

We are



Welcome to the AEP Texas Competitive Retailer Workshop

September 15, 2016



Matt Gerick

Manager CRR





RUBEN



MARK



CHERYL



TONEY



MELISSA



JIM



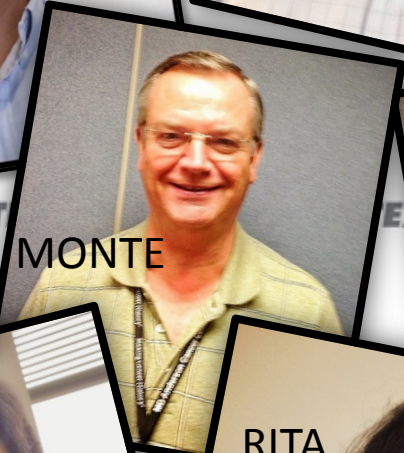
MATT



KAREN



SUZI



MONTE



BELINDA



DON



MELINDA



CINDY



RITA



JESSE

Safety Contact

ZEROHarm

No one gets hurt and everyone goes home in the same or better condition than they came to work.





FIRE EXIT





PROHIBITED

**TEXTING OR
ELECTRONIC
MESSAGING
WHILE
DRIVING**

**BY CITY ORDINANCE
UP TO \$200 FINE**





Importance of _____ **HYDRATION**

SYMPTOMS OF DEHYDRATION:

- THIRST
- DIZZINESS
- CONFUSION
- FATIGUE
- DRY SKIN/MOUTH
- INCREASED HEART RATE



- DRINK AT LEAST 64 OUNCES OF FLUID PER DAY
- MINIMIZE THE CAFFEINE
- AVOID ALCOHOL AND SUGARY BEVERAGES
- WHETHER YOU ARE THIRSTY OR NOT, DRINK WATER BEFORE, DURING AND AFTER EXERCISING



To Serve as a Reminder:



Thank You for Coming

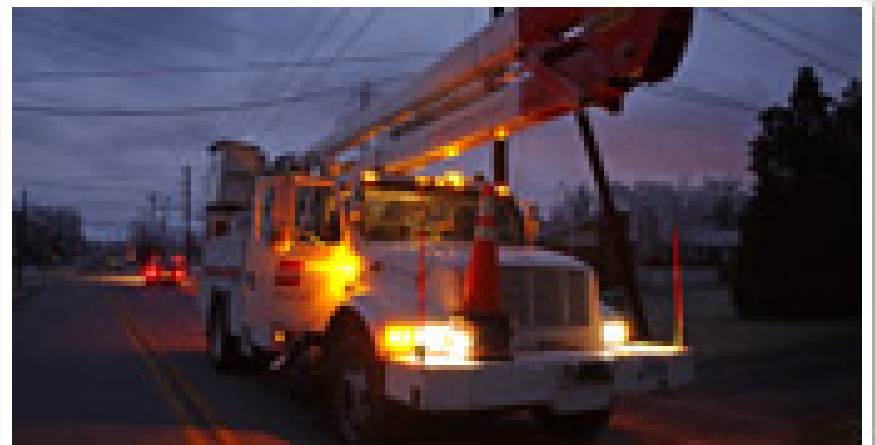
- ERCOT
- Oncor, Centerpoint, TNMP, and Sharyland
- 48 CRs Attending the Workshop
- Representing >83% of our End-use Customers



AEP Texas Leadership

Judith Talavera, President & COO





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CRR Survey Results

Mark Hunt
CRR Account Manager



Improving the Competitive Retailer Experience



45+ F2F Meetings with CRs



Rolled out new REP Desk Functionality



Continue Improving Communication

- Market Notices and REP Desk Bulletin Board
- Extended CR Hotline Availability
- Chat Functionality Implemented



Active Participant at Market Meetings



Continuous Improvement – 2016 CR Survey

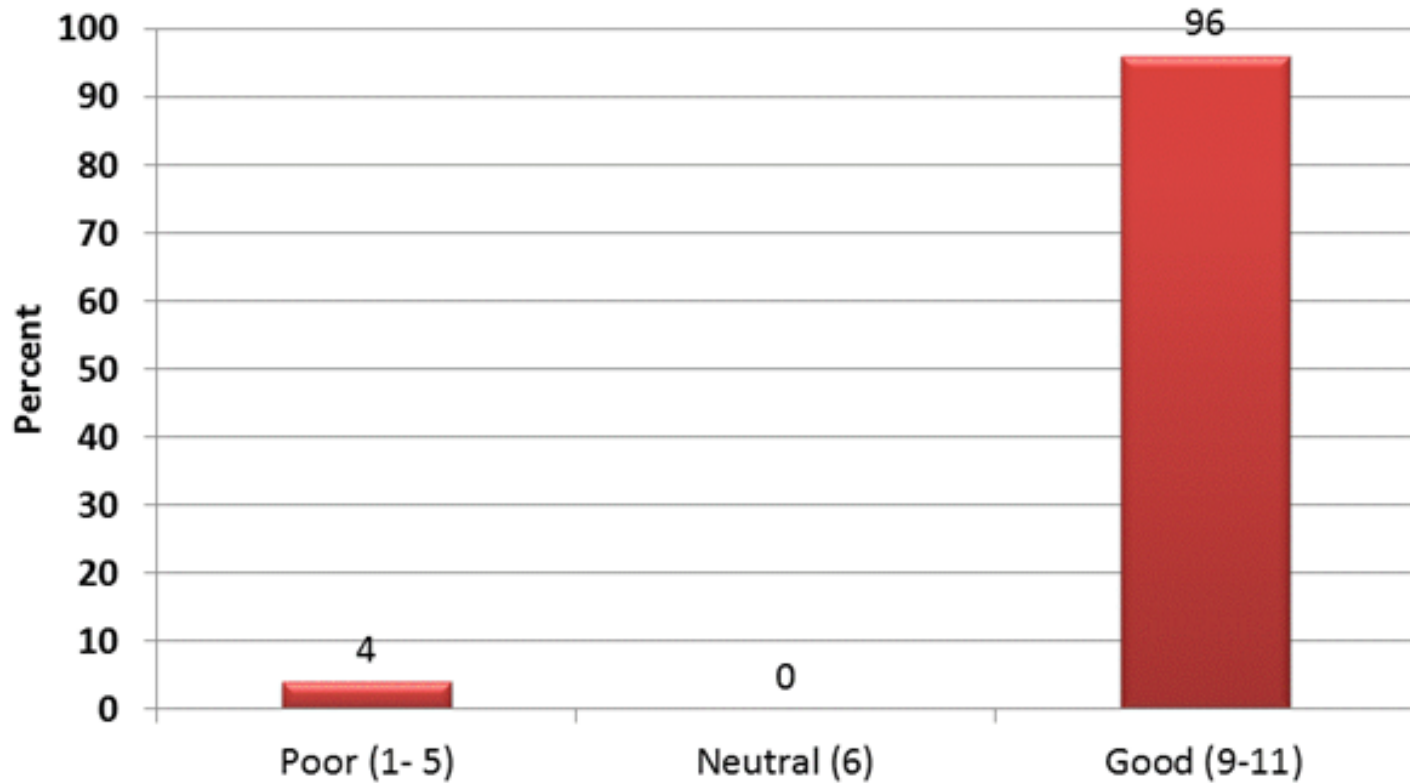


2016 Competitive Retailer Survey

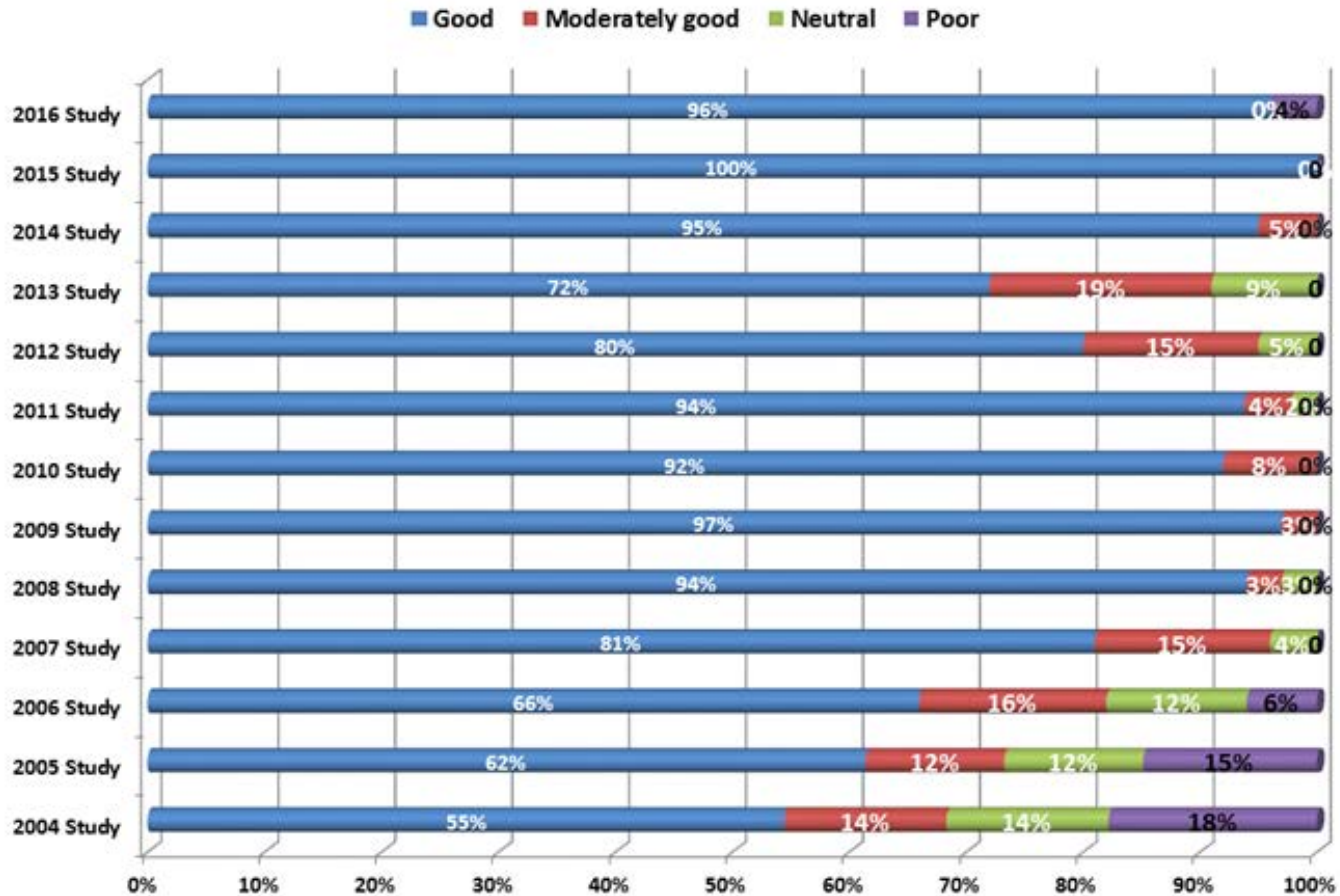
- Surveying CRs for 13 years
- Data collection began on July 12th to July 23rd
- Encourage Comments and Feedback
- Participation: 31 Respondents representing 73 CRs
 - ✓ In 2015 CR Survey, we had 19 Respondents representing 43 CRs
 - ✓ 83% of End Use Customers Represented



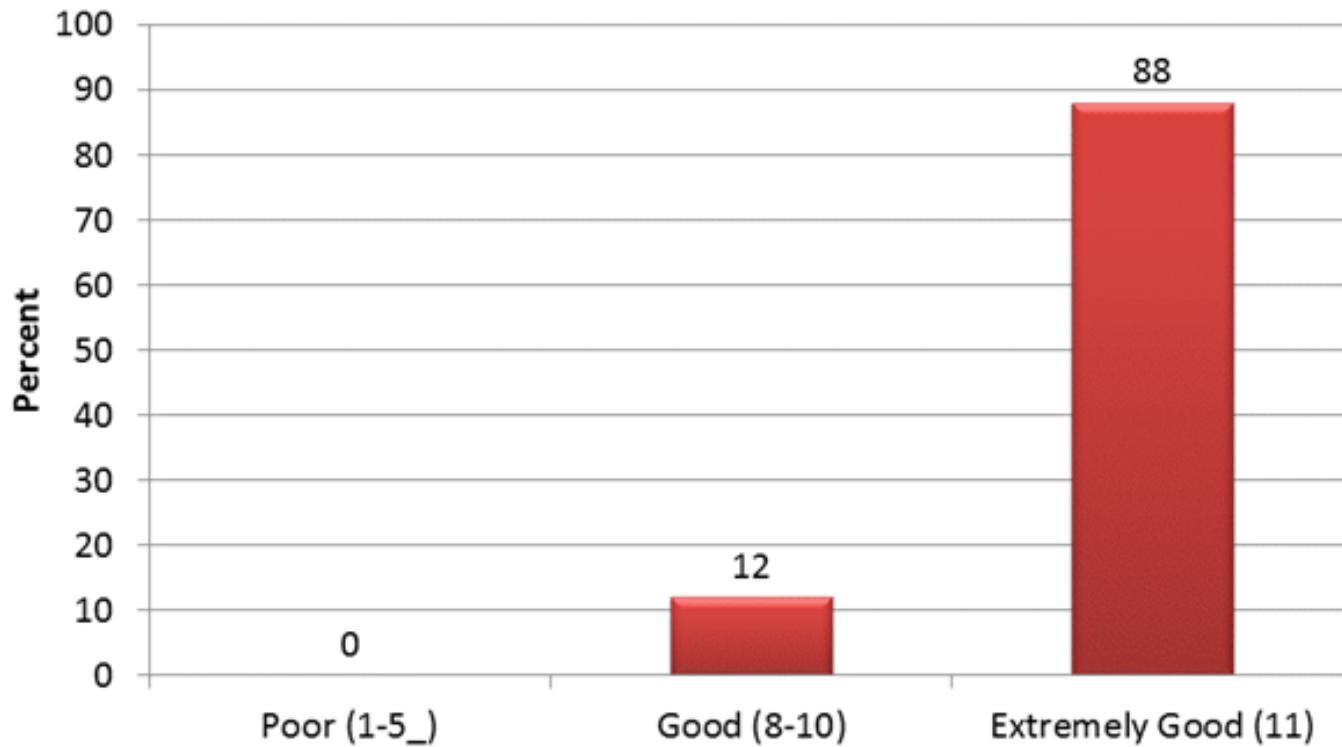
Overall, how would you rate the general performance of AEP Texas?



