

AEP Ohio CRES Provider Workshop

October 27, 2015

Welcome

Michele Chavalía

AEP Ohio Choice Operations Manager

Agenda

- AEPCH Operations & Projects – Systems Update
- Early Termination Fees on Consolidated Bills
- Write-Offs
- Service Delivery Identifier Number
- Bill Format Changes
- Purchase of Receivables (Status in PUCO)
- Letters of Authorization (LOA) (Status in PUCO)
- Net Metering Update
- GridSMART/AMI Update
- Questions & Answers

AEP Ohio Choice Operations Team

- Michele Chavalía – Manager
- Anita Adams – Market Specialist
- Stephanie Lepore – Market Specialist
- Kristine Watts – Market Specialist
- Tamara Byrd – Provider Support Associate
- Kevin Vass – Market Account Manager

Workshop Survey

- CRES Provider input
- Preference for Face-to-Face vs. Remote
- Additional comments
- Should receive later today

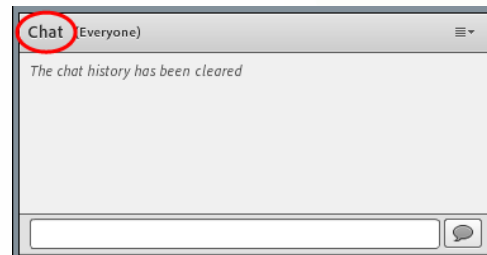
Housekeeping

- Please mute your phone.
- Please do not put your phone on hold during the meeting.

Housekeeping

If you have a question, please....

Use the **Chat** function



Or **Raise Your Hand**



With either, you need to exit Full Screen mode

System Updates

Ken Roberts

AEP Customer Systems Services Supervisor

System Updates

- FRED (Financial Responsibility End Date) – established at write-off time, AEP will only send 867's after that date, no cancel/rebill 810's and no 820 transactions
- Drop Response issue – resolution in test, fix to be in production soon

System Updates

- Cycle changes with pending switches – looking at different approaches
- ESP Account number – still analyzing issues

System Updates

- After FRED – 867 change to denote dual billing – tentatively scheduled for Dec. 11
- SAC04 Codes in 810 Transactions – codes will be in the EDI guide and change request is needed to add new codes through the OEWG. Blank SAC04's are not allowed and will be rejected – tentatively scheduled for Dec. 11

System Updates

- HU – Summary request on interval account – respond with summary usage – implemented 8/5
- Removed schedule type from cycle number in EDI – implemented 8/5
- 814C – respond with eff. Dates of rate code changes – being reviewed

Questions

Early Termination Fees on Consolidated Bills

Kristine Watts

CRES Market Specialist

Drop

- CRES receives drop with reason code and scheduled end date. Most frequent are:
 - Changed to Another Provider
 - Customer Moved or Account Closed

Early Termination Fee (ETF)

CRES submits ETF on 810 to display as separate line item charge

Current [REDACTED] Charges

Supplier Logo

Service Delivery Identifier Number : 000406210 [REDACTED] 09/03/15

Early Termination Fee @ 80	\$	80.00
Commodity Charge 189 KWH @ 0.077		14.55
Level Pay Settleup @ 47.28		47.28
Current Supplier Charges	\$	141.83*

*Residential
sample*

Total Amount Due **\$165.68**

*Charges make up the "Total Amount Due"

Due Date Sep 23

Price-to-Compare: For tariff 822, in order for you to save money off of your utility's supply

Current [REDACTED] Charges

Supplier Logo

Service Delivery Identifier Number : 001400607 [REDACTED] 10/09/15

Fixed Price Energy Charges 881 KWH At \$0.0689 \$ 60.70

Early Termination Fee 199.00

Current Supplier Charges \$ 259.70*

Total Amount Due \$329.30

*Charges make up the "Total Amount Due"

Due Date Nov 2

Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply

Residential sample

CRES #1

Current [REDACTED]
Service Delivery Identifier Number : 001400607 [REDACTED] 06/16/15

Early Termination Fee	\$ 11,056.39
Transmission Tariff Cost Adjustment	20.12
Generation And Transmission 30,640 KWH X \$0.07475	2,290.34
	13,366.85
Current Supplier Charges	\$ 13,366.85

CRES #2

Current [REDACTED] Charges [REDACTED]
Supplier Account Number - [REDACTED]
Service Delivery Identifier Number : 001400607 [REDACTED] 07/16/15

Fixed Rate (27200KWH X .0708000)	\$ 1,925.76
	1,925.76
Current Supplier Charges	\$ 1,925.76

Total Amount Due \$16,707.04

Do Not Pay This Bill. This Amount Will Be Deducted From Your Bank Account On August 7, 2015.



Meter	Service Period	Meter Reading Detail
[REDACTED]	[REDACTED]	[REDACTED]

Commercial sample

CRES Retention Effort

- CRES #1 offers to waive ETF if customer returns to CRES supply.
- Customer objects to switch to CRES #2.
- AEP Ohio sends Reinstatement to CRES #1.
- If too late to object, customer switches and CRES #1 submits new enrollment request for next available switch date.

If CRES Waives ETF...

- **Must send 810 reversal (ME17) before write-off date to remove from customer's AEP Ohio balance.**
- AEP Ohio pays CRES per payment posting hierarchy.

