

TMEPA Meeting

Pre-Paid Metering

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Bruce Russell

Director, Smart Grid Solutions

Elster Solutions

Hometown Connections[®]
DELIVERING VALUE TO PUBLIC POWER

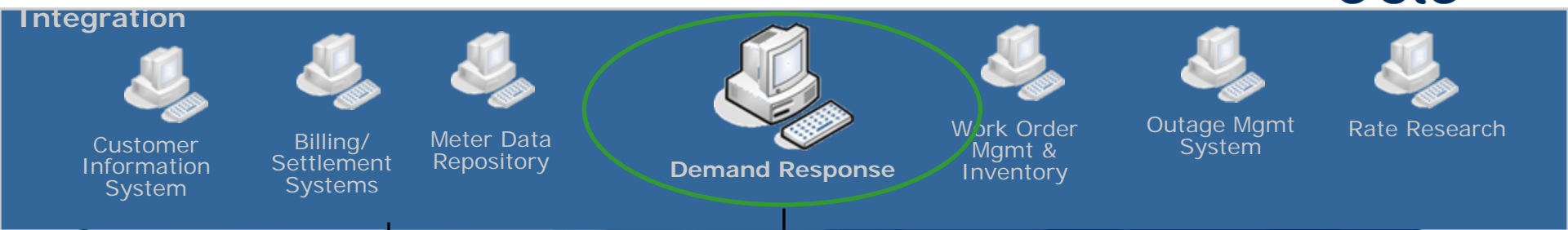


Pre-Paid Meters

Presentation Agenda

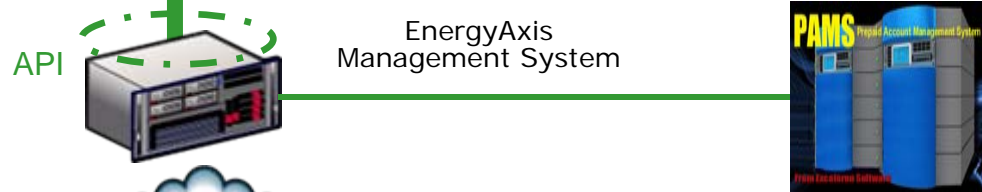
1. What is pre-paid Metering?
2. How does pre-paid metering fit into the Smart Grid?
3. What are the Business Drivers?
4. Background & Technology
5. Administrative issues
6. Challenges
7. Advantages & Benefits
8. Case Study
9. Keys to Success
10. Conclusion

Demand Response



**Open,
Interoperable
Communications**

**DR network
leverages two-way
AMI communications
infrastructure**



ZigBee HAN

In-Home Displays

Load Control & Programmable Controllable Thermostats (PCTs)

900 MHz HAN

In-Home Displays

Pre-Paid Metering Smart Grid Applicability

- As a component of the smart grid, prepayment provides the consumer with awareness of energy usage, becoming better informed as a result, enabling choice, thus promoting energy efficiency as the outcome
- Prepayment Options are available today, providing utilities with the flexibility and scalability needed to realize the smart grid
- Load-shedding tool for higher risk customers; available to any and all customers.....

Energy Usage Awareness for the Consumer

- Better informed
 - ✓ Consumption typically available daily
- Enables choice
 - ✓ Easier budgeting. Pay less, but more often
- Promotes Energy Efficiency
 - ✓ Reduce consumption, typically 10%-15%

Drivers are universal:

1. Technology
2. Administrative (Accounting & Billing)
3. Customer Service

Addressing these Business & Demand Drivers will allow you to:

- Address the 80 / 20 rule
- Consumers with bad or no credit are able to avoid / recapture large deposits
- Consumers in arrears are able to avoid disconnection by switching to prepayment (and payoff arrears over time)
- Better informed customers - never surprised by large utility bills
- Feedback gives them control over usage
- Informed consumers tend to use 10-15% less energy

Pre-Paid Metering Platforms



There are two major technology platforms for a pre-paid metering program

1. Hardware

- Requires a specialized pre-paid meter
- May increase the utility's cost
- Does not promote standardization