Overall, how would you rate the general performance of AEP Texas?

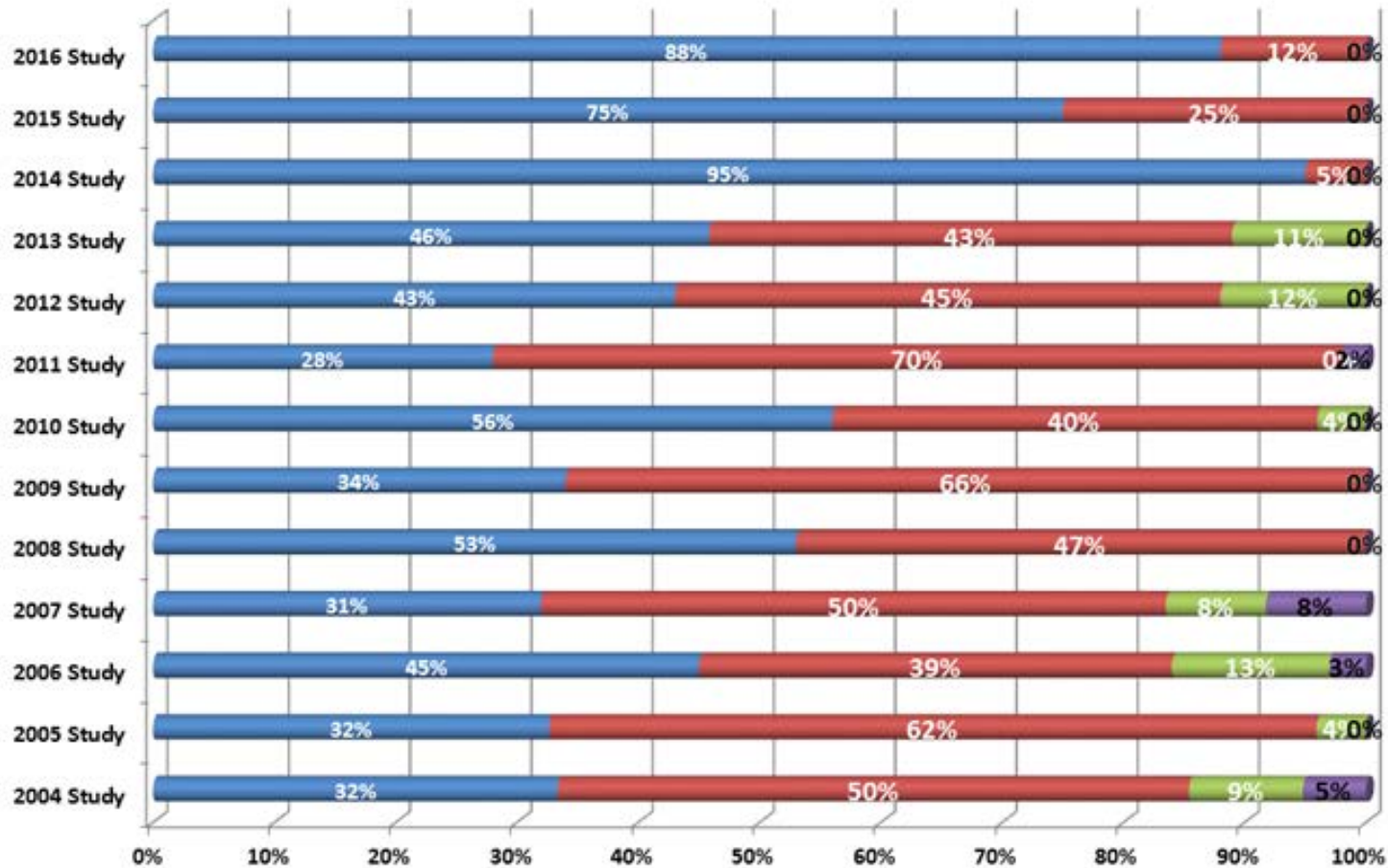


Overall, how would you rate the general performance of your account manager?

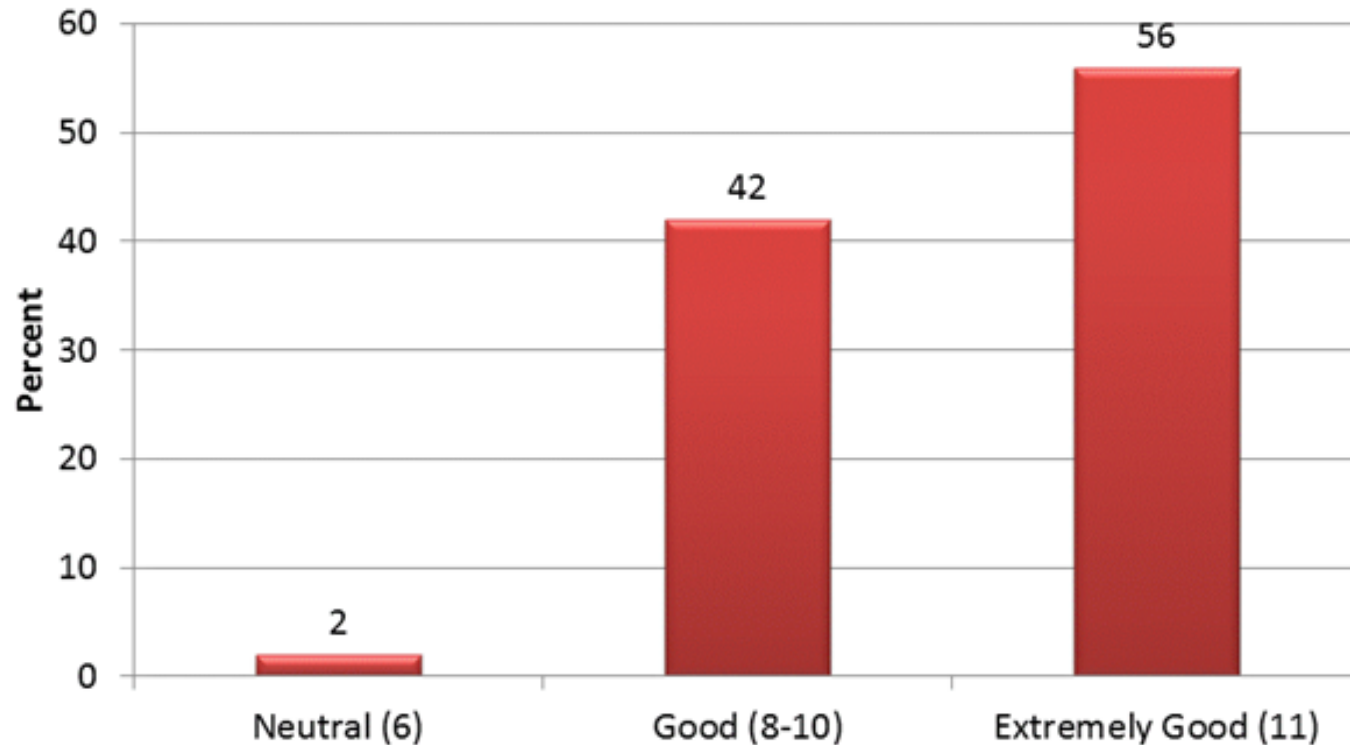


Over time ratings of the performance of Account Manager

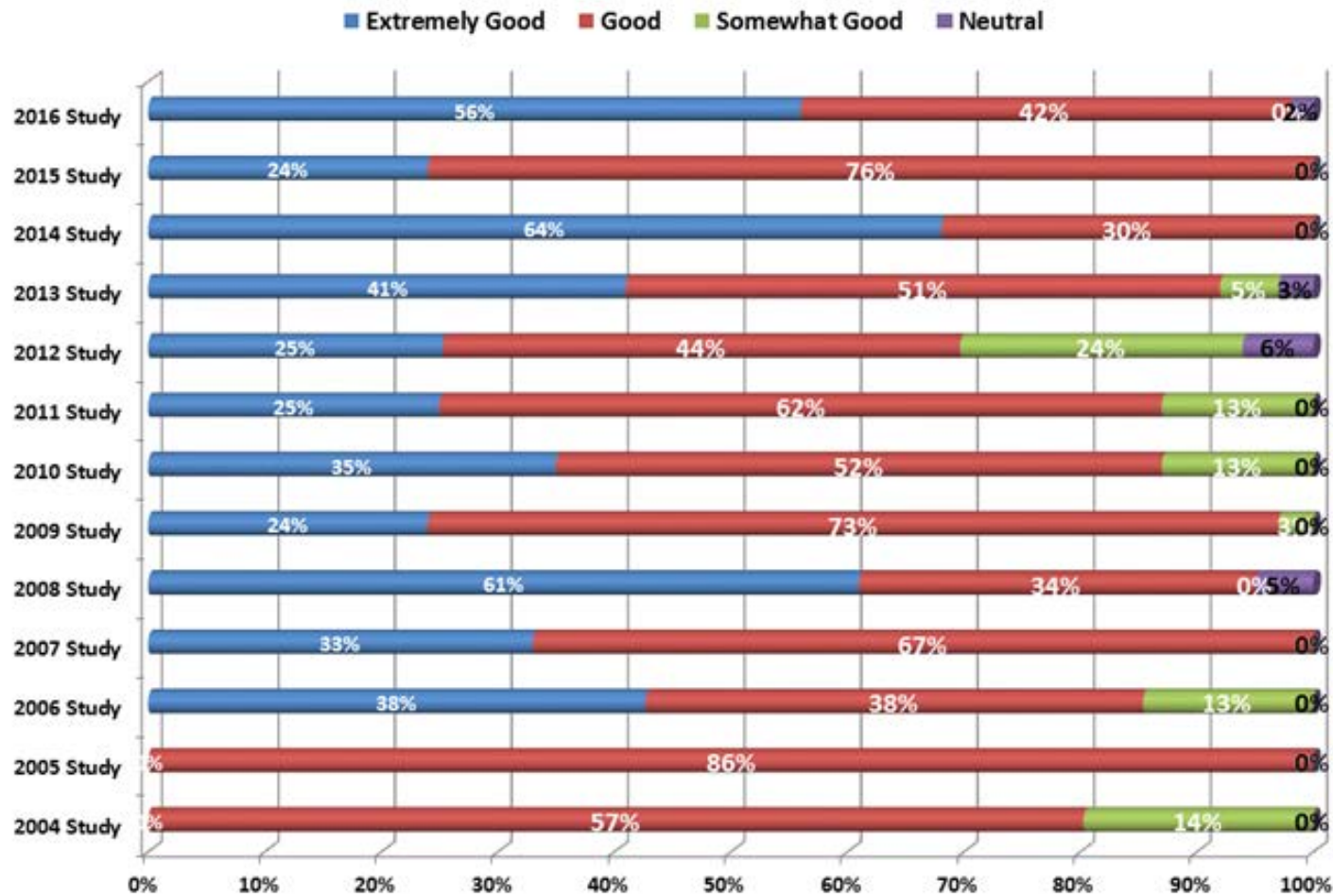
Extremely Good Good Moderately Good Neutral



Overall, how would you rate the general performance of the AEP Texas Market Specialists?



Overall, how would you rate the general performance of the AEP Texas Market Specialists?