CRES #1

Current [REDACTED]

Service Delivery Identifier Number : 001400607 [REDACTED] 06/16/15

Early Termination Fee \$ 11,056.39

Transmission Tariff Cost Adjustment 20.12

Generation And Transmission 30,640 KWH X \$0.07475 2,290.34

Current Supplier Charges \$ 13,366.85

Current [REDACTED] **Charges** [REDACTED]

Supplier Account Number - [REDACTED]

Service Delivery Identifier Number : 001400607 [REDACTED] 07/16/15

Fixed Rate (27200KWH X .0708000) \$ 1,925.76

Current Supplier Charges \$ 1,925.76

Total Amount Due \$16,707.04

Do Not Pay This Bill. This Amount Will Be Deducted From Your Bank

Account On August 7, 2015.



Meter	Service Period	Meter Reading Detail
[REDACTED]	[REDACTED]	[REDACTED]

Commercial sample

Impact to Customer

- If checkless pay customer, total balance due is withdrawn from checking account on due date.
- If not checkless pay, customer short pays AEP Ohio by the amount of the ETF while waiting for reversal to appear.
- Customer receives disconnect notice after short-paying next two months of bills.

Impact to Credit History

- Deposit can be assessed as early as two late payments.
- Commercial accounts are assessed late fees.
- Credit history is not repaired.
- Customer may be disconnected.

Resolution

- Must submit 810 reversal before write-off date.
- 810s **after** write-off date will be rejected.
- If not resolved before write-off date and CRES has already been paid in full, CRES could send refund check to customer so customer can pay AEP Ohio.

Questions

CRES Provider Write-offs

Stephanie Lepore

CRES Market Specialist

What is a Write-Off?

- A Write-Off date is established for every account that leaves a supplier. This is the same as FRED; when AEP Ohio no longer shows liability to a CRES for a customer.
- A CRES Write-Off will be notated in two ways on a customer's account:
 - CRES Write-Off to the previous provider (unpaid supplier balance)
 - CRES No Write-Off (Zero unpaid supplier balance)
- FRED is established when a customer drop has been accepted.

Frequent Supplier Questions...

- **How are CRES charges and balances handled after receiving drop notice?**
- **How long will AEP Ohio attempt to collect CRES charges and forward payments?**
- **What happens if the customer pays AEP Ohio for CRES charges after Write-Off Date?**
- **What happens if customer sends payment directly to CRES before Write-Off Date?**

After the Drop Notice

- Once a drop is accepted, AEP Ohio will continue to handle supplier charges the same way for the remainder of the supply.
- When the customer officially drops from the supplier, the FRED count down will begin.
- Any 810 requests will reject after FRED.

Effective end date included in drop EDI transaction

The Write-Off date will depend on the customer's account status...

How long will AEP Ohio attempt to collect and forward payments?

ACTIVE CUSTOMERS: SWITCHING A CRES OR SSO

- AEP Ohio will attempt to collect and forward payments for previous supplier for two bill cycles (approximately 80 days).
- AEP Ohio will send EDI 248 Write-Off transaction on day 81 for any remaining unpaid supplier balance.

- AEP Ohio will attempt to collect and forward payments to supplier for 35 days after account end date.
- AEP Ohio will send EDI 248 Write-Off transaction on day 36 for any remaining unpaid supplier balance.

FINALLED ACCOUNTS

Note for Active: If AEP Ohio submits an adjustment prior to the scheduled Write-Off date, the Write-Off date will re-set and bump out to allow two additional full bill cycles.

Customer bill BEFORE Write-Off...

Write-Off date on invoices for those two billing cycles after drop.

AEP OHIO Messages

As of September 28, 2015, AEP will no longer remit payments to [REDACTED] for [REDACTED].

AEP OHIO Messages

As of November 22, 2015, AEP will no longer remit payments to [REDACTED] for [REDACTED].

As of December 25, 2015, AEP will no longer remit payments to [REDACTED] for [REDACTED].

Multiple switches can get complicated.

Customer bill AFTER Write-Off...

- When we reach FRED, the balance will be “written-off” our books to the provider to collect.
- AEP Ohio will NOT accept 810 transactions of any kind.

Previous Charges:	
Total Amount Due At Last Billing	\$ 14,919.87
Payment 09/22/15 - Thank You	-2,924.79
Payment 10/09/15 - Thank You	-8,439.72
Late Payment Charge	121.56
Transfer To Previous Provider To Collect	-3,676.92
Previous Balance Due	\$.00*

Note: If there is a change in usage after FRED, we will send corrected usage to the supplier. However, we will not bill for the supplier.

If customer pays AEP Ohio for CRES charges **AFTER** FRED.

- AEP Ohio no longer shows liability to CRES after the Write-Off is sent.
- Will NOT forward payment to CRES after FRED.
- Will apply customer payment to customer's account. If results in credit balance on a closed account, we will refund customer or transfer credit balance to new account.
- Customer will not lose the benefit of that payment.

If customer pays CRES directly **BEFORE** Write-Off . . .

- Supplier send refund check to customer, so customer can pay AEP Ohio.

- O R -

- Supplier send check to AEP's remittance address on customer's behalf.

- O R -

- Supplier send EDI miscellaneous credit adjustment to apply to customer's account.

Questions

AEP Ohio Service Delivery Identifier

Anita Adams

CRES Market Specialist

What is an SDI?