2. Software – integrated to your Head-end system

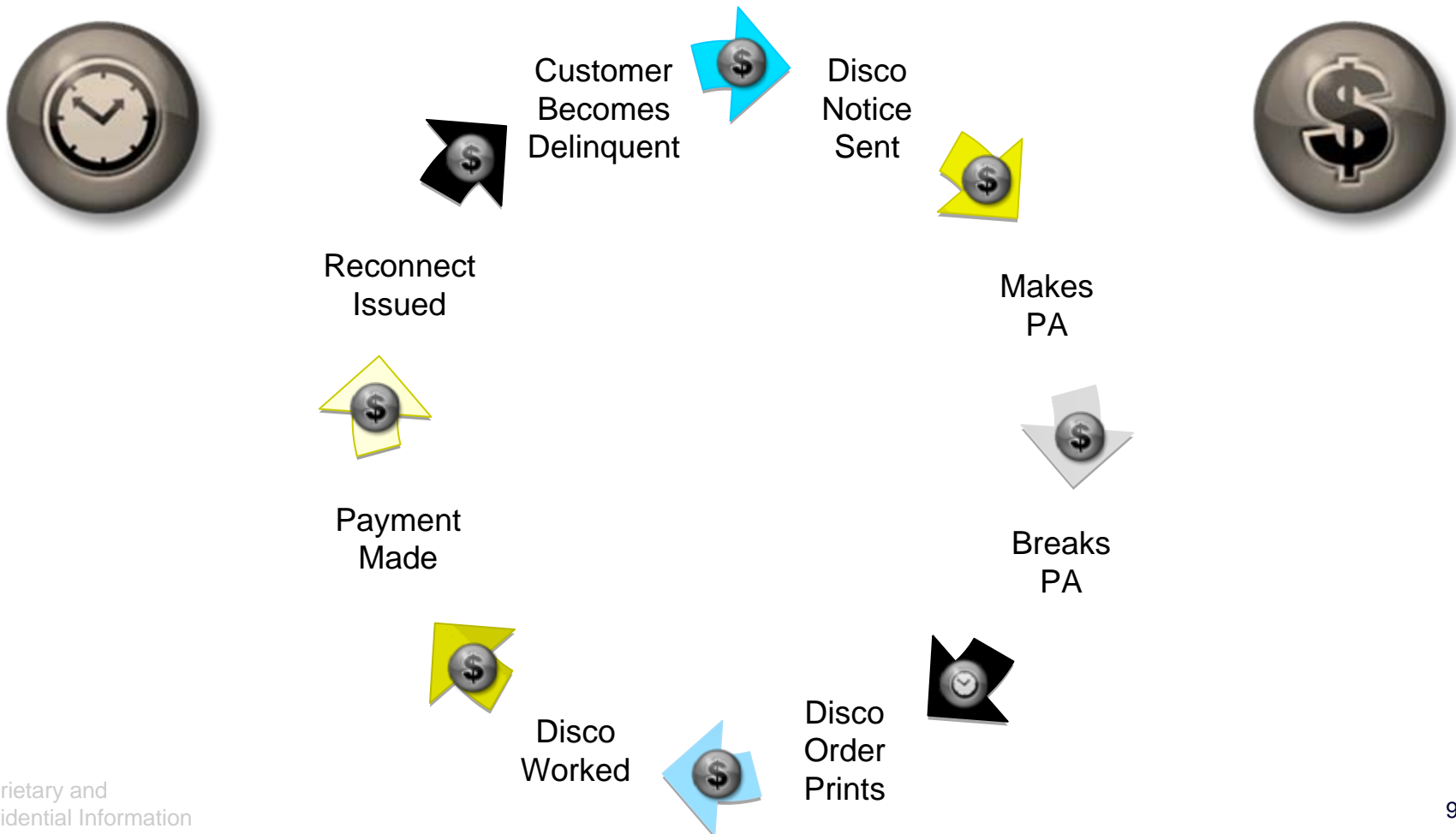
- Smart Meter with remote disconnect and two-way communications
- Web-based Hosted Solutions
- Consumer Portals
- Ability to track using existing technologies

Challenges Facing the Utility Industry

- Higher deposits required due to increased cost of power
- Frequent communication with consumers is costly
- Repayment plans are difficult to setup and maintain
- Prepaid is a departure from traditional billing methods
- Culture change from a traditional post paid environment.



Utility Opportunity: Reduce their Delinquent Cycle



Existing Pre-Paid Models

Existing prepaid technologies may require:

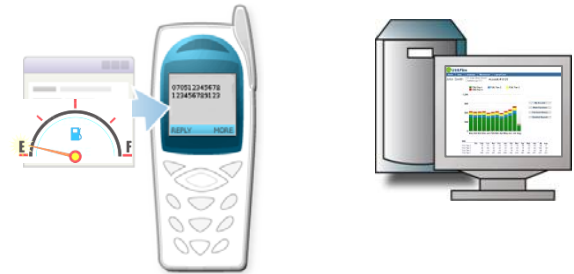
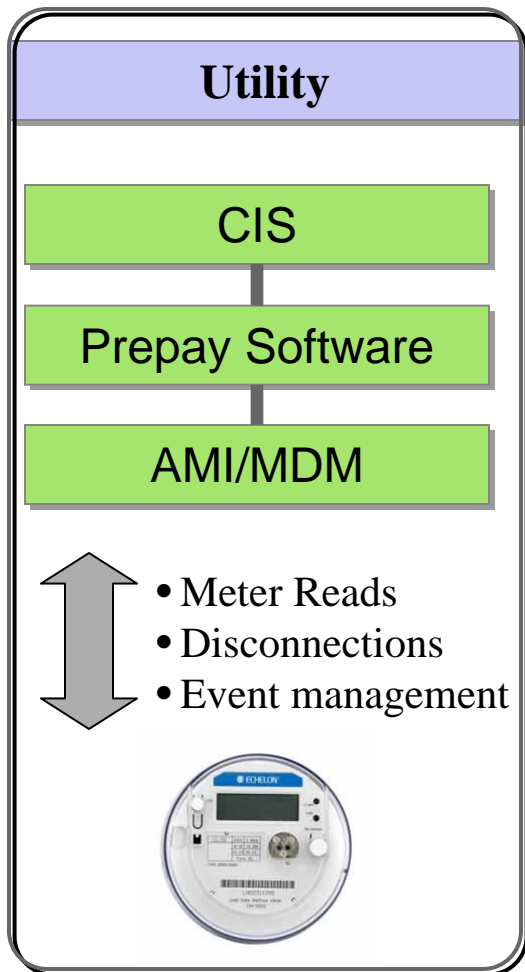
- Consumers to visit a kiosk or agent to recharge their account
- Regular service and maintenance of kiosks
- In-home terminals
- A smart card or token
- Additional software to be installed and maintained
- Consumer must be home to receive notification



Software / Web-based Application

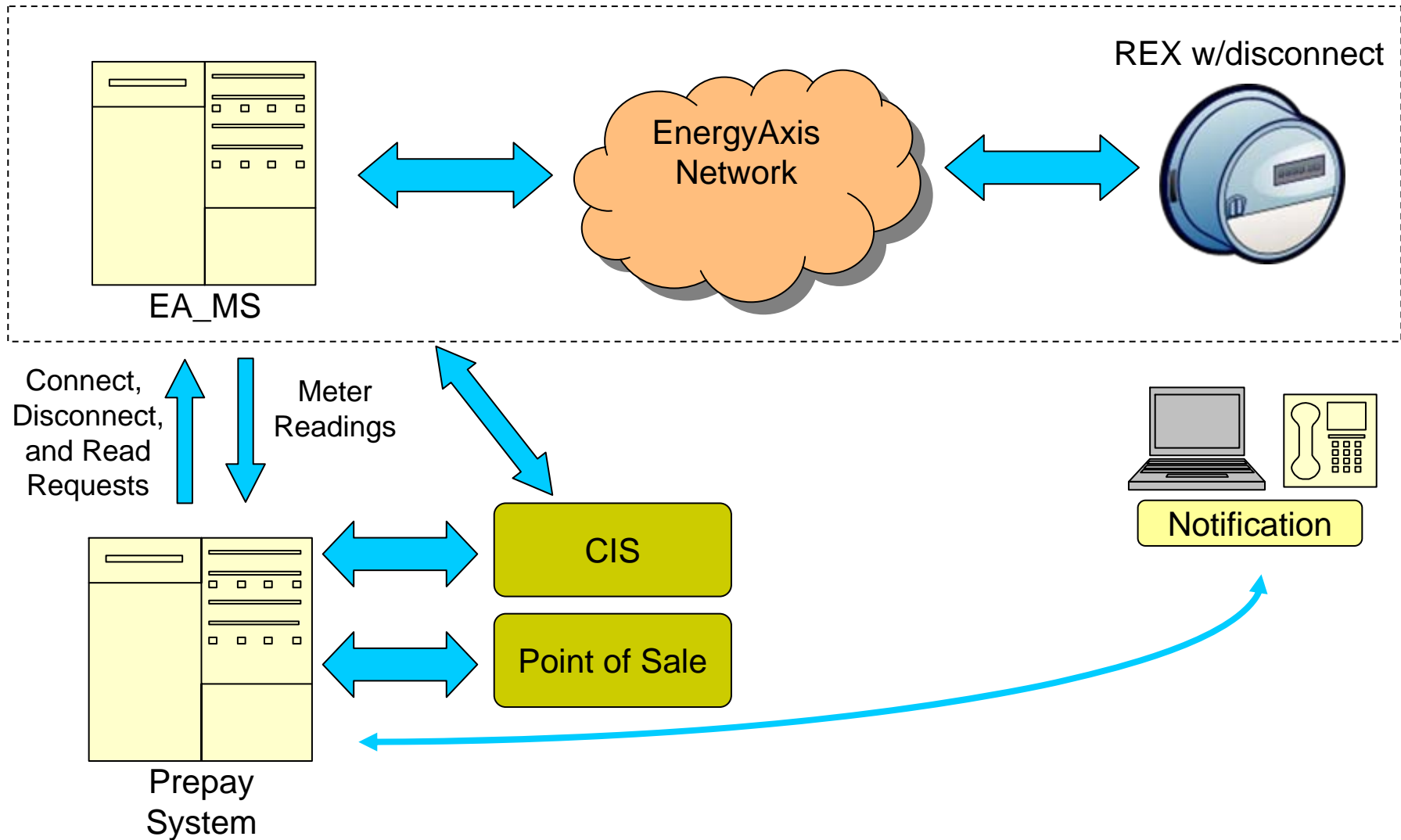
- ✓ No unique meters required
- ✓ No expensive hardware to add / maintain
- ✓ Supports existing payment methods
- ✓ Powerful alert / communication platform(s)
- ✓ Provides support for remote disconnect capability
- ✓ Seamless integration with AMI and CIS
- ✓ All customers have access using various technology & communication platforms