Improving Customer Service through better Electronic Means



REP Desk

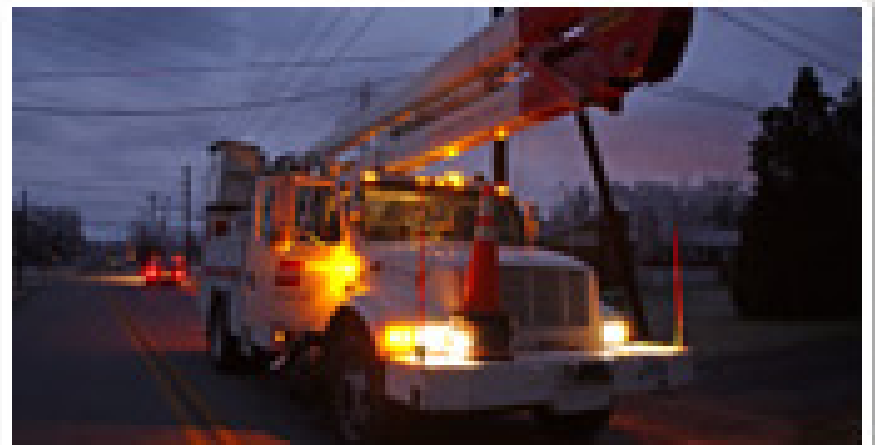
- Roll over existing functionality
 - ESID Lookups
 - Bulletin Board Information
 - 867/810 Data
- New Enhancements
 - View of all AMS orders
 - Upload Safety-Net Spreadsheets
 - LOA Usage Requests
 - Chat
- Any additional needs? Comment on Survey





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AEP TEXAS





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Jeff Stracener
Manager Advanced Meter
Infrastructure





AEP Texas AMS Meter Update, LSE Data Reliability & More



AMS Meter Update

- 99.2% meter read attainment (greater for interval data)
- 99.6% service order automation (over 1 million truck rolls avoided annually)
- Outage notification from meters creating trouble tickets
- Map viewer application making it easier to find meters in the field
- Head-end system upgrade in October (maybe)
- Meter farm installed with over 200 test meters
- Too many meters still being changed out



LSE Data Reliability

- Interval data delivered to SMT between 9 am & 2 pm each day
- 10 times YTD SMT delivery has been after 5 pm (4%)
- ERCOT file delivery is very similar



SMT

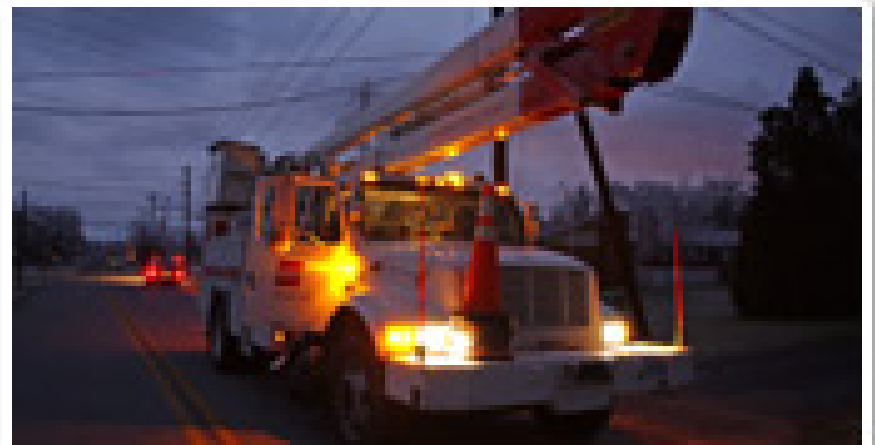
- Project No. 46206 - Rulemaking Regarding Governance, Performance, and Funding of SMT
- ERCOT will not be taking on any role with SMT



Low Income IHD/PCT Program

	TCC	TNC
Available	\$800,000	\$200,000
Spend to date	\$630,600	\$79,450
% of available	79%	40%
Total IHDs	579	220
Total PCTs	1574	52
# of REPs	15	6



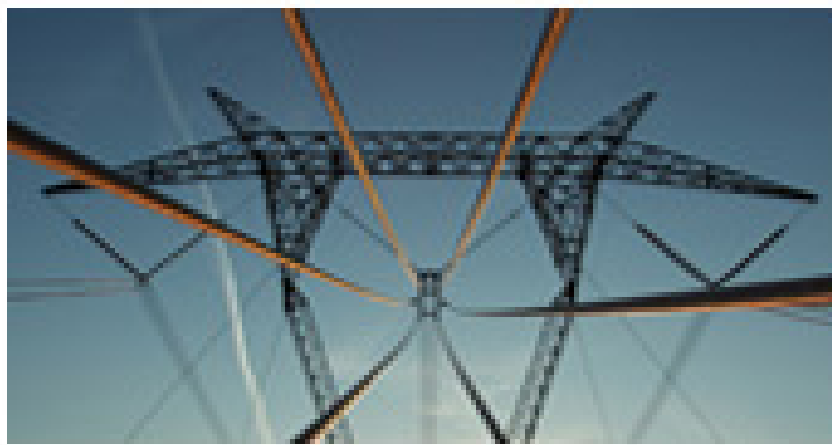


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Choice Processes & System Updates

Stacey Gabbard

Manager Customer Choice Processes & System Manager
&

Bob Hewitt

Supervisor Customer Systems Service



Customer Choice Processes & Systems

Provide support to Provider Relations and Customer Services groups

- Research and resolve process and system issues – MarkeTraks
- Prioritize break-fix and enhancement requests

Manage EDI Choice systems and transaction processing - AEPCH

- Assure compliance with EDI market standards
- Perform EDI flight testing and certify new REPS
- Execute yearly disaster recovery system testing

Support IT capital projects

- IT Business cases and work requests
- Project management, user acceptance testing



TCC TNC Merger Technical Impacts

No Impacts

- ESI ID numbers
- AEP CIS and accounting general ledger
- Transmission system load zone calculation
- EDI transaction DUNS numbers
- Many processes and systems already reflect AEP Texas

Impacts

- External facing media (websites, SMT)
- External facing reports and emails
- Customer correspondence letters
- Testing will include some external participants



MDM Upgrade

What is a Meter Data Management System (MDM)?

The MDM is a software system that performs long-term data storage and management for large quantities of data delivery by smart metering systems.

What does an MDM do?

- Stores Scalar Readings and 15 minute interval data for AMI meters
- Performs VEE (Validation, Estimation, Editing) on all imported data.
- Prepares Data for Downstream Systems such as:
 - ODS (Operational Data Store) – Load Research
 - Smart Meter Texas Portal and ERCOT
 - Web Portal Displays
 - Billing Determinants – Register Reads used for CIS billing.



MDM Upgrade

What is being upgraded?

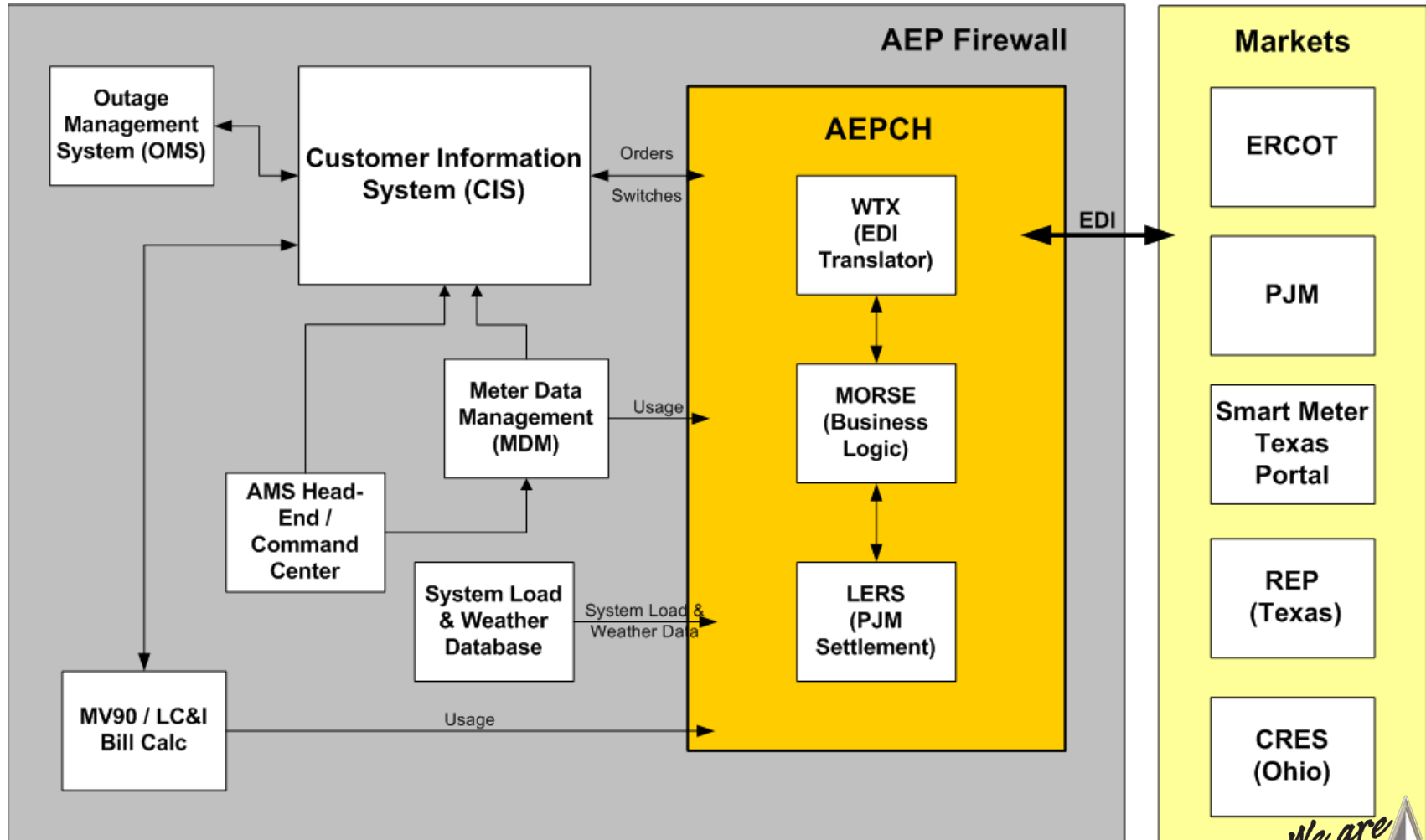
- AEP's MDM system and supporting infrastructure is being upgraded to the latest Oracle version.
- 18 new servers added
- Go live December 2016

How big of a project is this?

- The MDM is an integral system supporting the Texas market
- The project spans over 30 months from planning through execution
- Over 2,800 test cases executed
- Converting 13 months of interval data – 72 billion rows
- 114 employees have supported the project in some way



System Testing Improvements



System Testing Improvements

AMI “Center Of Excellence”

- Cross-functional working group representing EDI and AMI systems
- Monitor projects related to EDI/AMI
- Ensure tools and policies are being used by project teams working on EDI/AMI systems

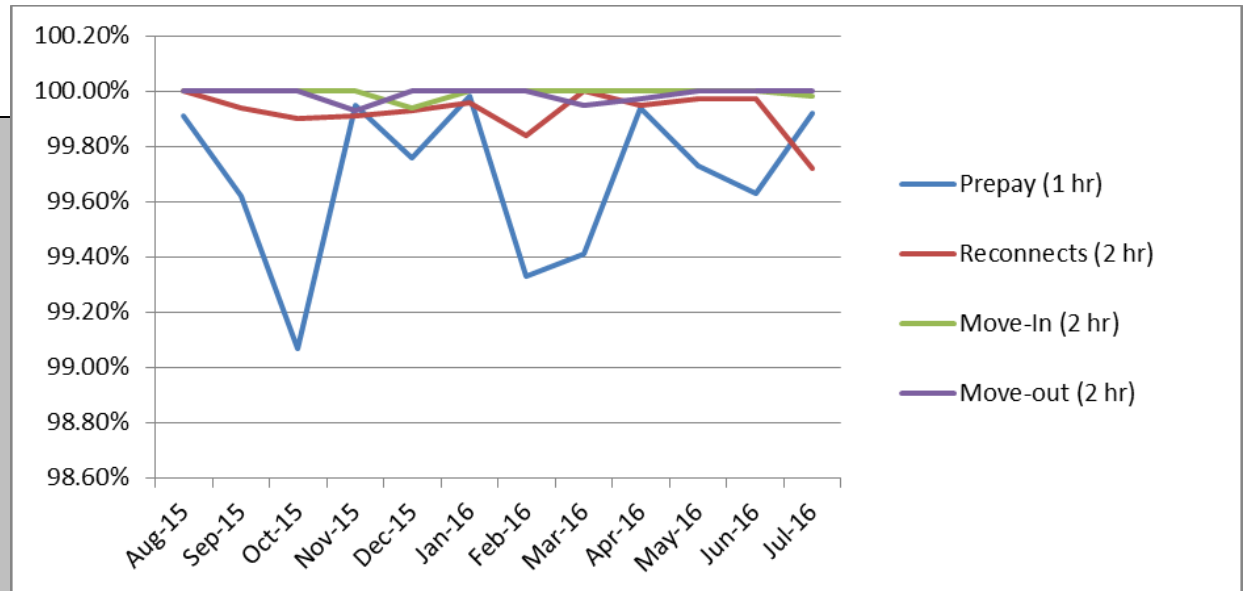
Goals

- Minimize business disruptions across companies
- Provide the tools to technical teams to build robust test strategies
- Ensure changes to production are rigorously tested



Commitment to The Texas Market

**Continued
focus on
service order
processing**



- Prepay averaging 99.71% of SLA to-date 2016, up from 2015
- Move-ins 100% of SLA 10 of last 12 months
- Move-outs 100% of SLA 9 of last 12 months
- Non-AMI IDR data delivery 100% last 5 months

AEPCH Enhancements

IT Project initiated and in planning phase

- Identify EDI automation opportunities to increase processing reliability and accuracy for market transaction.
- Focus on priority transactions
- Testing and deployment expected end of year timeframe

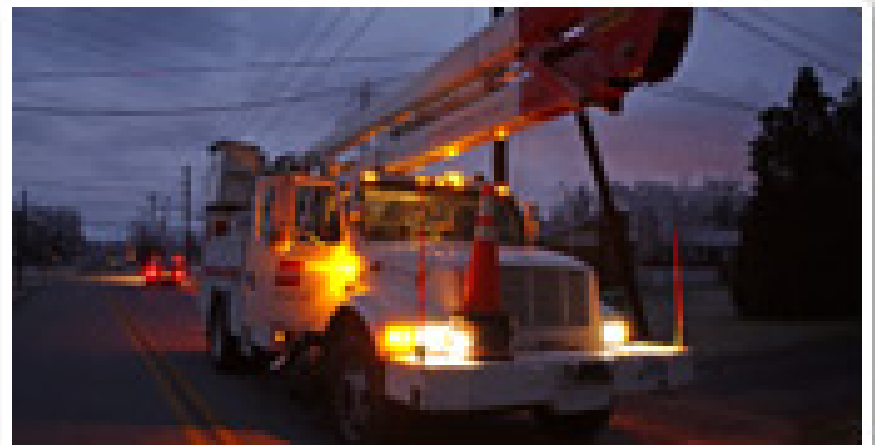


Process Improvement

Registration Outage Process

- Perform a cross-functional value stream mapping effort
- Identify areas for improvement around regular registration outage process that can impact market operations
- Mapping exercise in October
- Implement process improvements early 2017
- Feel free to provide any input we should consider to Matt's team prior to October!