- Service Delivery Identifier (SDI) is a 17-digit number
- SDI is not an AEP Ohio Account Number
- SDI is located on the customer bill
- Found above AEP Ohio line item detail
- And above CRES line item charges

Sample of SDI on the Bill

Current AEP Ohio Charges:

Tariff 820 - Residential Service 05/05/15

→ Service Delivery Identifier: 000406210 [REDACTED]

Distribution Service

Customer Charge

Retail Stability Rider

Deferred Asset Phase-In Rider

Current Electric Charges Due

Current [REDACTED] Charges [REDACTED]

→ Service Delivery Identifier Number : 000406210 [REDACTED] 05/05/15

SDI Data Definition by Character

Character Position		Data Definitions
1 - 2	2 Characters	State Compliant Data
3 - 7	5 Characters	Rate Jurisdiction DOE Number
8 - 9	2 Characters	Company Code
10 - 17	8 Characters	Randomly Generated

AEP Ohio Two Territories

State Code	Rate Jurisdiction	Company Code	Random Number
Ohio 00	CSP 04062	10	00000000
Ohio 00	OP 14006	07	00000000

Columbus Southern Power 00040621000000000

Ohio Power 00140060700000000

SDI & DUNS # Combination

- SDI numbers must match DUNS per Rate Jurisdiction for EDI Transactions
- Ohio Power Company DUNS - 002899953
- Columbus Southern Power Company DUNS - 007901739

Transaction Combination

- **Ohio Power Company**
 - **DUNS Number 002899953**
 - **OP SDI 001400607000000000**
- **Columbus Southern Power Company**
 - **DUNS Number 007901739**
 - **CSP SDI 000406210000000000**

Note – EDI Transactions will Reject without the correct combination

Questions

Bill Format Changes

Tamara Byrd

Provider Support Associate

BILL FORMAT CHANGES

The Public Utilities Commission of Ohio proposed numerous bill format changes for the EDUs of Ohio. AEP Ohio has implemented a revised bill format designed to make it easier for customers to read their bills and understand the amount due. In addition, most choice customers will see their Supplier's logo in the Current Supplier Charges section of the bill. The new format started with all AEP Ohio customers on Friday, September 4, 2015 with read cycle 6.



Send Inquiries To:
 PO BOX 24401
 CANTON, OH 44701-4401
 R-10

Account Number
 CY 04
 6957

\$111.61	\$
Total Amount Due	Amount Enclosed
Due Date Jul 23	

The **Neighbor to Neighbor** program helps disadvantaged customers pay their electric bill. I want to help. My payment reflects my gift of \$_____

Make Check Payable and Send To:
 AMERICAN ELECTRIC POWER
 PO BOX 24417
 CANTON OH 44701-4417



000011161000011161010000000000

Please tear on dotted line

Return top portion with your payment

Service Address:
 [Redacted]

Rate Tariff: Residential Service-820			Page 1 of 2
Account Number	Total Amount Due	Due Date	
[Redacted]	\$111.61	Jul 23, 2015	
Meter Number	Cycle-Route	Bill Date	
[Redacted]	04-38	Jul 7, 2015	

For Billing, Outage or Service Inquiries,
 Call: 1-800-672-2231
 Pay By Phone: 1-800-611-0964

AEP OHIO Messages
 As a participant in the AEP Ohio Customer Choice Program, your electric energy is being supplied by Supplier Name. This bill reflects AEP Ohio charges for distribution of the electric energy and all electric energy supply charges AEP has received from your supplier as of the Billing Date shown on this bill. For questions about your electric energy supply charges, please contact Supplier Name at 1-999-999-9999. Please note that the failure to pay charges for competitive retail electric services (CRES) may result in loss of those products and services, the cancellation of your contract with the CRES provider, and your return to AEP Ohio's Standard Offer for generation services.

Supplier Message(s)
 End Supplier Message(s)
 Your Budget Anniversary month is March.

Visit us at www.AEPOhio.com
 Due date does Not Apply to the previous balance due
 See other side for important information



Previous Charges:
 Total Amount Due At Last Billing \$ 80.93
 Payment 06/25/15 - Thank You -80.93
 Previous Balance Due \$.00*
 Accumulated Budget Balance -38.92
 Total Previous Balance \$ -38.92

Current AEP Ohio Charges:
 Tariff 820 - Residential Service 07/06/15
 Service Delivery Identifier [Redacted]
 Transmission Service \$ 12.94
 Distribution Service 41.21
 Customer Charge 8.40
 Retail Stability Rider 5.06
 Deferred Asset Phase-IN Rider 1.96
 Current Electric Charges Due \$ 69.57
 Current Supplier Name Charges (999-999-9999): **Supplier Logo**

Supplier Account Number [Redacted]
 Service Delivery Identifier Number: [Redacted] 07/06/15
 Electric Energy Charge (953KWH @ \$0.0699) \$ 66.61
 Current Supplier Charges \$ **66.61***
AEP Ohio Current Budget Amount Due \$ **45.00***
 Total Account Balance \$ 97.26

Total Amount Due \$111.61
***Charges make up the "Total Amount Due"**
 Due Date Jul 23

Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply charges, a supplier must offer you a price lower than AEP Ohio's price of 6.3 cents per kWh for the same usage that appears on this bill. To review available competitive supplier offers, visit the Public Utilities Commission of Ohio's "Energy Choice Ohio" web site at www.energychoice.ohio.gov.

