog and Low Pressure.

Handheld Interface

Serial RS232 (DB9)

Some Compatible Meters

ABB	2550, 2650, All Alpha, Alpha T, A3, Alt, Alr-al, 2430
Aptech/Robinton	LPR1, LPR2, LPR3, SR500, TR403, TR804
General Electric	DR87, KM901, M90-AE, Phase 3, T80, T91, TM80, TM81, TMR82, TM92, KC901, KTC-901, KV, KV2, KV2-C, others
Siemens (Landis&Gyr)	CTR101, CTR102, DC, DCR, DD, DG100, DT, DX, DXR, SD100, SM101, SM301, TMC101, LINC, DCRMA, DDMA, S4 family, AX series, RX series, MAXSYS 2410, MAXSYS 2510, Quad 4, others
Metricom	C
PSI	S100, S200, Quad 4
Pwr Measurement	ION 7000 series, 8000 series
Itron (Schlumberger)	Datastar, Fulcrum, MT100, MT200, Quantum, Q1000, Sentinel, Centron, Vectron
Synergistics	B40
Transdata	EMA, Mark V

WWW.INTELLIPROBE.NET

intelliprobe

2041 Industrial Drive | McAllen, Texas 78504 | Phone: 956-630-1833 | Fax: 956-630-2241

Summary: Exhibit Exhibit: Opt-Out Meter 2 Way Communication electronically filed by Mr. Aaron Young on behalf of YOUNG, THAAH AND AARON

Times Sheet Hours 18-1832-EL-CSS Young Vs AEP

18-1832-EL-CSS Young Vs AEP (Thaah Young) Hours 98.45

18-1832-EL-CSS Young Vs AEP (Aaron Young) Hours 176.25

Total 274.70

Average $41.00 Hour = $11262.70

Complainant's N

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
11/28/18	*12:00 PM*	*1:00 PM*			***1.00***
11/29/18	*10:32 AM*	*10:48 AM*			***0.30***
11/29/18	*11:00 AM*	*5:08 PM*			***6.15***
11/30/18	*11:02 AM*	*1:46 PM*	*6:30 PM*	*5:56 PM*	***2.20***
11/26/18	*1:30 PM*	*3:36 PM*			***2.10***
11/26/18	*6:38 PM*	*7:30 PM*			***0.90***
11/27/18	*11:45 AM*	*1:14 PM*			***1.50***
				Total	***14.15***

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
12/03/18	10:34 AM	11:06 AM	11:30 AM	11:50 AM	0.90
12/04/18	9:15 AM	1:09 PM	3:50 PM	4:15 PM	4.35
12/05/18	8:18 AM	10:18 AM			2.00
12/05/18	10:21 AM	10:38 AM			0.30
12/05/18	2:35 PM	7:40 PM			5.10
12/06/18	11:15 AM	1:45 PM			2.50
12/06/18	5:05 PM	8:15 PM			3.20
12/07/18	1:08 PM	7:35 PM			6.45
12/08/18	12:15 PM	3:32 PM			3.30
12/10/18	3:58 PM	8:14 PM			4.30
12/11/18	3:33 PM	4:18 PM			0.75
12/12/18	9:03 AM	11:45 AM	2:51 PM	3:26 PM	3.30
12/13/18	11:35 AM	1:26 PM			1.85
12/17/18	2:38 PM	3:33 PM			0.95
12/14/18	10:00 AM	10:26 AM			0.45
				Total	39.70

TIME RECORD

Description 18-1832-EL-CSS Young Vs AEP (Thaah Young) **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
01/03/19	8:30 AM	10:28 AM			2.00
01/18/19	2:48 PM	3:22 PM			0.60
01/23/19	4:58 PM	5:10 PM			0.20
				Total	2.80