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SWAMI 867 Interval Data Comparisons

Maureen Clanton

Supervisor Billing & Account Operations
&

Jim Lee

CRR Business Standards Consultant



BAO RESPONSIBILITIES

- ✓ Billing Monthly Usage on Metered Accounts
- ✓ Unmetered Accounts (Streetlights, TXDOT, Traffic Signals, TV amps)
- ✓ Critical Care / Load
- ✓ Historical Usage Requests
- ✓ Energy Diversion Backbilling
- ✓ PUC Complaints
- ✓ Annexations
- ✓ Various Order Completions
- ✓ Various Fees
- ✓ Maintaining Customer Contracts ie: facility rentals
- ✓ AMI Opt Out Customers
- ✓ 867 Interval Data Comparison



SWAMI

System Watchman for AMI



SWAMI Functionality

Service Performance Scorecard

- Monitors performance of MVI, MVO, DNP, RCN & SWI

SWAMI Service Performance/MLA Scorecard ⚙

Service Performance
MLA
SLA/MLA Rules

Service Performance Scorecard

08/29/2016

Expand All/Collapse All 📄

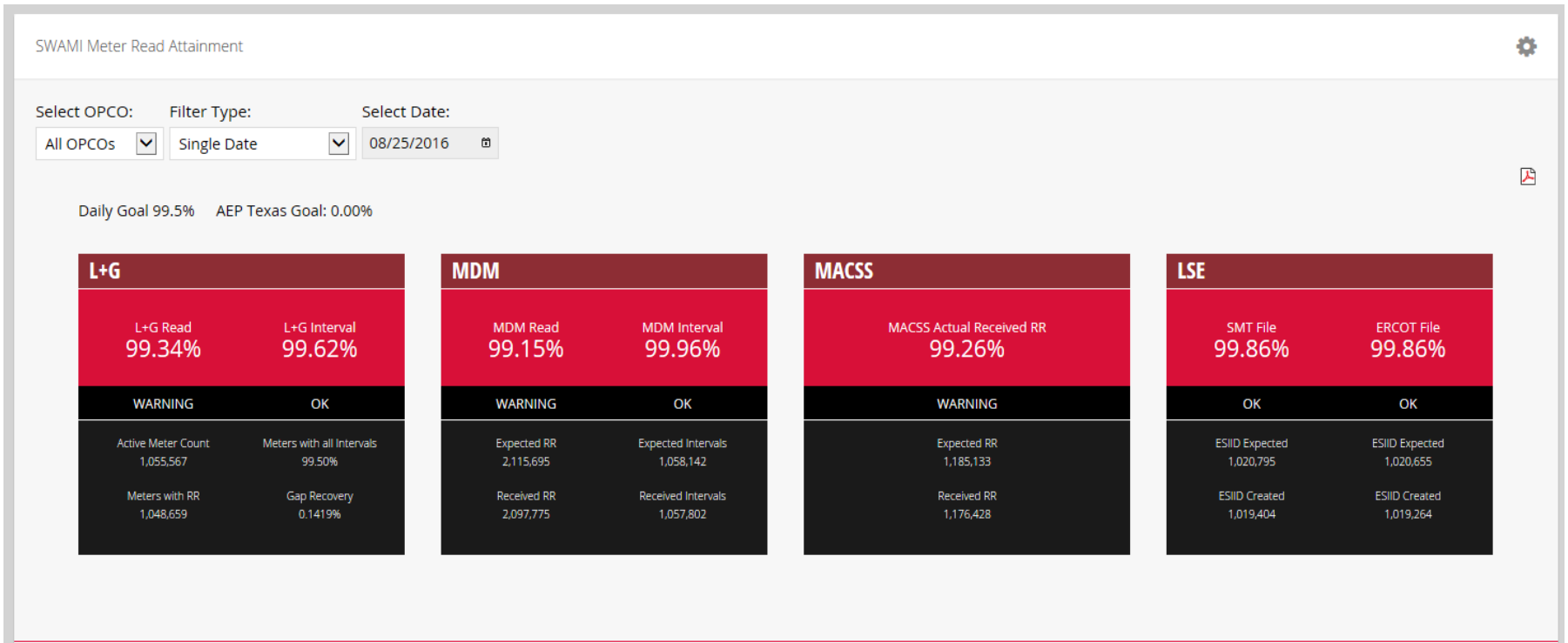
EDIs Requests	Service Performance										
	Total	Met #	Missed #	Met %	Missed %	Pending	Unexec	Cancelled	Reject	Other	Avg Duration
Total	5495	5217	16	99.69%	.31%	244	173	4	290	18	0:33:48
▶ DNP	2204	2166	6	99.72%	.28%	32	86	0	47	0	0:37:03
▶ Move In	996	894	8	99.11%	.89%	78	24	0	8	16	0:30:52
▶ Move Out	919	904	0	100%	0%	13	57	4	4	2	0:33:06
▶ Read	2	0	0	0%	0%	2	0	0	0	0	0:00:00
▶ Reconnect	896	795	2	99.75%	.25%	99	2	0	228	0	0:25:33
▶ Switch	478	458	0	100%	0%	20	4	0	3	0	0:07:59



SWAMI Functionality

AMI Meter Read Attainment

➤ Tracks data flow from meter to LSE file creation & delivery



SWAMI Functionality

867 vs AMS Comparison

➤ Next-day report showing 867_03 vs AMS LSE usage compliance

867 Comparison Report
LSM Generator

Date 07/27/2016 Difference >= 500 KWH

[Open SMT Dashboard](#) [Download](#) [Corrections](#)

All REPs All Meters All OPCOs Max Accounts: 300

Repeat Offenders Exclude Different Meter Multipliers

2016-07-27

42104

TOTAL BILLED

Market Compliance : 97.18%

29931

71.09%

Exact Alignment

10985

26.09%

Within +/-2 Times the Meter Mult

1188

2.82%

Not within +/-2 Times the Meter Mult

Not Within +/-2 Times the Meter Multiplier

Account Number	ESIID	Provisi	Billed Usage	Interva Total	Differe	LSM Genera	REP of Record	Billing From	Billing To	Billing Date	MDM Read	Billing Cycle	Multipl Meters	Meter Multipl	Service Order	Repeat Offend	Interva Estimatl Count	Full Cut Day Count	CMM	Tariff Code
9	1003278	<input checked="" type="checkbox"/>	485	3,839	3,354	<input checked="" type="checkbox"/>		6/25/20	7/26/20	7/27/20	<input checked="" type="checkbox"/>	19	<input type="checkbox"/>	1		<input checked="" type="checkbox"/>	2,216	21		855
9	1003278	<input checked="" type="checkbox"/>	995	3,965	2,970	<input type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input type="checkbox"/>	20	<input type="checkbox"/>	1	CH	<input type="checkbox"/>	0	0		857
9	1020404	<input checked="" type="checkbox"/>	93,888	96,229	2,341	<input type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input checked="" type="checkbox"/>	20	<input type="checkbox"/>	600		<input checked="" type="checkbox"/>	0	0	L2	836
9	1003278	<input checked="" type="checkbox"/>	2,322	170	2,152	<input checked="" type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input type="checkbox"/>	20	<input type="checkbox"/>	1	CH	<input checked="" type="checkbox"/>	818	7		820
9	1003278	<input checked="" type="checkbox"/>	957	2,743	1,786	<input type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input checked="" type="checkbox"/>	20	<input type="checkbox"/>	1	RN	<input type="checkbox"/>	58	0		820
9	1003278	<input checked="" type="checkbox"/>	344	1,630	1,286	<input type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input checked="" type="checkbox"/>	20	<input type="checkbox"/>	1	CH	<input type="checkbox"/>	35	0		820
9	1020404	<input checked="" type="checkbox"/>	56,920	58,062	1,142	<input type="checkbox"/>		6/28/20	7/27/20	7/27/20	<input checked="" type="checkbox"/>	20	<input type="checkbox"/>	300		<input checked="" type="checkbox"/>	16	0	L2	836
9	1003278	<input checked="" type="checkbox"/>	484	1,485	1,001	<input type="checkbox"/>		6/25/20	7/27/20	7/27/20	<input type="checkbox"/>	19	<input type="checkbox"/>	1	CH	<input checked="" type="checkbox"/>	2,647	27		820

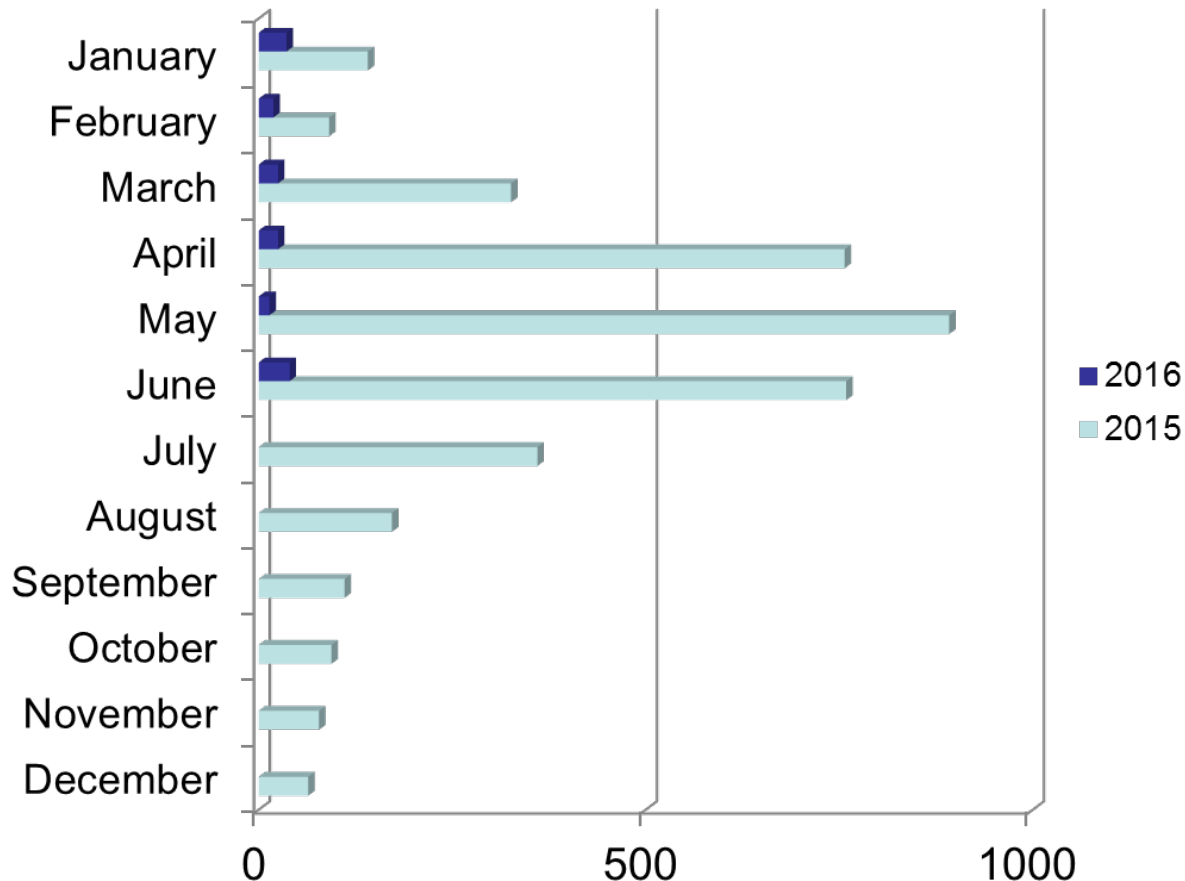


How SWAMI Improves AMS Data

AEP performance for ESI IDs +/- 500 kWh

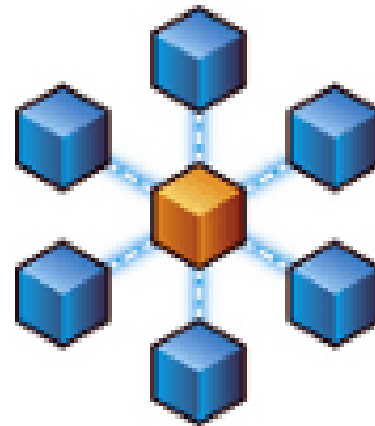
(via monthly/quarterly ERCOT's 867 vs AMS reports)

➤ BAO uses SWAMI's "867 vs AMS Comparison" portlet to work discrepancies



Meter Data Management Upgrade (MDM 2.1)

ORACLE®
DATABASE



MDM 2.1 Functions

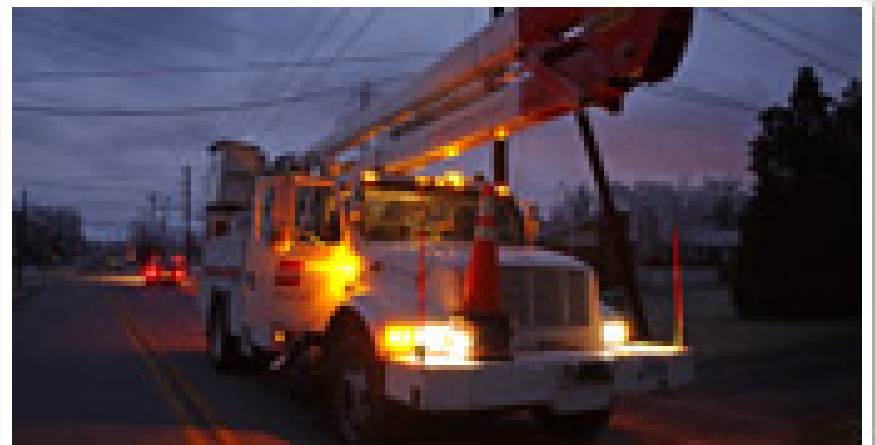
Improved estimation and validations to provide better quality data for billing, settlement and web presentment

- ✓ Robust estimation routines to allow interval estimations from scalar, and scalar estimations from intervals.
- ✓ Full cut estimation routines derived from historical meter load shapes
- ✓ Interval sum check validation, producing exceptions for those that fail
- ✓ Utilizing the interval data to calculate billing determinants using interval data for residential customers when a read is not available.
- ✓ Ability to rebill customer if better quality data becomes available.
- ✓ Importing outage event data for estimation routines. Tags the intervals as actual when outage identified

Revenue Protection items

- ❖ Three phase voltage information to determine loss of phase
- ❖ Identify usage on inactive customers prior to billing cycle
- ❖ Identify zero consumption (stopped meters, or tampered meters) prior to billing
- ❖ Identify meters that are not reporting and are subject to consecutive estimations prior to billing
- ❖ Identifies interval overflow scenarios that identifies meter calibration errors.
- ❖ Identify meters with a low or failing battery.