Meter Number	Service Period		Meter Reading Detail			
	From	To	Previous Code	Current Code	Current	Code
[Redacted]	06/04	07/06	55736	Actual	56689	Actual
Multiplier 1.0000			Metered Usage 953 KWH			

BILL FORMAT CHANGES

- **The following enhancements were made to the AEP Ohio bill:**
 - Price to Compare
 - Asterisks
 - “AEP Ohio” vs. Generation Charges
 - CRES Logos

PRICE TO COMPARE

Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply charges, a supplier must offer you a price lower than AEP Ohio's price of 6.3 cents per kWh for the same usage that appears on this bill. To review available competitive supplier offers, visit the Public Utilities Commission of Ohio's "Energy Choice Ohio" web site at www.energychoice.ohio.gov.

- Located in the lower portion of the bill
- PUCO website address

Asterisks have been added to the right of the charges included in the total amount due for Standard Service Offer (SSO) and Open Access Distribution (OAD) bills.

Previous Charges:	
Total Amount Due At Last Billing	\$ 80.93
Payment 06/25/15 - Thank You	-80.93
Previous Balance Due	\$.00*
Accumulated Budget Balance	-38.92
Total Previous Balance	\$ -38.92
Current AEP Ohio Charges:	
Tariff 820 - Residential Service 07/06/15	
Service Delivery Identifier: [REDACTED]	
Transmission Service	\$ 12.94
Distribution Service	41.21
Customer Charge	8.40
Retail Stability Rider	5.06
Deferred Asset Phase-IN Rider	1.96
Current Electric Charges Due	\$ 69.57
Current Supplier Name Charges (999-999-9999):	Supplier Logo
Supplier Account Number - [REDACTED]	
Service Delivery Identifier Number: [REDACTED] 07/06/15	
Electric Energy Charge (953KWH @ \$0.0000)	\$ 66.61
Current Supplier Charges	\$ 66.61*
AEP Ohio Current Budget Amount Due	\$ 45.00*
Total Account Balance	\$ 97.26

Total Amount Due \$111.61

***Charges make up the "Total Amount Due"**

Due Date Jul 23

Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply charges, a supplier must offer you a price lower than AEP Ohio's price of 6.3 cents per kWh for the same usage that appears on this bill. To review available competitive supplier offers, visit the Public Utilities Commission of Ohio's "Energy Choice Ohio" web site at www.energychoice.ohio.gov.

BILL FORMAT CHANGES

Current Supplier Name Charges (999-999-9999):	Supplier Logo
Supplier Account Number - [REDACTED]	
Service Delivery Identifier Number: [REDACTED] 07/06/15	
Electric Energy Charge (953KWH @ \$0.0699)	\$ 66.61
Current Supplier Charges	\$ 66.61*
AEP Ohio Current Budget Amount Due	\$ 45.00*
Total Account Balance	\$ 97.26
Total Amount Due	\$111.61
*Charges make up the "Total Amount Due"	
Due Date Jul 23	
Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply charges, a supplier must offer you a price lower than AEP Ohio's price of 6.3 cents per kWh for the same usage that appears on this bill. To review available competitive supplier offers, visit the Public Utilities Commission of Ohio's "Energy Choice Ohio" web site at www.energychoice.ohio.gov	

The enhancements will aid customers in discerning whether a charge is from a generation supplier or AEP Ohio.

CRES LOGOS

CRES Provider logos
are now displayed on
OAD bills

Current Electric Charges Due	\$	69.57
Current Supplier Name Charges (999-999-9999):		Supplier Logo
Supplier Account Number - [REDACTED]		
Service Delivery Identifier Number : [REDACTED] 07/06/15		
Electric Energy Charge (953KWH @ \$0.0699)	\$	66.61
Current Supplier Charges	\$	66.61*
AEP Ohio Current Budget Amount Due	\$	45.00*
Total Account Balance	\$	97.26
Total Amount Due		\$111.61
*Charges make up the "Total Amount Due"		
Due Date Jul 23		
Price-to-Compare: For tariff 820, in order for you to save money off of your utility's supply charges, a supplier must offer you a price lower than AEP Ohio's price of 6.3 cents per kWh for the same usage that appears on this bill. To review available competitive supplier offers, visit the Public Utilities Commission of Ohio's "Energy Choice Ohio" web site at www.energychoice.ohio.gov		

LOGO CRITERIA

- Black and white only
- At least 600 dpi (dots per inch)
- In a jpg or gif file format only
- Other file formats cannot be utilized for the logo
- Logo image should be horizontal/rectangular in shape (instead of vertical or stacked)
- No greater than 5/16 inch in height by 1 1/8 inches in width
- If no logo is received, a blank space will display on the consolidated bill

TRANSMISSION CHARGES

Transmission charges are now billed by AEP Ohio.

As of June 1, 2015 and consistent with the ruling of AEP Ohio's Electric Security Plan III (ESPIII), AEP Ohio is now responsible for certain transmission related charges that were previously the responsibility of CRES Providers.