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
02/06/19	1:16 PM	4:23 PM			3.15
02/11/19	8:30 PM	8:45 PM			0.25
02/12/19	11:00 PM	11:35 PM			0.60
02/13/19	12:36 PM	5:00 PM			4.40
02/14/19	10:10 AM	10:47 AM			0.65
02/18/19	10:28 AM	10:42 AM			0.25
02/19/19	1:32 AM	3:00 AM			1.50
02/19/19	11:26 AM	1:15 PM			1.85
02/18/19	11:53 AM	12:58 PM			1.10
02/20/19	10:55 AM	12:22 PM			1.45
02/20/19	12:45 PM	1:03 PM			0.30
02/25/19	12:36 PM	1:10 PM			0.60
02/25/19	1:57 PM	3:47 PM			1.85
02/26/19	8:00 AM	2:20 PM			6.35
02/28/19	10:15 AM	11:16 AM			1.05
				Total	25.35

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
03/01/19	*8:42 AM*	*9:18 AM*			***0.60***
03/05/19	*10:20 AM*	*10:25 AM*			***0.10***
03/12/19	*12:45 PM*	*1:01 PM*			***0.30***
03/15/19	*3:29 PM*	*5:12 PM*			***1.75***
03/18/19	*11:36 AM*	*12:10 PM*			***0.60***
03/19/19	*9:29 AM*	*10:46 AM*			***1.30***
03/20/19	*4:20 PM*	*6:30 PM*			***2.20***
				Total	***6.85***

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
04/03/19	1:08 PM	1:15 PM			0.15
04/10/19	1:00 PM	2:09 PM			1.15
04/17/19	12:30 PM	1:10 PM			0.70
				Total	2.00

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
08/27/19	*1:20 PM*	*1:45 PM*			***0.45***
08/29/19	*1:43 PM*	*2:34 PM*			***0.85***
08/29/19	*2:10 AM*	*3:10 AM*			***1.00***
08/30/19	*9:10 AM*	*11:26 AM*			***2.30***
				Total	***4.60***

TIME RECORD

Description *18-1832-EL-CSS Young Vs AEP (Thaah Young)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
09/05/19	*12:47 PM*	*2:14 PM*			***1.45***
09/09/19	*8:14 AM*	*9:22 AM*			***1.15***
09/09/19	*9:32 AM*	*9:56 AM*			***0.40***
				Total	*3.00*

TIME RECORD

Description *18-1832-EL-CSS Young v. AEP Ohio (Aaron)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
08/20/18	9:30 AM	1:55 PM			4.45
09/05/18	1:35 PM	2:00 PM			0.45
09/25/18	10:00 AM	12:00 PM			2.00
10/10/18	1:40 PM	3:00 PM			1.35
11/27/18	1:30 PM	3:40 PM	6:40 PM	6:45 PM	2.25
11/28/18	8:00 AM	11:45 AM	1:10 PM	1:20 PM	3.95
11/29/18	10:00 AM	1:35 PM	5:30 PM	6:45 PM	4.85
11/30/18	11:10 AM	1:10 PM			2.00
12/01/18	11:30 AM	2:00 PM			2.50
12/02/18	10:15 AM	11:20 AM			1.10
12/03/18	10:05 AM	5:10 PM			7.10
12/05/18	9:30 AM	11:00 AM	4:40 PM	10:00 PM	6.85
12/06/18	1:50 PM	11:55 PM			10.10
12/07/18	12:05 AM	3:05 AM			3.00
12/08/18	1:05 PM	5:45 PM			4.70
12/09/18	10:10 AM	5:15 PM			7.10
12/10/18	9:35 AM	5:05 PM			7.50
12/11/18	9:55 AM	12:45 PM			2.85
02/18/19	12:20 PM	1:30 PM			1.20
02/19/19	5:15 PM	6:50 PM			1.60
02/21/19	12:20 PM	3:15 PM			2.95
02/24/19	12:30 PM	9:45 PM			9.25
02/25/19	1:20 PM	1:40 PM			0.35
02/26/19	8:00 AM	2:20 PM			6.35
02/28/19	5:20 PM	7:05 PM			1.75
03/28/19	9:15 AM	9:45 AM			0.50
04/01/19	9:55 AM	10:35 AM			0.70
04/09/19	1:10 PM	2:40 PM			1.50
04/10/19	11:40 AM	3:05 PM			3.45
04/17/19	9:50 AM	11:45 AM	1:10 PM	1:55 PM	2.70
05/01/19	4:25 PM	4:30 PM			0.10
05/02/19	10:20 AM	11:30 AM			1.20
05/11/19	2:25 PM	3:30 PM			1.10
05/12/19	12:20 PM	12:40 PM			0.35
05/14/19	11:05 AM	2:00 PM			2.95
05/15/19	9:05 AM	9:50 AM			0.75
05/16/19	9:00 AM	1:15 PM			4.25
06/11/19	9:45 AM	12:10 PM			2.45
06/12/19	12:00 PM	3:35 PM			3.60
				Total	123.15