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ERCOT Retail Market Update

September 15, 2016

Jim Lee
Business Standards Consultant
2016 AEP CR Workshop



ERCOT STAKEHOLDER GROUPS

Board
Of
Directors

Technical
Advisory
Committee
(TAC)

Retail Market
Subcommittee
(RMS)

Reliability
Operations
Subcommittee
(ROS)

Wholesale
Market
Subcommittee
(WMS)

Commercial
Operations
Subcommittee
(COPS)

Protocol
Revision
Subcommittee
(PRS)



WHERE TO PARTICIPATE?

Retail Market
Subcommittee
(RMS)

Commercial
Operations
Subcommittee
(COPS)

Working Groups

Advanced Metering (AMWG)

Texas Data Transport &
MarkeTrak Systems (TDTMS)

Texas SET

Task Forces

Retail Market Training (RMTTF)

Working Groups

Communications &
Settlements (CSWG)

Market Data (MDWG)

Profiling (PWG)



Retail Market Guide Revision Requests

Approved in 2016 (so far)...

2016:

RMGRR136, Switch Hold Removal Process Clarifications (TDTMS)

- Clarifies the supporting documentation requirements submitted by the CR when requesting removal of a Switch Hold by the TDSP

RMGRR137, Timeline and Completion Process for Correcting CBCI Files (TXSET)

- Adds language that clarifies the timeline CRs must follow when re-sending corrected CBCI files back to ERCOT

RMGRR138, Revision to Oncor's Requirement for REPs to Send Prepay ESIID Lists (RMS)

- Removes the requirement for REPs to send weekly list of prepay ESIIDs to Oncor – by request only going forward



Retail Market Guide Revision Requests

Approved in 2016 (so far)...

RMGRR134, Allow AMS Data Submittal Process for TDSP-Read Non-Modeled Generators (RMS)

- Allows the option of using the AMS data submittal process for all TDSP-read non-modeled generators (<1MW)

RMGRR140, Efficiencies for Acquisition Transfer Process (TXSET)

- Allows ERCOT added flexibility to execute an Acquisition Transfer in an expedited manner in an attempt to prevent a Mass Transition event.

RMGRR141, Clarifying Procedures for Market Participants During an Extended Unplanned System Outage (TXSET)



Retail Market Guide Revision Requests

Pending Stakeholder Consideration...

RMGRR132, NOIE Disconnect and Reconnect Process (TXSET)

- Submitted in 2015, provides Non Opt-In Entities (NOIEs) with the ability to disconnect retail Customers for non-payment

RMGRR139, Alignment with NPRR778, Modifications to Date Change and Cancellation Evaluation Window (TXSET)

- Modifies Retail market process to align with changes proposed in NPRR778 which eliminates the 1-day evaluation window currently required by ERCOT when completing a Cancel (814_08) or Date Change (814_12) request.
- Will impact the current Cancel w/ Approval process within MarkeTrak



Other ERCOT Market Initiatives In Progress...

SCR786, Retail Market Test Environment

- Adds a new Retail market test environment that mimics ERCOT's 'production' environment and provides Market Participants a place to perform ad-hoc sandbox testing to fully test internal projects before going live in production.

ERCOT and Smart Meter Texas (SMT) Data Processes Workshops

- Related to PUCT Proj. 42786, Review of Advanced Metering System Web Portals, and PUCT Proj. 46206, Rulemaking Regarding Governance, Performance, and Funding of Smart Meter Texas
- In-depth discussions related to the handling, processing and transfer of AMS data between ERCOT and SMT.

ERCOT Market Continuity Discussions

- What is needed from the Retail Market in the event of a catastrophic incident that may require an entire market restart?



Retail Market Training Now Available!

Remaining Instructor-led Training Opportunities for 2016:

- Retail 101 - Tuesday, September 27th
- MarkeTrak Training - Wednesday, September 28th

MarkeTrak System Application Web-Based Training:

- Available 24 x 7!!
- Register via ERCOT LMS (Learning Management System)
- Modules currently offered:
 - Overview
 - Inadvertent Gain/Loss
 - Switch Hold Removal
 - Cancel With/Without Approval
 - Usage/Billing Disputes
 - Additional Day-To-Day Subtypes
 - Bulk Insert



Didn't know of these changes?

ERCOT ListSerts help you stay up-to-date with the most current ERCOT activities including Market Notices, Market Guide and Protocol revisions, and opportunities for participation.

To subscribe, go to lists.ercot.com

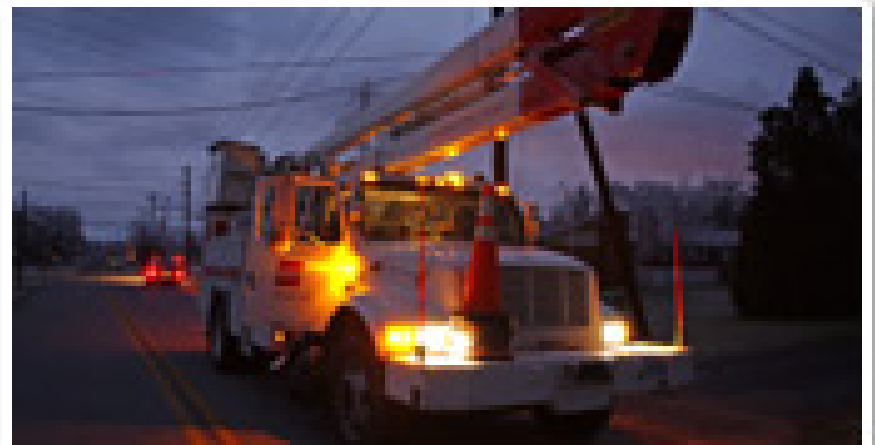
ListSerts that support the ERCOT Retail Market:

- AMWG
- COPS
- CSWG
- INDEPENDENTREPSEGMENT
- MARKETRAKAPI/MARKETRAKGUI
- MDWG
- MISUSERGROUP
- NOTICE_EXTRACTS_RETAIL
- NOTICE_RELEASE_RETAIL
- NOTICE_RETAIL_OPERATIONS_ISSUES
- NOTICE_RETAIL_PROCESSING
- NOTICE_TESTING_RETAIL
- NOTICE_TRAINING
- PROFILING WG
- RETAILOPERATIONSISSUES
- RMC
- RMS
- RMTTF
- TDTMS
- TXSET



Questions





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Regulatory Updates

David Hawk
Regulatory Manager



Riders

- TC -In effect for 14 years from February 2002, ending with February bills in 2016
- Rider TC Refund – In effect for 3 months beginning August 29, 2016.
- TC2: In effect for 14 years from October 2006, ending with October bills in 2020.
- TC3: In effect for 12 years and 7 months from March 2012, ending with October bills in 2024.



DCRF

- Effective September 1, 2016
- Allows recovery distribution capital investments made since the last base rate case proceeding. The DCRF is a mechanism that allows utilities to recover investment in distribution infrastructure in a timely manner.



TCC TNC Merger

On June 15, AEP Texas Central Company (TCC) and AEP Texas North Company (TNC) filed a request with the Public Utility Commission of Texas (PUC) seeking approval of a proposed merger for TCC and TNC, ultimately, under the AEP Texas name. Merging the two legal entities into a single company will align the legal structure of AEP Texas with the current organizational and operational form. A similar request will be filed with the Federal Energy Regulatory Commission (FERC).

Why is AEP Texas consolidating TNC and TCC?

There are three primary drivers for the proposed merger of TCC and TNC into a single TDU:

- **Access to Financing.** With this proposed merger, TCC and TNC will be able to issue one set of financing instruments as AEP Texas. The proposed merger will create a bigger and stronger financial platform from which to access financial markets, which will support the continued and increasing investment in the transmission and distribution grid needed to provide reliable service to customers.
- **Efficiencies in Financial Reporting.** The proposed merger will allow the elimination of duplication in the production of financial statements currently filed by TCC and TNC. The elimination of duplication will conserve the resources of TCC and TNC, as well as that of other parties in the review of such filings.
- **Efficiencies of Regulatory Filings.** The proposed merger will promote efficiency in regulatory filings (eliminating and consolidating filings), thereby conserving resources of TCC and TNC, the Commission, and other parties that participate in regulatory proceed



TCC TNC Merger

Will the rates or tariffs change?

No, the filing requests continuing the same rate structures that are currently in place for TCC and TNC. We will create two divisions: AEP Texas–North Division and AEP Texas–Central Division. Our intent is to keep the existing rates and tariffs for these two divisions in place. It is possible a future decision will be made to change rates and tariffs. That decision will be guided by what is best for customers and our company.

When do you anticipate this effort being finalized?

Our goal is to have the consolidation finalized by the end of 2016.

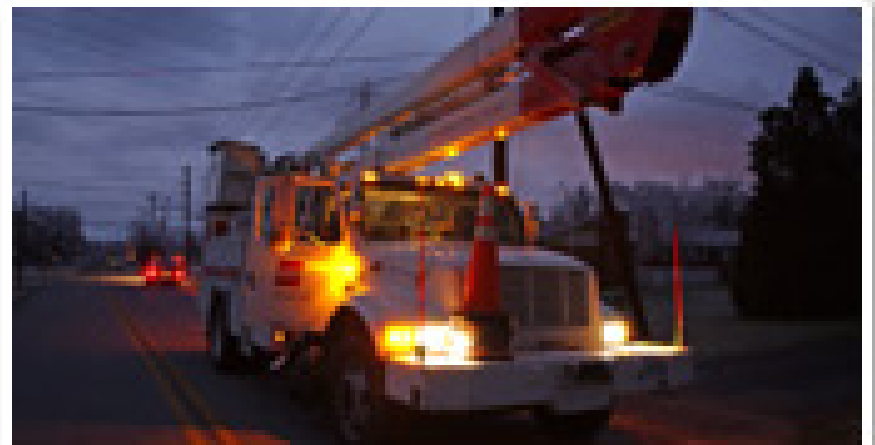
Will service to customers change in any way?

No, this change will not affect our organization or our ongoing commitment to enhance the customer experience.

Will any jobs be eliminated as a result of combining companies?

No. The only impact on employees is that a few employees may be moved from the service company to the new AEP Texas entity. The proposal will not entail reducing jobs. We are consolidating companies to model how we already are operating.





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September 15, 2016



Distributive Energy Resources

Distributed Generation Coordinator

Blake Burchard

933 W. 19th St.

San Angelo, TX 76903

325-657-2733

rbburchard@aep.com

www.aeptexas.com

Customer Owned Generation – tab at bottom of
home page







**AUTOBODY COLLISION
TECHNOLOGY BUILDING**


P
Autobody
Collision
Technology











We are

AEP TEXAS



Distributive Energy Resources

Distributed Generation Coordinator

Blake Burchard

933 W. 19th St.

San Angelo, TX 76903

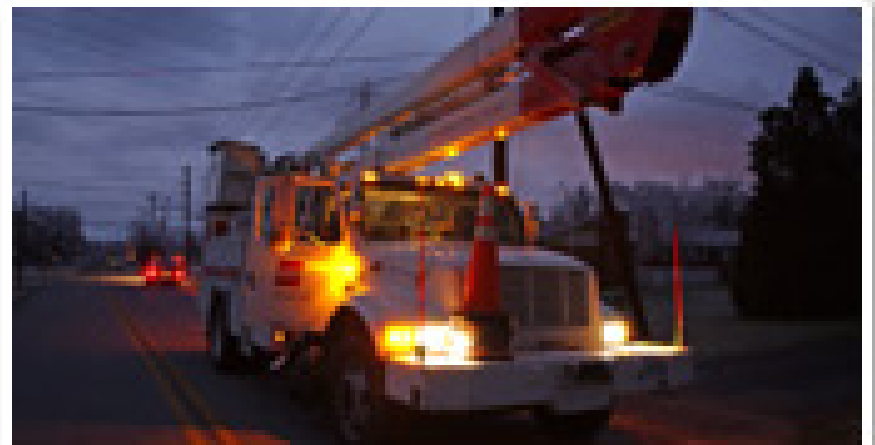
325-657-2733

rbburchard@aep.com

www.aeptexas.com

Customer Owned Generation – tab at bottom of
home page





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September 15, 2016



Energy Diversion / Revenue Protection

Ernie Godoy

Supervisor AMI Technical Support
&

Martin Magana

Revenue Protection Coordinator



AMI Analytics Development and Revenue Protection

AEP-Texas

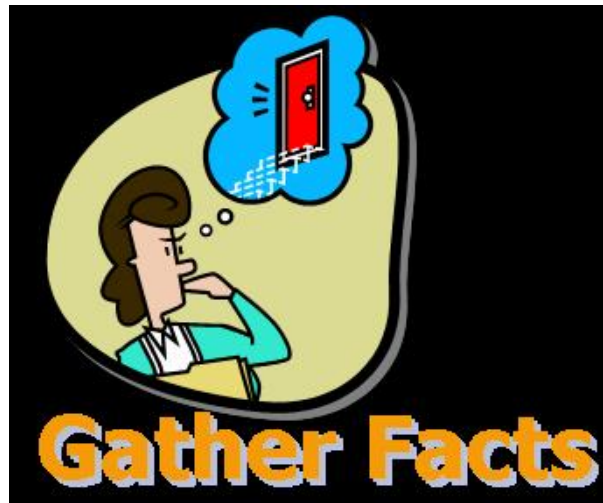


Data , Data, Data.....It's everywhere

Now that AEP Texas has deployed over a million meters in its service territory, what's next?