Total Previous Balance	\$	-38.92
Current AEP Ohio Charges:		
Tariff 820 - Residential Service 07/06/15		
Service Delivery Identifier: [REDACTED]		
Transmission Service	\$	12.94
Distribution Service		41.21
Customer Charge		8.40
Retail Stability Rider		5.06
Deferred Asset Phase-IN Rider		1.96
Current Electric Charges Due	\$	69.57

Questions

BREAK
15 Minutes

Purchase of Receivables

PUCO Status

Stacey Gabbard

Mgr. Customer Choice Processes & Systems

Letters of Authorization (LOA)

MDWG Update

Michele Chavalía

AEP Ohio Choice Operations Manager



Standard Letter of Authorization for the Request of Historical Usage
To be completed by AEP Ohio customer

Customer Name: _____
Customer Address: _____
City, State, Zip: _____
Phone Number: _____
Authorized person: _____ Title: _____
The above named customer authorizes the release of 12 months of _____
_____ data if available, for release to:
(Please fill in the blank with your request, e.g., summary, IDR, Cap/Tran, etc.)
Broker/CRES (I agree to a \$50 charge, if applicable)
Name: _____
Company: _____
Address: _____
Phone Number: _____
Email Address: _____ (usage will be sent to this address)
SDI Number(s) _____

For multiple SDI Numbers, please attach spreadsheet in Microsoft Excel format containing the SDI(s) for which you are requesting usage.

I realize that under the rules and regulations of the Public Utilities Commission of Ohio, I may refuse to allow AEP Ohio to release the information set forth above. By my signature, I freely give AEP Ohio permission to release the information designated above.

(Authorized Customer Signature) (Printed Name)

(Date)

This authorization will expire one year from the date of execution.
Note: The customer hereby releases AEP Ohio, its employees, officers and agents from any and all liability associated with the third party use and/or dissemination of account information or other data that AEP Ohio provides in accordance with this authorization.

02-05-2015

- PUCO Approved LOA Under Review
- AEP Ohio LOA Meets Current State Requirements Effective 1/1/15
- PDF Fillable Form
- <https://aepohio.com/global/utilities/lib/docs/account/service/choice/oh/StandardLetterofAuthorizationfortheRequestofHistoricalUsageRev02-06-2015.pdf>

Completing the LOA

**Standard Letter of Authorization for the Request of Historical Usage
To be completed by AEP Ohio customer**

Customer Name: _____
Customer Address: _____
City, State, Zip: _____
Phone Number: _____
Authorized person: _____ Title: _____

The above named customer authorizes the release of 12 months of

AEP Ohio Customer Information is Required

Completing the LOA

Authorized person: _____ Date: _____
The above named customer authorizes the release of 12 months of _____
_____ data **if available**, for release to:
(Please fill in the blank with your request, e.g., summary, IDR, Cap/Tran, etc.)
Broker/CREP (I agree to a \$10 charge if applicable)

Indicate Summary Usage, IDR Usage, Cap/Tran, etc.

Completing the LOA

Broker/CRES (I agree to a \$50 charge, if applicable)

Name:

Company:

Address:

Phone Number:

Email Address: (usage will be sent to this address)

SDI Number(s)

For multiple SDI Numbers, please attach spreadsheet in Microsoft Excel format containing the SDI(s) for which you are requesting usage.

Include the Broker/CRES Contact Information and SDI Numbers on the Form or by Excel

Questions

Net Metering

Mark Gundelfinger

Alternative Energy Resources Manager

Qualifying Customer Generator

- Fueled by solar, wind, biomass, landfill gas, hydropower, micro-turbine or fuel cell.
- Located on customer generator's premise.
- Operated in parallel with the electric utility's transmission and distribution facilities.
- **Intended primarily to offset part or all of the customer generator's electricity requirements.**

Excess Generation

- The generation supplier is responsible for addressing excess generation.
- If EDU, then a credit is applied based on the excess kWh multiplied by the SSO generation rate. If on OAD – Schedule NEMS, then no credit for any excess kWh.
- If CRES, then how to address the excess kWh is at the discretion of the CRES provider. Through de-regulation the CRES providers develop and offer various market rate alternatives. They are neither required or obligated to provide the same rate design of the EDU for the excess kWh.

2000 - 2008

- 91 customers with a combined capacity of approximately 1.2 MW.
- Primarily residential customers and most were solar PV systems.
- Most systems were in the 3 – 5 kW range, which normally produced 30% – 40% of the customer's electricity requirements.
- Very few customers had excess kWh during a billing period nor were they at risk of over production during the year.

2009 - 2011

- SB 221 became effective in 2009 and initially RECs were in the \$400 - \$450 range.
- Nonresidential systems and small wind installations began, but still primarily residential and solar PV.
- Residential systems still averaged 3 – 5 kW due to cost of \$8.00 - \$8.50/watt.
- Very few CRES net meter customers and it was rare for any to have excess kWh.
- 290 customers with a combined capacity of approximately 9.1 MW.

2012

- CRES providers acquire large number of customers including those with net metering.
- RECs still in the \$300 range and solar PV system costs begin to drop significantly (residential \$4.00 - \$4.50/watt, nonresidential \$2.00 - \$2.50/watt).
- Renewable Energy Technology and REC Purchase Programs.
- Average residential systems in the 8 – 10 kW range, which offset 80% - 90% of the customer's electricity requirements.

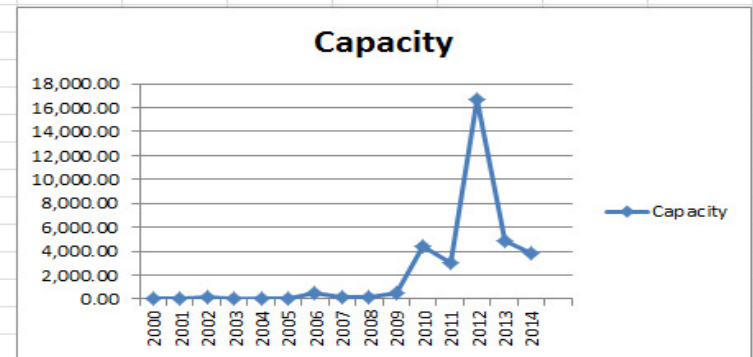
2013 - Present

- Exponential growth of net meter customers continues as does the number with excess kWh.
- Pending PUCO net meter rule changes attempted to address some of the issues.
- Growing problem with customers applying for net metering with oversized systems.
- Approximately 5% of net meter customers are at risk of not meeting the qualifications. We will work with them to resolve their situation.
- As of September 30, 2015, we have 871 customers with a combined capacity of approximately 53.9 MW.
- Approximately 44% take generation service from a CRES provider.