TIME RECORD

Description *18-1832-EL-CSS Young v. AEP Ohio (Aaron)* **Total Hrs**

Date	Time In	Time Out	Time In	Time Out	Worked Hours
06/13/19	10:20 AM	3:15 PM			4.95
06/18/19	2:30 PM	5:00 PM			2.50
06/19/19	12:50 PM	4:00 PM			3.20
06/20/19	3:55 PM	5:40 PM			1.75
06/21/19	11:15 AM	1:05 PM	1:50 PM	2:15 PM	2.25
06/21/19	2:30 PM	2:40 PM			0.20
06/24/19	10:50 AM	2:20 PM			3.50
06/25/19	3:35 PM	4:10 PM			0.60
07/02/19	3:05 PM	5:25 PM			2.35
07/04/19	11:30 AM	11:45 AM			0.25
07/08/19	8:00 AM	8:10 AM	9:10 AM	9:15 AM	0.25
07/15/19	9:05 AM	9:45 AM			0.70
08/01/19	7:45 AM	8:00 AM			0.25
08/11/19	2:35 PM	4:50 PM			2.25
08/12/19	8:20 AM	8:35 AM			0.25
08/21/19	10:20 AM	1:35 PM			3.25
08/25/19	1:35 PM	1:45 PM			0.20
08/26/19	9:30 AM	10:40 AM			1.20
08/30/19	9:10 AM	10:55 AM			1.75
08/31/19	1:30 PM	3:00 PM			1.50
09/01/19	1:25 PM	5:30 PM	6:10 PM	10:20 PM	8.25
09/05/19	1:10 PM	1:30 PM			0.35
09/06/19	9:55 AM	4:10 PM			6.25
09/10/19	10:15 AM	3:20 PM			5.10
				Total	53.10

Mileage

12-12-2018 Post office overnight 4 miles

2-26-2019 Settlement conference at PUCO 33 miles around

3-20-2019 Attended etna township meeting 14 miles around trip

9-11-2019 Hearing at PUCO 33 miles around

Total 84 miles x $ 0.58 = $48.72

Expenses

12-12-2018 Overnight Mail $24.70

02-26-2019 Parking $4.00

Total: $28.70

IRS issues standard mileage rates for 2019

English

What's Hot
News Releases
Multimedia Center
Tax Relief in Disaster Situations
Tax Reform
Radio PSAs
Tax Scams/Consumer Alerts
The Tax Gap
Fact Sheets
IRS Tax Tips
e-News Subscriptions
IRS Guidance
Media Contacts
IRS Statements and Announcements

IR-2018-251, December 14, 2018

WASHINGTON — The Internal Revenue Service today issued the 2019 optional standard mileage rates used to calculate the deductible costs of operating an automobile for business, charitable, medical or moving purposes.