Advanced meters are capable of providing much more data than just energy consumption

For example, advanced meters are capable of capturing interval data, bi-directional data, temperature, recognizing if the meter is inverted or turned upside down, loss of phase voltage, hi or low voltages, power outages and much, much more.



GRID/METER ANALYTICS

Purpose: to provide actionable intelligence about the grid to enable field personnel to prevent/mitigate outages and other service disruptions

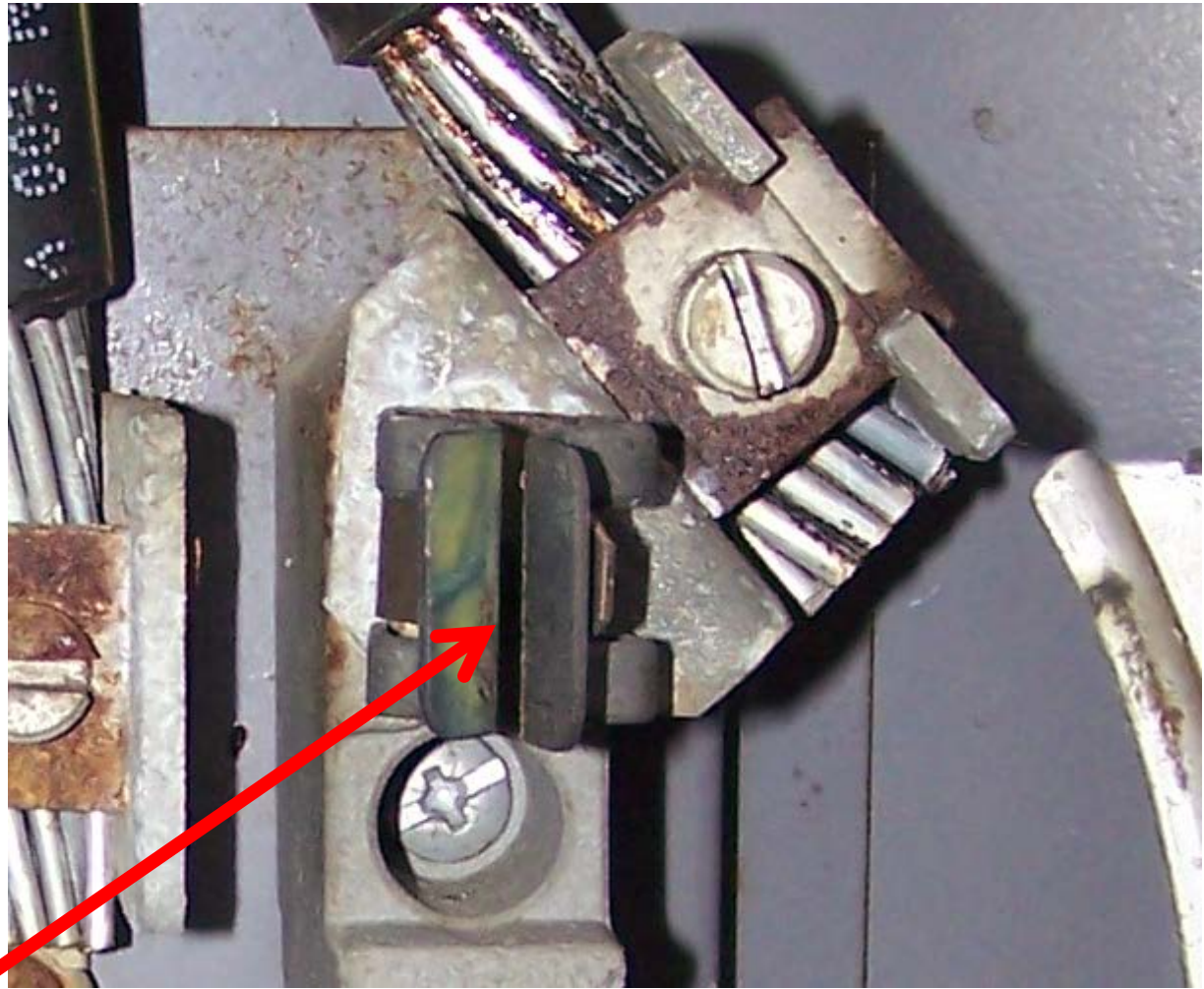
Detect and Identify Customers who may be tampering with a meter and recover lost revenue as quickly as possible



Hot Socket Detection

Monitor daily meter temperature to the average meter.





Tin plating on jaw "cooked"



WHAT ARE LIKELY SOCKET CONCERNS

Sprung/damaged jaw

Loose wire termination at line or load side jaw

Meter blade beside and not into socket jaw

Worn line/load wire insulation arcing over to grounded mounting box

Total loads exceeding socket capacity – lots of older 100 amp services in the field

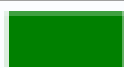


AEP-Texas has been experiencing customers who have been placing resistors in the current circuit



Front of the home

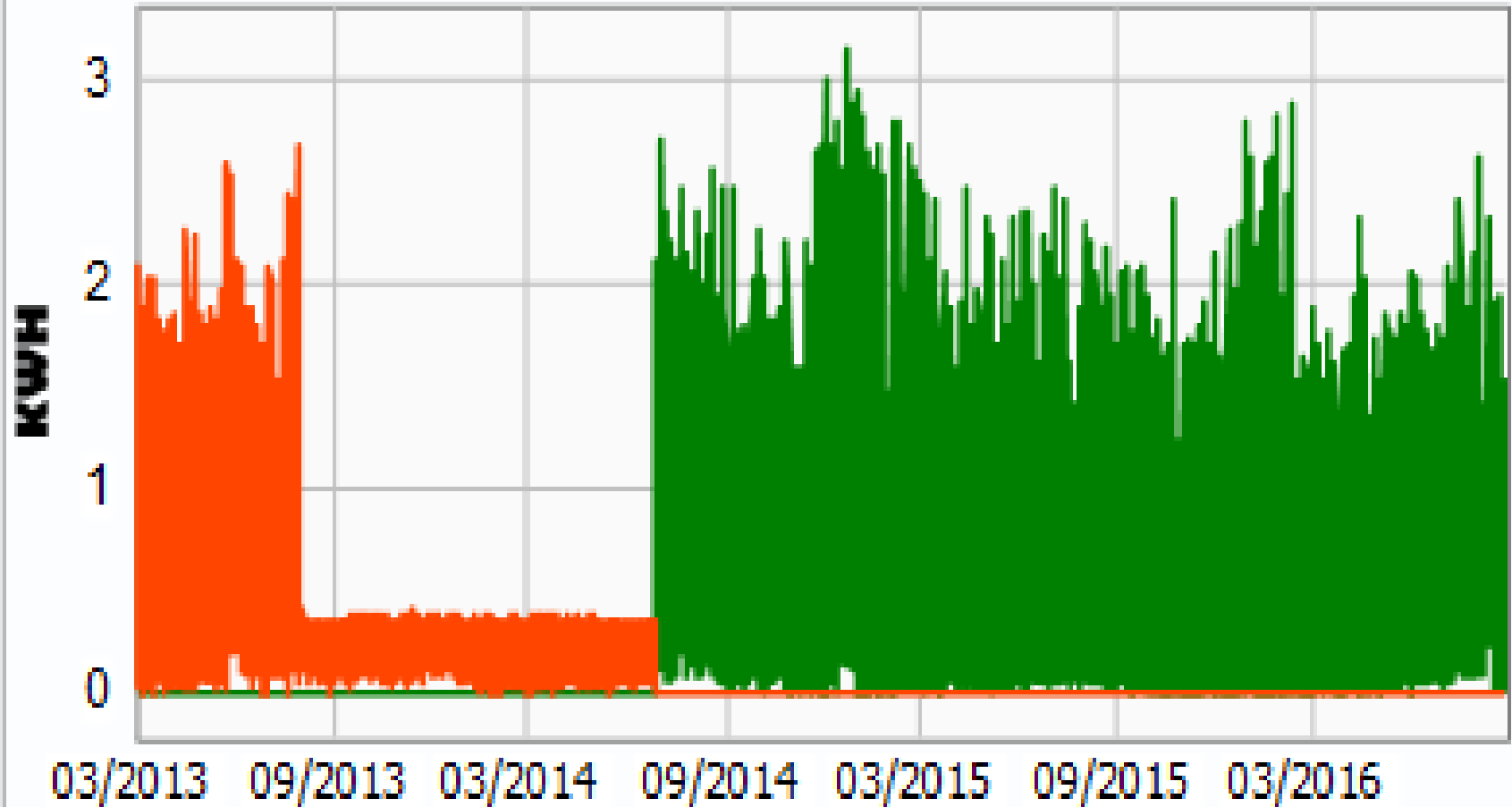




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3/1/2013 11:15:00 - 8/24/2016 23:59:59



KV2C Site Genie Analysis

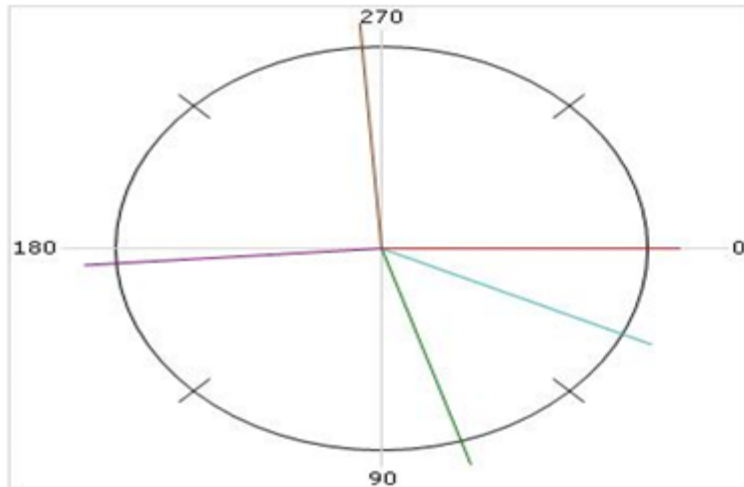
Monthly query to look for zero/missing/low voltages , Broken Ct or PTs, poor connections, bad neutral wire, bad cable, Service incorrect, etc.

Phase Voltage Report for Meter [REDACTED]

Instantaneous Data

Reading Date: 5/20/2016 3:07:00 PM

Phase Diagram



Phase Data

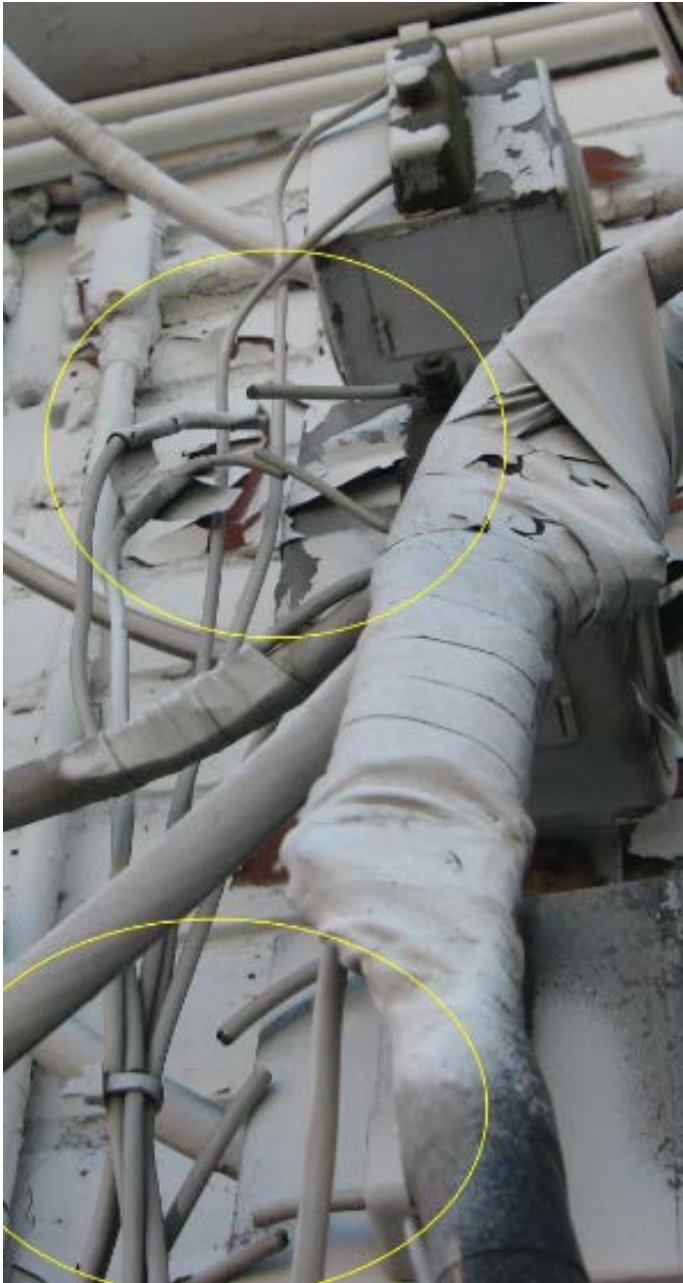
	Voltage (Volts)	Angle (Degrees)
Phase A	117.500	0.000
Phase B	117.500	0.000
Phase C	0.000	72.600