AEP Ohio Renewable Energy Resources - Distributed Generation

Year	Solar PV		Small Wind	
	Customers	Capacity	Customers	Capacity
2000	6	7.00	0	0.00
2001	1	1.20	1	18.00
2002	0	0.00	0	0.00
2003	1	3.75	1	3.75
2004	4	10.40	3	6.00
2005	12	40.50	4	20.20
2006	9	51.30	1	1.00
2007	14	115.64	3	21.30
2008	13	112.00	4	9.10
2009	28	217.10	19	270.40
2010	57	1,434.57	22	1,430.60
2011	86	2,346.12	14	709.10
2012	98	6,677.27	6	9,018.90
2013	177	4,377.13	5	54.50
2014	136	3,351.13	1	1.00
Totals	642	18,745.11	84	11,563.85

Year	Total DG	
	Customers	Capacity
2000	6	7.00
2001	2	19.20
2002	1	200.00
2003	2	7.50
2004	7	16.40
2005	16	60.70
2006	11	552.30
2007	17	136.94
2008	17	121.10
2009	47	487.50
2010	81	4,435.17
2011	100	3,055.22
2012	105	16,696.17
2013	183	4,831.63
2014	138	3,852.13



Other RER - Non-Residential				
Type	Year	Customers	Capacity	
Hydro	2002	1	200.00	
Biogas	2006	1	500.00	
Biogas	2010	2	1,570.00	
Biogas	2012	1	1,000.00	
Biogas	2013	1	400.00	
Biogas	2014	1	500.00	

December 31, 2014

Excludes non-renewables, Transmission-CHP, Wyandot Solar LLC, AEP Facilities & Inactive Systems