Beginning on Jan. 1, 2019, the standard mileage rates for the use of a car (also vans, pickups or panel trucks) will be:

- 58 cents per mile driven for business use, up 3.5 cents from the rate for 2018;
- 20 cents per mile driven for medical or moving purposes, up 2 cents from the rate for 2018; and
- 14 cents per mile driven in service of charitable organizations.

The business mileage rate increased 3.5 cents for business travel driven and 2 cents for medical and certain moving expense from the rates for 2018. The charitable rate is set by statute and remains unchanged.

It is important to note that under the Tax Cuts and Jobs Act, taxpayers cannot claim a miscellaneous itemized deduction for unreimbursed employee travel expenses. Taxpayers also cannot claim a deduction for moving expenses, except members of the Armed Forces on active duty moving under orders to a permanent change of station. For more details see Notice 2019-02.

The standard mileage rate for business use is based on an annual study of the fixed and variable costs of operating an automobile. The rate for medical and moving purposes is based on the variable costs.

Taxpayers always have the option of calculating the actual costs of using their vehicle rather than using the standard mileage rates.

A taxpayer may not use the business standard mileage rate for a vehicle after using any depreciation method under the Modified Accelerated Cost Recovery System (MACRS) or after claiming a Section 179 deduction for that vehicle. In addition, the business standard mileage rate cannot be used for more than four vehicles used simultaneously. These and other limitations are described in section 4.05 of Rev. Proc. 2010-51.

Notice 2019-02, posted today on IRS.gov, contains the standard mileage rates, the amount a taxpayer must use in calculating reductions to basis for depreciation taken under the business standard mileage rate, and the maximum standard automobile cost that a taxpayer may use in computing the allowance under a fixed and variable rate plan.

EE249005180US

[redacted]

Description	Sale Qty	Final Price
Certified Mail	1	$3.50
(Article Delivered)		
Label Bin	1	$0.00
(Mail Fee:$3.50)		
First Class	1	$3.50
Package		
Service:		
Retail		
2 Days		
(Domestic)		
(WASHINGTON DC 20001)		
(Weight:0 lb 1.10 oz)		
(Estimated Delivery Date)		
(Fri May 12 14:2018)		
(USPS Tracking #)		
(9505 5145 5592 8340 3742 01)		
PM Exp 1 Day	1	$24.75
(Domestic)		
(COLUMBUS OH 43215)		
(Weight:1 lb 3.80 oz)		
(Signature Requested)		
(Scheduled Delivery Date)		
(Tue Dec 12:15 2017 15:00 PM)		
(Money Back Guarantee)		
(USPS Tracking #)		
(EE249005180US)		
PM Exp	1	$0.00
Insurance		
(Up to $100.00 included)		
PM 2 Day	1	$13.65
Medium Box		
(Domestic)		
(SPRINGFIELD VA 22150)		
(Flat Rate)		
(Expected Delivery Date)		
(Saturday 12/15/2018)		
(USPS Tracking #)		
(9505 5145 5592 8340 3742 15)		
Insurance	1	$0.00
(Up to $50.00 included)		
PM 2-Day	1	$9.85
Regional Box A		
(Domestic)		
(SPRINGFIELD, VA 22150)		
(Weight 0 lb 8.20 oz)		
(Expected Delivery Date)		
(Saturday 12/15/2018)		
(USPS Tracking #)		
(9505 5145 5592 8340 3742 01)		
Insurance	1	$0.00
(Up to $50.00 included)		
PM 1-Day	1	$7.20
Sm Flat Rate		
Box		
(Domestic)		
(WASHINGTON DC 20001)		
(Flat Rate)		
(Expected Delivery Date)		
(Thursday 12/13/2018)		
(USPS Tracking #)		
(9505 5145 5592 8340 3742 01)		
Insurance	1	$0.00
(Up to $50.00 included)		
PM 2-Day	1	$6.70
(Domestic)		

CUSTOMER USE ONLY

PAYMENT BY ACCOUNT (if applicable)

DELIVERY OPTIONS (Customer Use Only)

TO: (PLEASE PRINT)

PHONE ( )

* Pick-up available.