	Current (Amps)	Angle (Degrees)
Phase A	2.100	25.100
Phase B	2.200	265.800
Phase C	2.200	175.800

Demand Data

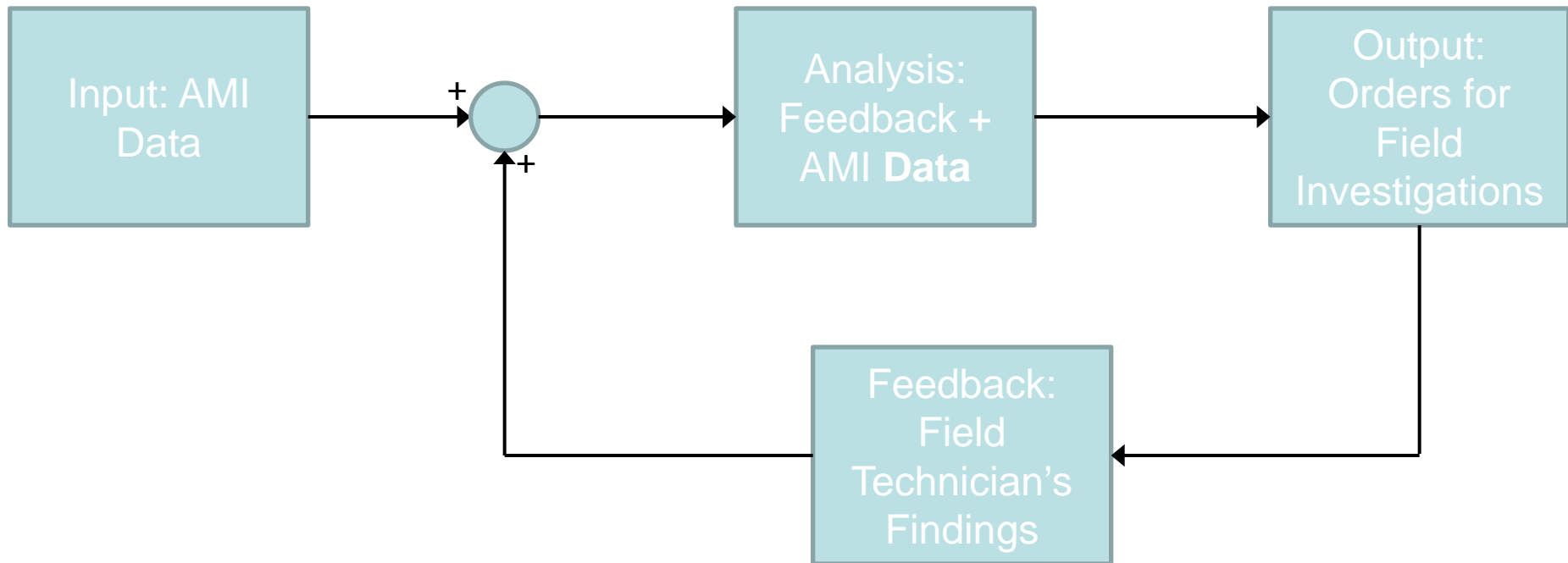
W
VA rms
VA td
VAR td
Power Factor





Feedback is critical to Analytical Analysis

- The Feedback is used to evaluate the analysis process to make output more accurate, typical of a control system.



Benefits of Data Analytics

Remote resolution of non communication events,
reducing truck rolls and improving reliability

PUC complaint monitoring and remediation
effectiveness

Meter and meter equipment analysis and alarms to
determine failed or faulty equipment

Analytics

Failed VT's/CT's

Blown fuses

Miswired CT's

Bad Control Cable

Theft



We are

AEP TEXAS®

AEP TEXAS MAIN MISSION

Deliver Electric Service Safely and Reliably to our Customers while earning a competitive return for investor

Enhancing the Customer experience which includes our Electric Retail Providers is one of our main objectives.







ZERO HARM

No one gets hurt and everyone goes home in the same or better condition than they came to work.



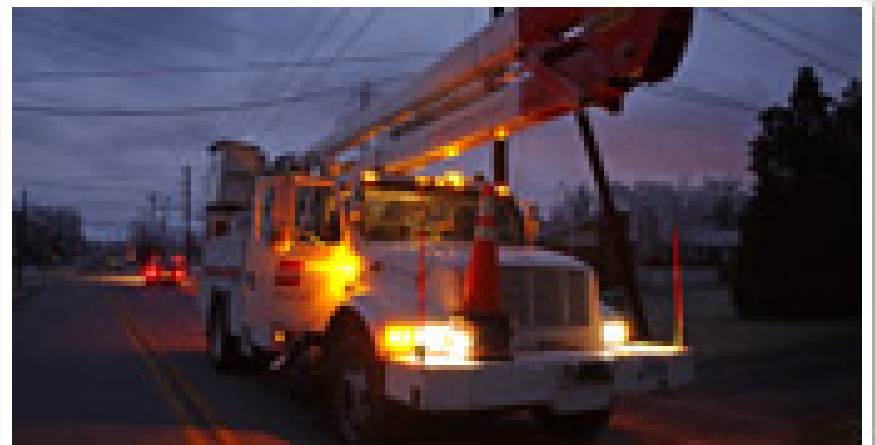
Leads

- Customer Solution Center
- Retail Electric Provider or REP
- www.ReportPowerTheft.com



QUESTIONS





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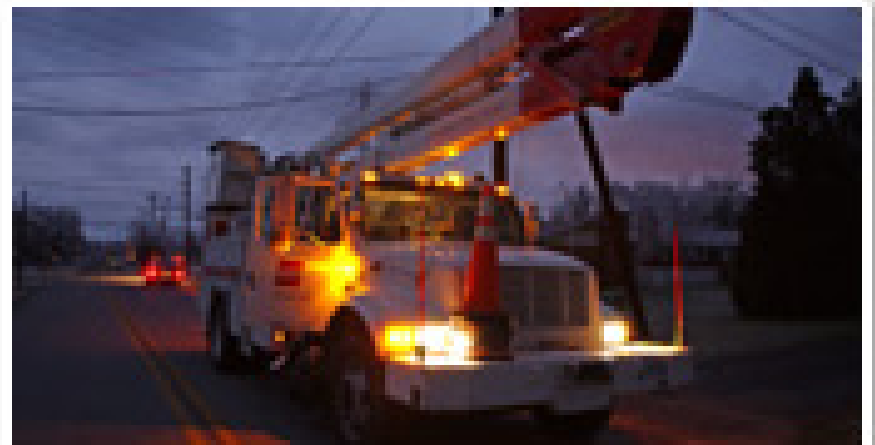
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REP Desk

Jesse Macias
CRR Account Manager





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Energy Efficiency & Demand Response Programs

Robert Cavazos

Manager EE/DR Programs Manager





AEP Texas

2016 Energy Efficiency Programs

Residential Programs	Non-Residential Programs
CoolSaver [®] AC Tune-Up MTP*	Commercial SOP
Efficiency Connection (Pilot)	Commercial Solutions MTP
Hard-to-Reach SOP	CoolSaver [®] AC Tune-Up MTP
High Performance New Homes MTP*	Irrigation Load Management MTP
Residential Demand Response (Pilot)	Load Management SOP
Residential SOP	Open MTP
SMARTSource SM Solar PV MTP	SCORE/CitySmart MTP
Targeted Low-Income Weatherization	SMARTSource SM Solar PV MTP

* AEP Texas Central Only

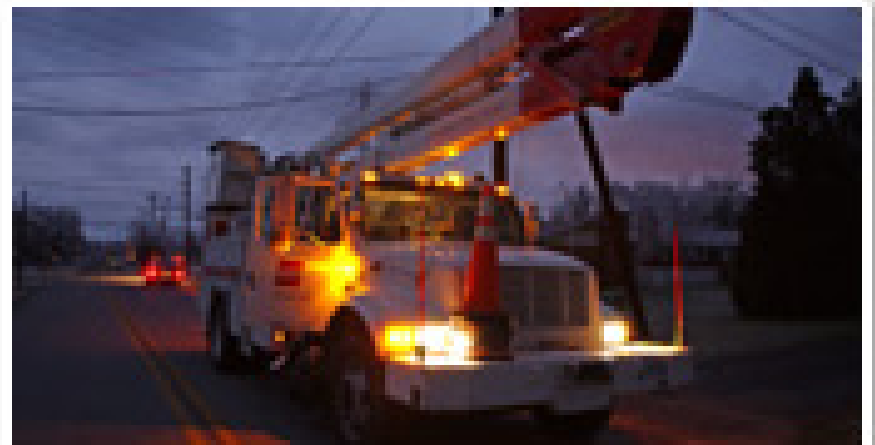


For More Information

- Visit **AEPTexas.com/Save** for information on specific programs of interest and answers to Frequently Asked Questions (**FAQs**).
- Look for low-cost/no-cost improvements from participating contractors and vendors.
- Other sources:
 - State Energy Conservation Office (**seco.cpa.state.tx.us**)
 - Statewide utility programs (**TexasEfficiency.com**)







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Peace of mind
has a new ring tone.



**2016 CRR
Workshop**

Mobile Alerts

+

Outage Mapping

Julie Walker, Customer Operations Supervisor
Omar Lopez, Corporate Communications Manager



MOBILE ALERTS + OUTAGE ALERTS

ACTIVATE OUTAGE ALERTS AT
AEPTEXAS.COM

OUTAGE ALERTS CAN BE

 TEXT MESSAGES **OR**  EMAILS

- Launched in 2015
- *FREE!* service to customers on AEP Texas lines
- Notifies customers if a power outage is occurring at their registered residence
- If possible, a reason for the outage is listed
- Bonus: Estimated time of restoration if determined



MOBILE ALERTS BENEFITS



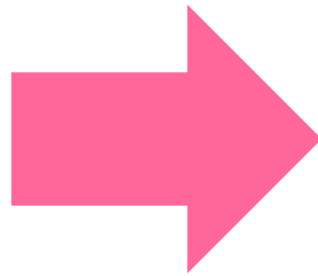
Mobile Alerts offers:

- Peace of Mind
- Information is the key to empowerment
- Smart approach to managing life



MOBILE ALERTS + OUTAGE ALERTS

- Mobile registration process is as easy as it gets for Texas
- Mobile Alerts is the Oscar-winning sequel
- OUTAGE ALERTS is the original



OUTAGE ALERTS AUTO-ENROLLMENT

Peace of mind
has a new ring tone.



You will be receiving automatic email notifications when the power goes out and when it's expected to be restored.



As your energy delivery company, AEP Texas makes sure your power is delivered safely and reliably. We are excited to offer this free service that keeps you informed when the lights go out.

We will be using the email address you provided the company to automatically



OUTAGE ALERTS DATA

AEP Texas Opt-out universe				
All registered accounts with email addresses	Accounts not enrolled in alerts (only active accounts included)	Duplicate web IDs removed	Duplicate account numbers removed	Duplicate email addresses removed
34,518	28,482	26,692	25,974	24,935
Wave 1	Wave 2	Wave 3		
8,311	8,311	8,313		
Enrolled 7/19	Enrolled 7/26	Enrolled 8/3		
7,463	7,466	7,341		
Total pilot enrollments				
22,270				



OUTAGE ALERTS DATA

AEP Texas email statistics					
Wave 1 July 7		Wave 2 July 18		Wave 3 July 25	
Sent	8,153	Sent	7,929	Sent	8,136
Hard Bounce	561	Hard Bounce	346	Hard Bounce	566
Soft Bounce	83	Soft Bounce	71	Soft Bounce	82
Delivered	7,509	Delivered	7,512	Delivered	7,488
Delivery rate	92.10%	Delivery rate	94.74%	Delivery rate	92.04%
Unique opens	2,174	Unique opens	2,119	Unique opens	2,195
Open rate	28.95%	Open rate	28.21%	Open rate	29.31%
Unique clicks	214	Unique clicks	127	Unique clicks	215
Click rate	2.85%	Click rate	1.69%	Click rate	2.87%
Opt-out link	9	Opt-out link	31	Opt-out link	10
Unsubscribe	13	Unsubscribe	7	Unsubscribe	8
Unsub rate	0.17%	Unsub rate	0.09%	Unsub rate	0.11%