Questions



AEP Ohio gridSMART®

Scott Osterholt

Advanced Meter Infrastructure Manager

gridSMART® Phase 2 Plan



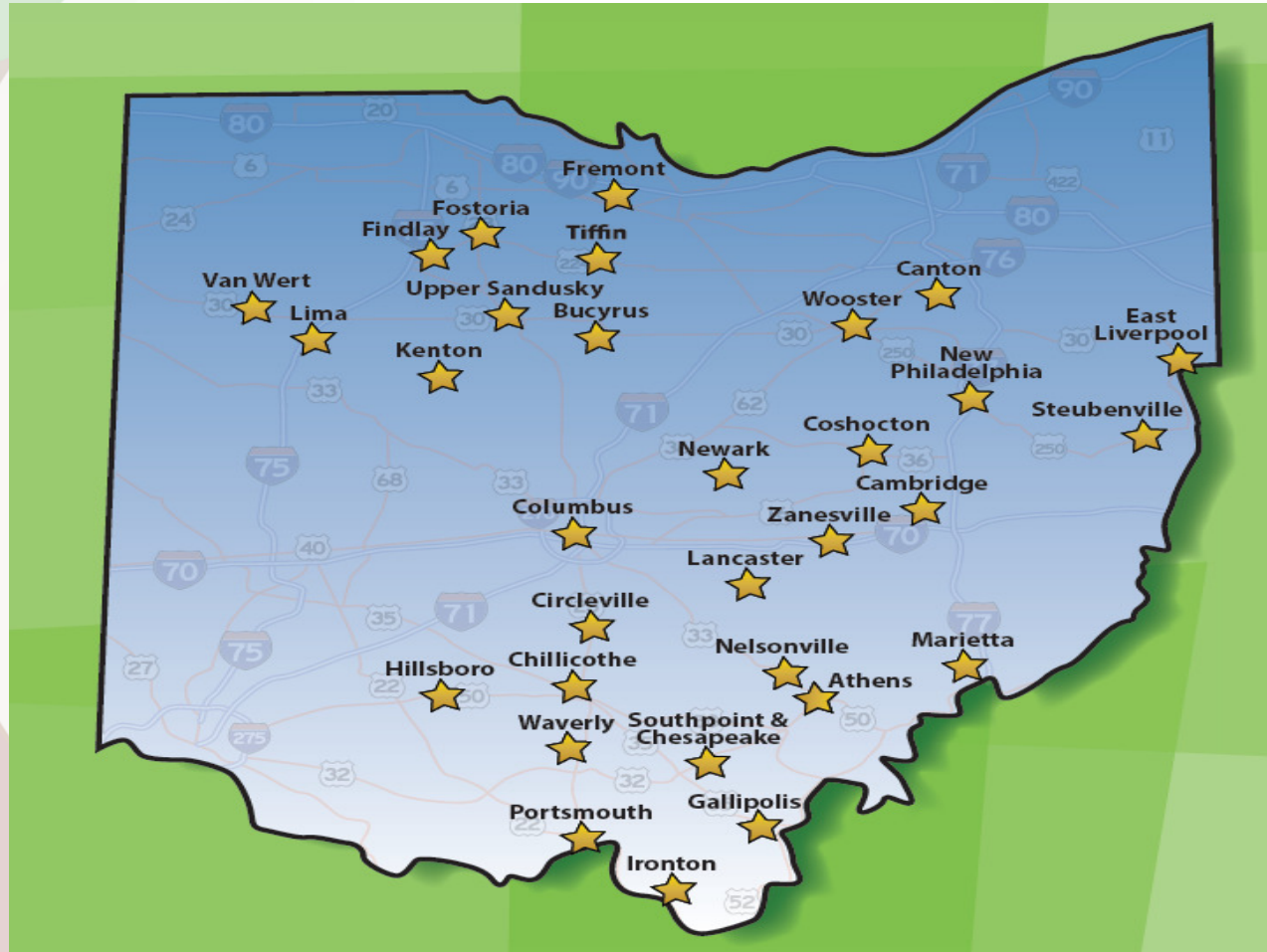
- **Scope**

- Advanced Metering Infrastructure (AMI) in most populated cities – approximately 900,000 meters
- Distribution Automation Circuit Reconfiguration (DACR) on approximately 250 circuits
- Volt VAR Optimization (VVO) on approximately 65 circuits

- **Deployment – 4 years**

- AMI – approximately \$165M initial Capital
- DACR – approximately \$110M initial Capital
- VVO – approximately \$20M initial Capital

AMI Cities



City	Estimated AMI Qty
Columbus	479,296
Canton	96,189
Lima	32,279
Newark	31,846
Zanesville	22,460
Findlay	22,363
Portsmouth	19,058
Lancaster	18,188
Steubenville	16,972
Chillicothe	15,241
Wooster	14,181
Fremont	11,171
Athens	10,347
New Philadelphia	10,017
Tiffin	9,918
East Liverpool	8,209
Fostoria	7,669
Cambridge	7,391
Coshocton	7,292
Marietta	7,235
Circleville	6,707
Ironton	6,671
Bucyrus	6,629
Van Wert	5,973
Kenton	4,282
Hillsboro	4,277
Upper Sandusky	3,539
Southpoint/Chesapeake	2,902
Gallipolis	2,750
Waverly	2,574
Nelsonville	2,505
TOTAL	894,000

gridSMART® Phase 2 Status

- **Still working toward approval**

- 4/14/15 – Meeting to sign the gridSMART Phase 2 Stipulation agreement was cancelled by the PUCO

- Brief the new Chief of Staff and Chairman.

- 4/24/15 – Met with the PUCO Staff including the new Chief of Staff to gather input

- Still working to gather their feedback

- Both parties remain interested



Time-of-Use (TOU) Tariffs

Desired Outcomes by Party

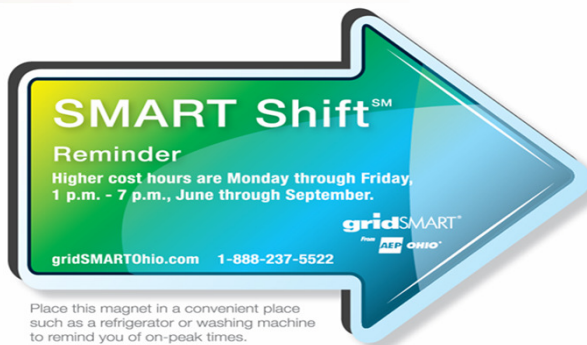
- AEP Ohio – views TOU as a generation market option (we are an infrastructure provider)
- PUCO Staff – appears focused on having TOU programs available for customers from Day 1
- CRES Providers – appear interested in offering these programs and for AEP Ohio to be able to provide billing data and billing services