* $500.00 insurance included.

UNITED STATES POSTAL SERVICE

PRIORITY * MAIL *

EE 249005180 US

1 LABEL 11.8 OCTOBER 2016

2 CUSTOMER COPY

AEP OHIO
An AEP Company
4500 S Hamilton Rd
Groveport, OH 43125-9563

THAAH YOUNG
PO BOX 371
REYNOLDSBURG, OH 43068-0371

Service Address:
9167 Taylor Rd SW
Reynoldsburg, OH 43068-9675

March 28, 2019

Account Number: 074-598-873-0-8

Dear Thaah Young:

On March 26, 2019, you requested that AEP test the electric meter located at 9167 Taylor Rd SW, Reynoldsburg, OH.

Our representative was at the premise on March 28, 2019 and completed the meter test which showed the following accuracy:

Full Load	99.24%
Average Load	99.19%
Light Load	99.98%

The above accuracy levels fall within the guidelines set by the state regulatory commission. Therefore, no billing adjustments are needed at this time.

Should you have any questions concerning this matter, please contact AEP at 1-800-672-2231.

Sincerely,

Diana Petrie
Customer Services
740-349-4057

AEP OHIO IS AVAILABLE 24 HOURS A DAY 7 DAYS A WEEK

MCSCMT02

Complainant's O

EE 249005180 US

UNITED STATES POSTAL SERVICE

PRIORITY MAIL

CUSTOMER USE ONLY

PAYMENT BY ACCOUNT

DELIVERY OPTIONS (CUSTOMER USE ONLY)

EE249005180US

IRS issues standard mileage rates for 2019

IR-2018-251, December 14, 2018

WASHINGTON — The Internal Revenue Service today issued the 2019 optional standard mileage rates used to calculate the deductible costs of operating an automobile for business, charitable, medical or moving purposes.

Beginning on Jan. 1, 2019, the standard mileage rates for the use of a car (also vans, pickups or panel trucks) will be:

- 58 cents per mile driven for business use, up 3.5 cents from the rate for 2018;
- 20 cents per mile driven for medical or moving purposes, up 2 cents from the rate for 2018; and
- 14 cents per mile driven in service of charitable organizations.

The business mileage rate increased 3.5 cents for business travel driven and 2 cents for medical and certain moving expense from the rates for 2018. The charitable rate is set by statute and remains unchanged.

It is important to note that under the Tax Cuts and Jobs Act, taxpayers cannot claim a miscellaneous itemized deduction for unreimbursed employee travel expenses. Taxpayers also cannot claim a deduction for moving expenses, except members of the Armed Forces on active duty moving under orders to a permanent change of station. For more details see Notice 2019-02.

The standard mileage rate for business use is based on an annual study of the fixed and variable costs of operating an automobile. The rate for medical and moving purposes is based on the variable costs.

Taxpayers always have the option of calculating the actual costs of using their vehicle rather than using the standard mileage rates.

A taxpayer may not use the business standard mileage rate for a vehicle after using any depreciation method under the Modified Accelerated Cost Recovery System (MACRS) or after claiming a Section 179 deduction for that vehicle. In addition, the business standard mileage rate cannot be used for more than four vehicles used simultaneously. These and other limitations are described in section 4.05 of Rev. Proc. 2010-51.

Notice 2019-02, posted today on IRS.gov, contains the standard mileage rates, the amount a taxpayer must use in calculating reductions to basis for depreciation taken under the business standard mileage rate, and the maximum standard automobile cost that a taxpayer may use in computing the allowance under a fixed and variable rate plan.

CASH

Rec'd 2/20/19
AP

Summary: Exhibit Expenses and Losses of Thaah and Aaron for 18-1832-EL-CSS electronically filed by Mr. Aaron Young on behalf of YOUNG, THAAH AND AARON