OUTAGE MAPPING FOR THE FUTURE

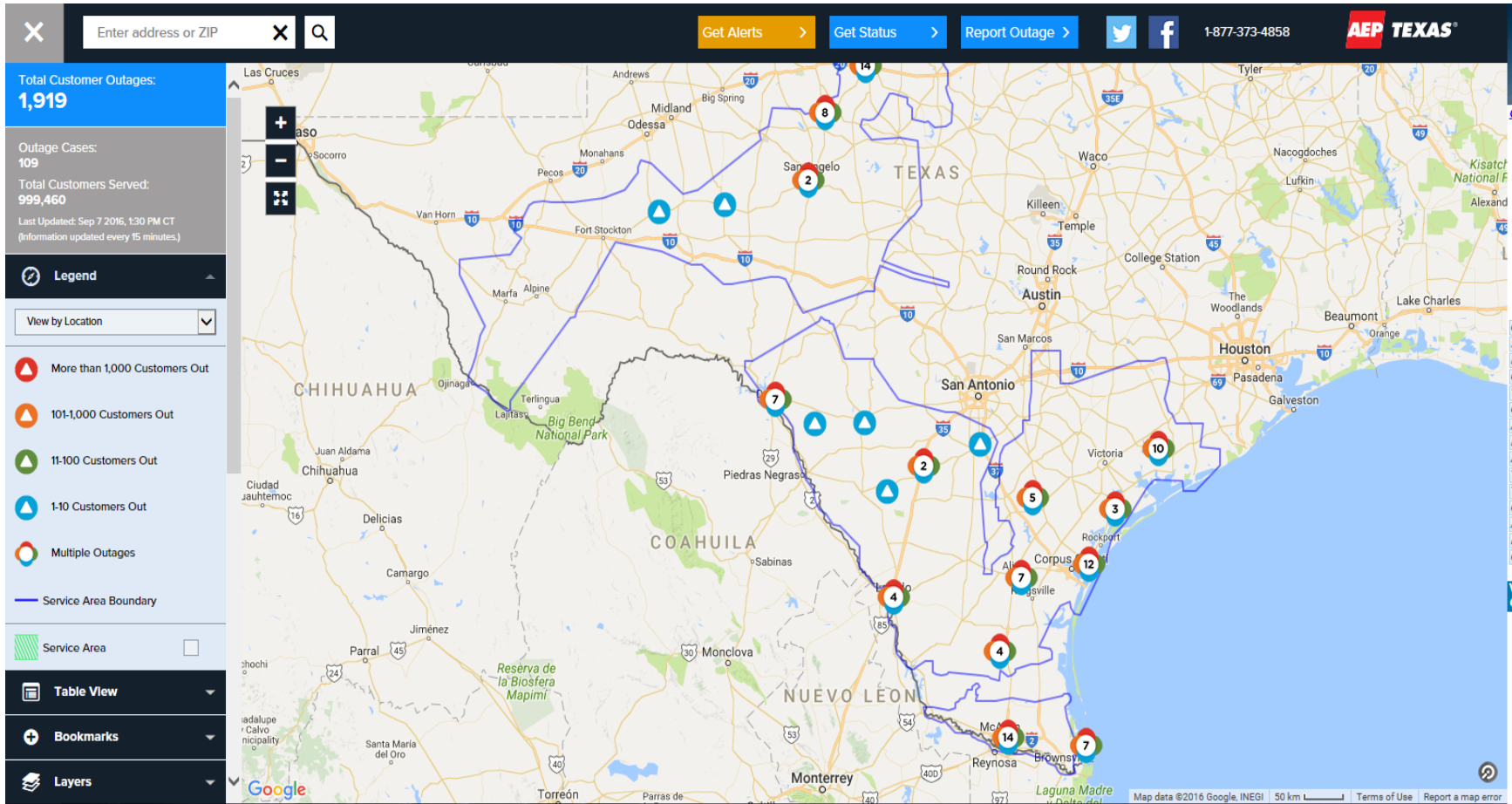


iFactor Outage Mapping

- Google Maps platform
- Interactive customer experience
- AEP Service Territory overlay
- Consistent outage data across all channels
- Outage data is pulled from OMS-TERS and sent to iFactor every 15 minutes, 24/7/365 (excluding partials and planned)
- Outage data displayed as color coded icons and area polygons
- Google analytics reporting on web traffic
- Mobile enabled with phone dialer
- Video tutorial on the site, Help and FAQ documents
- Alerts banner



iFactor Outage Mapping

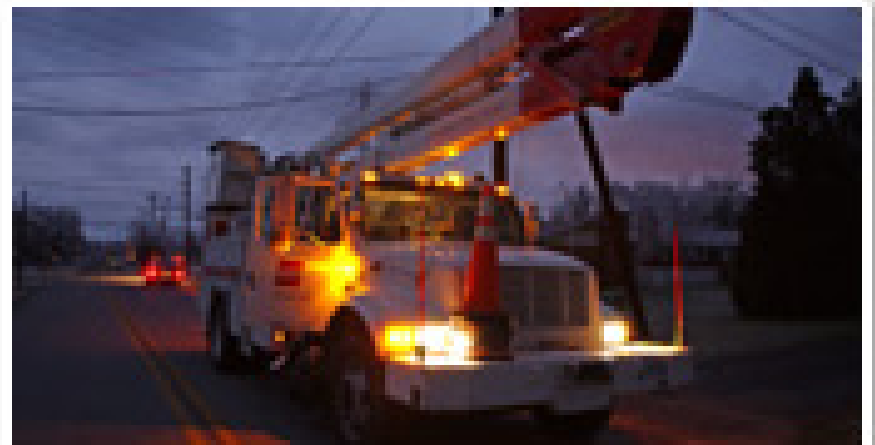


iFactor Outage Mapping – Project Status

- Currently testing 7 OPCO sites
- Demos and training plans
- Production deployment plans
- Roll out and communications plans
- Deployment Target: January 2017

**THANK
YOU!**



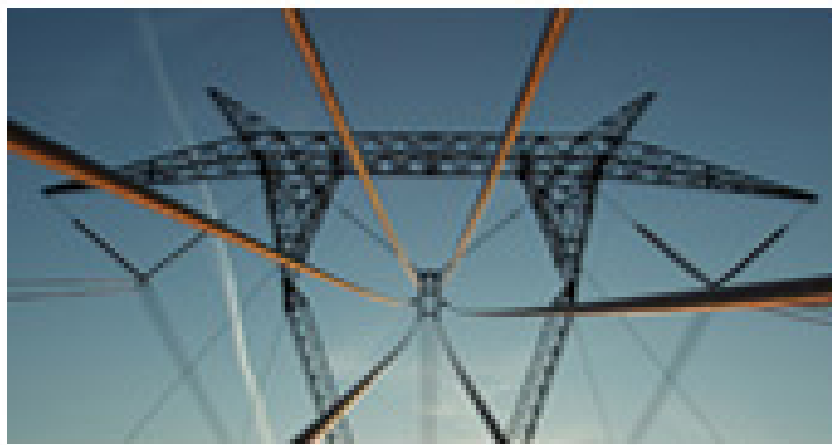


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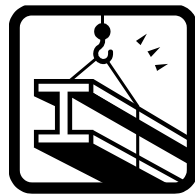


AEP Texas Managed Accounts

Robert Knowles, P.E., C.E.M.
Manager of Customer Service

Customers

High Volume



Critical Life Safety

Political

Significant Activity



Potential



Customer Wants

Single Point of Contact

Information

To Feel Valued

An Advocate

A Partnering

Relationship





Building Better Relationships

Annual Operational Meetings

Establish Clear and Realistic Expectations

Understand the Customer's Organization

Show Appreciation

*Get to know me and let me get to know
you!*

Managed Accounts Team

Customer Service Account Managers

- Mario Garcia, Rio Grande Valley
- Patrick King, Corpus Christi
- Paulino Lucio, Laredo
- Ricky Miller, Abilene and San Angelo

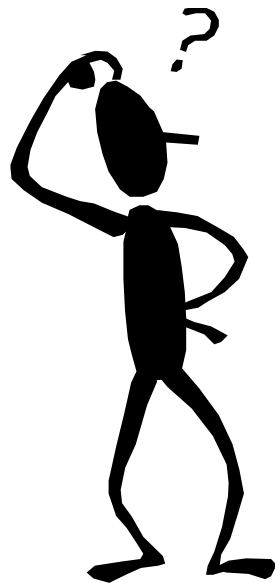


Customer Service Engineers

- Carroll Etheredge, P.E.
- David Mena, P.E.
- Chad Tomanec
- Heath Van Zandt

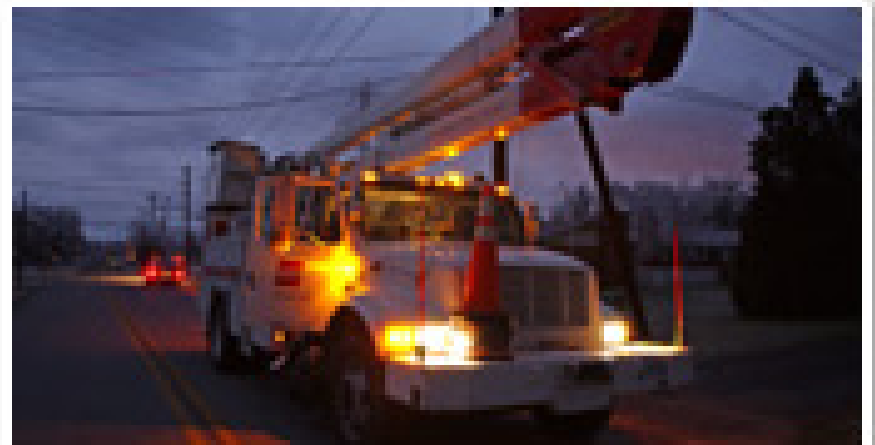


Illustration by Chris Gash



Questions?



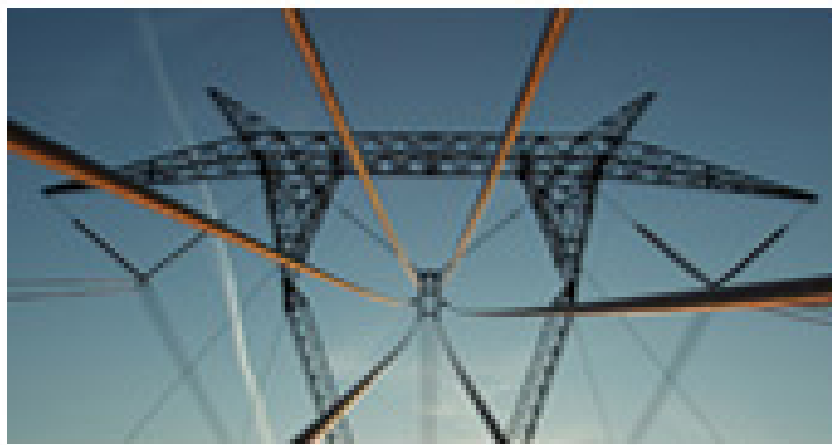


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Distribution Line Training

Mark Young

Distribution Human Performance Tech
Training Specialist



AEP Distribution Line Training

“Committed to train employees to perform their work safely and effectively”

We are

AEP TEXAS®

AEP Distribution Line Training

- Every new hire is admitted into the Apprenticeship Training Program
- The Apprenticeship Training Program is an “Up or Out” program
- Over the course of 4 years must attend and pass 17 weeks of formalized class room training at one of the (7) Line Schools in the AEP system, in conjunction with 8000 Hrs. OJT.
- AEP has 550 apprentices enrolled in the program, with AEP Texas accounting for 120 of those

We are

AEP TEXAS®

AEP Distribution Line Training

- In order to graduate student must complete over 150 module tests by 100%
- Show “hands on” proficiency in safety related work practices per OSHA 1910.269 such as;
 - Use and Care of Personal Protective Equipment
 - Identify live/energized live parts and equipment
 - Aerial Lift Procedures,etc
 - Pole Climbing!!!!!!



We are

AEP Distribution Line Training

Training Level	Sequence of Training
D-100 Series	At Hire or Transfer
D-200 Series	Completed Between 3rd-6th Month On The Job
D-300 Series	Completed Between 6th-12th Months On The Job
C-100 Series	Completed Between 12th-18th Month On The Job
C-200 Series	Completed Between 18th-24th Month On The Job
C-300 Series	Completed Between 24th-30th Month On The Job
C-400 Series	Completed Between 30th-36th Month On The Job
B-100 Series	Completed Between 36th-42nd Month On The Job
B-200 Series	Completed Between 42nd-48th Month On The Job

We are

AEP Distribution Line Training

- AEP Texas Apprenticeship Program is certified by :



We are

AEP Distribution Line Training

AEP Texas Apprenticeship Program is certified by

United States Veterans Administration, Dept. of Veterans Affairs

Qualifying Veterans receive “G.I. Bill” monthly benefits



We are

AEP TEXAS®

AEP Distribution Line Training

- Graduating Apprentices receive 45 credited hours toward an AAS degree

**If you have questions
about this program or you
are interested in pursuing
this degree, contact the
Office for
Non-Traditional Programs**

**at
(340) 424-8272 or
(304) 424-8321**

www.wvup.edu/Flex_degrees

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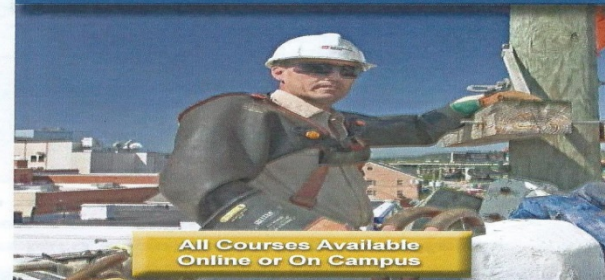
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Associate in Applied Science Degree

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**in Partnership with
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**All Courses Available
Online or On Campus**



Parkersburg
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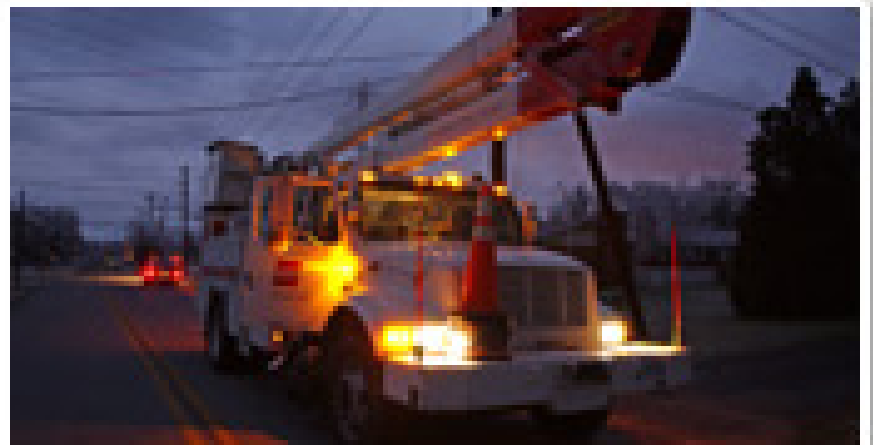


AEP Distribution Line Training

QUESTIONS ?

We are

AEP TEXAS®



We are



AEP Texas Reminds Y'all to be Safe:

Please arrive home in the same or better condition than when you arrived in Corpus.