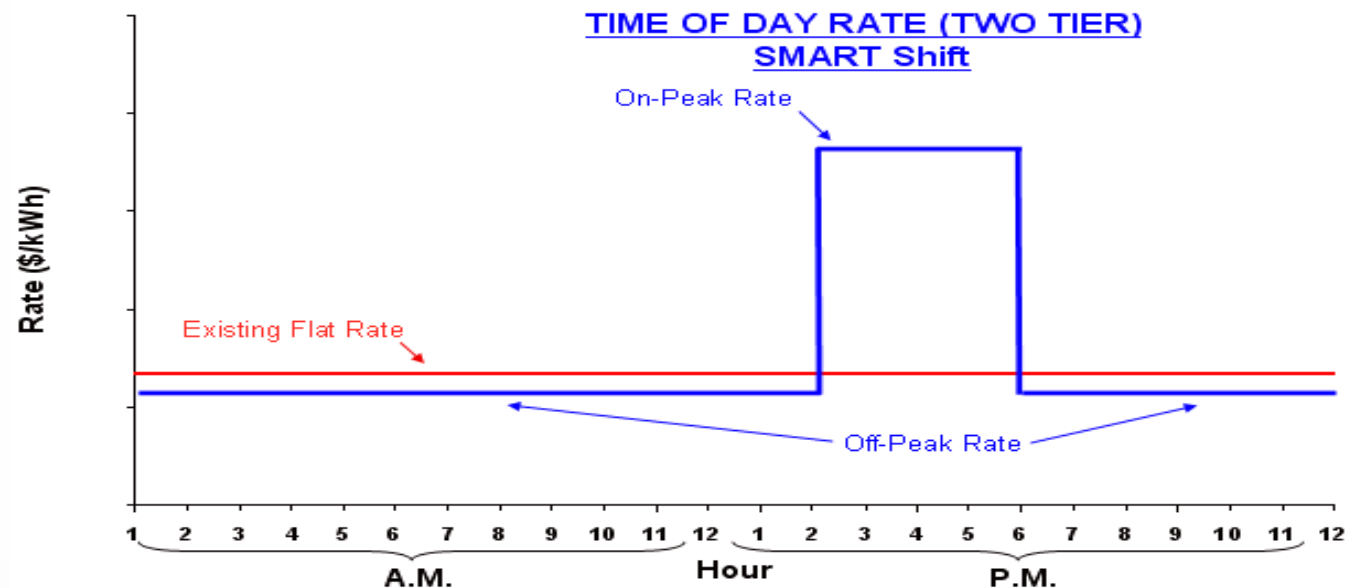
SMART ShiftSM

2 tier Time-of-Day (TOD) – on/off peak

- On Peak - June 1 to Oct. 1 from 1pm – 7pm (non-holiday weekdays only)
 - Off Peak - all winter & June 1 to Oct. 1 from 7pm to 1pm

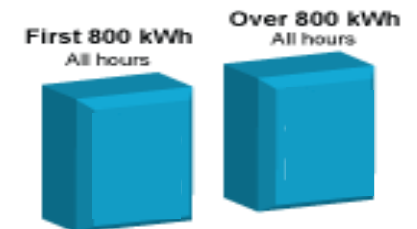
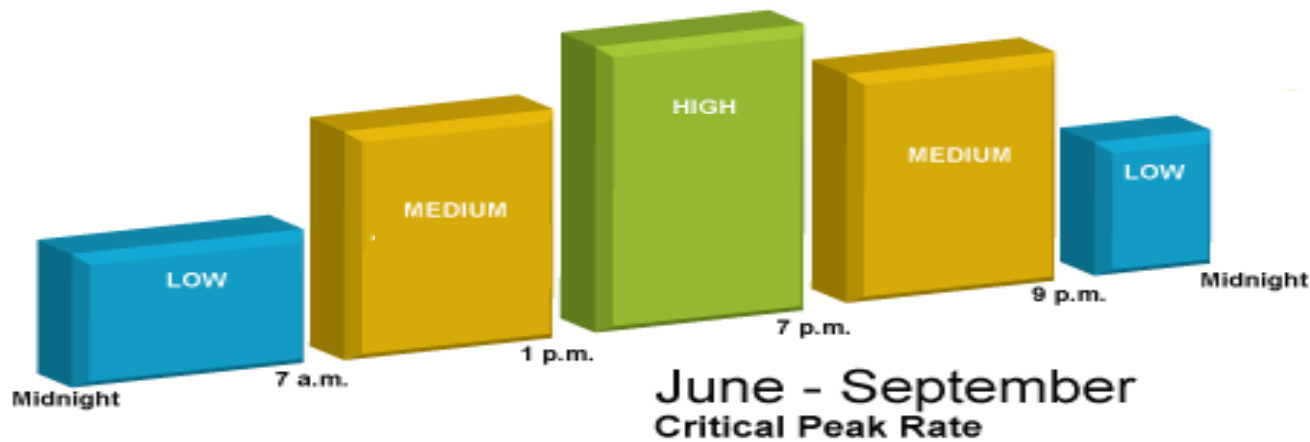


738 Active Participants



SMART Shift PlusSM

- 3 tier + Critical Peak Pricing (CPP) – on/off/shoulder/fixed price CPP



October - May
Critical Peak Rate

140 Active
Participants

78 — A unit of American Electric Power

gridSMART[®] TOU Program Transition Plan

Step 1

AEP Ohio continues to offer existing gridSMART TOU programs in the short term

Step 2

Numerous CRESs offer the gridSMART TOU programs in the near term (different rates)

Step 3

AEP Ohio delivers AMI Interval usage information to the CRES via CRES Data Portal – CRES offer innovation TOU programs



gridSMART[®] TOU Program Transition Plan

Step 1

AEP Ohio continues to offer existing gridSMART TOU programs in the short term



- AEP Ohio continues as-is
 - Continue Service for existing TOU customers
 - Sign-up new TOU customers (as applicable)
- Short-term Solution (~ 6 months)
 - Just until Systems and Processes are adjusted for Step 2

gridSMART[®] TOU Program Transition Plan

Step 2

Numerous CRESs offer the gridSMART TOU programs in the near term (different rates)



- Targeted to cover 18 month timeframe during development of the CRES AMI Data Portal
- CRES programs would need to mimic gridSMART programs
- CRES could provide pricing program alternatives
- Rate Ready and Bill Ready Billing Services offered (pending small IT projects)
- Transition via program termination communication from AEP Ohio – citing other alternatives
- CRES would call CPP events 24 hours in advance – AEP Ohio to administer
- CRES would be responsible for customer communication for CPP events

gridSMART® TOU Program Transition Plan

Step 3

AEP Ohio delivers AMI Interval usage information to the CRES via CRES Data Portal – CRES offer innovation TOU programs



- CRES AMI Interval Data Portal development is just greater than 2 years after approval of gridSMART Phase 2
- CRES mimicked gridSMART TOU could continue if desired
- CRES offer Innovative TOU programs

Questions

Q&A / Wrap Up

***THANKS FOR
ATTENDING!***

AEP Ohio Choice Operations
ohiochoiceoperation@aep.com