AMI Prepayment

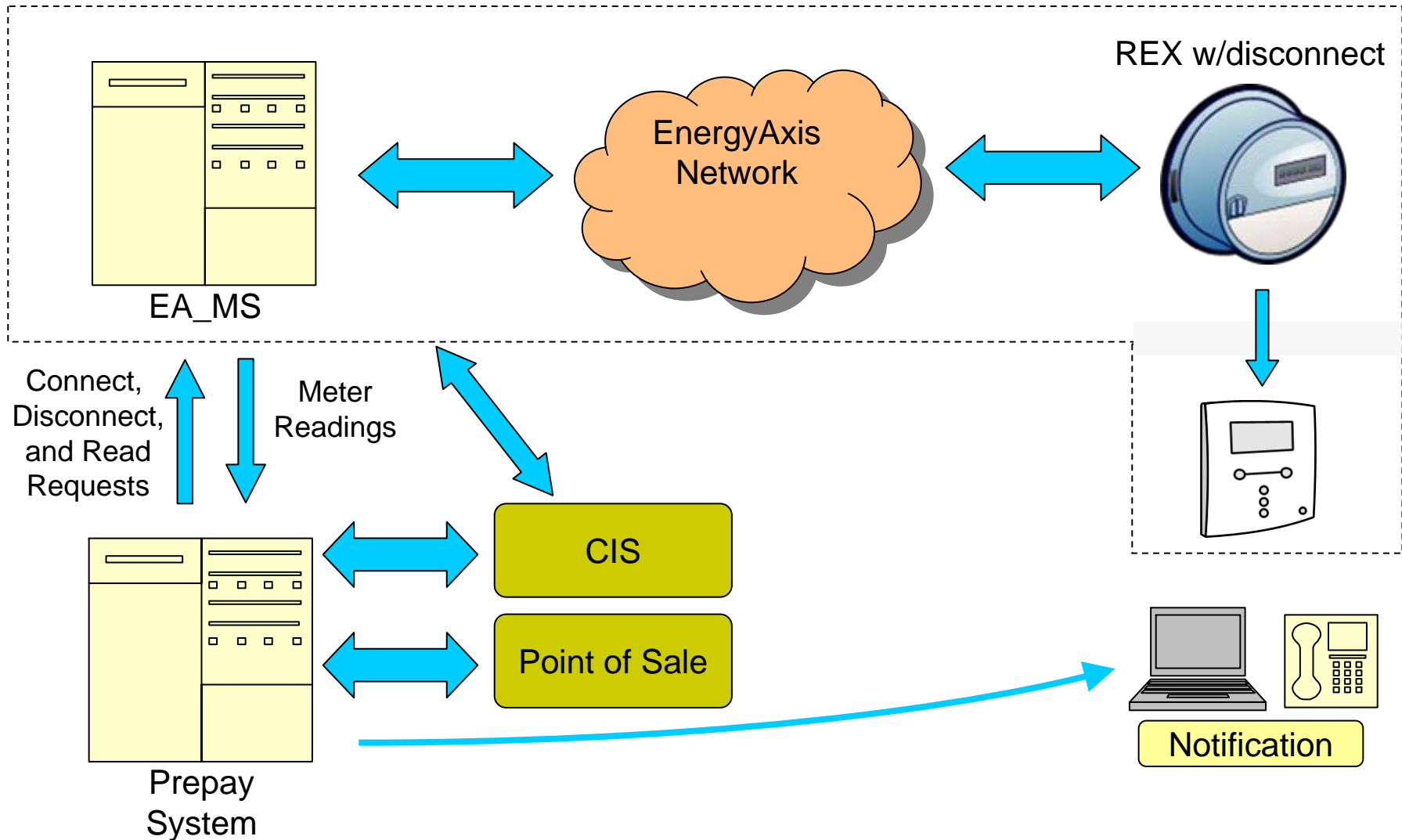


- **Single, integrated system**
- **Utility does not have to maintain any unique prepayment equipment**
- **Consumers use cells phones and PCs to receive balance and usage information**

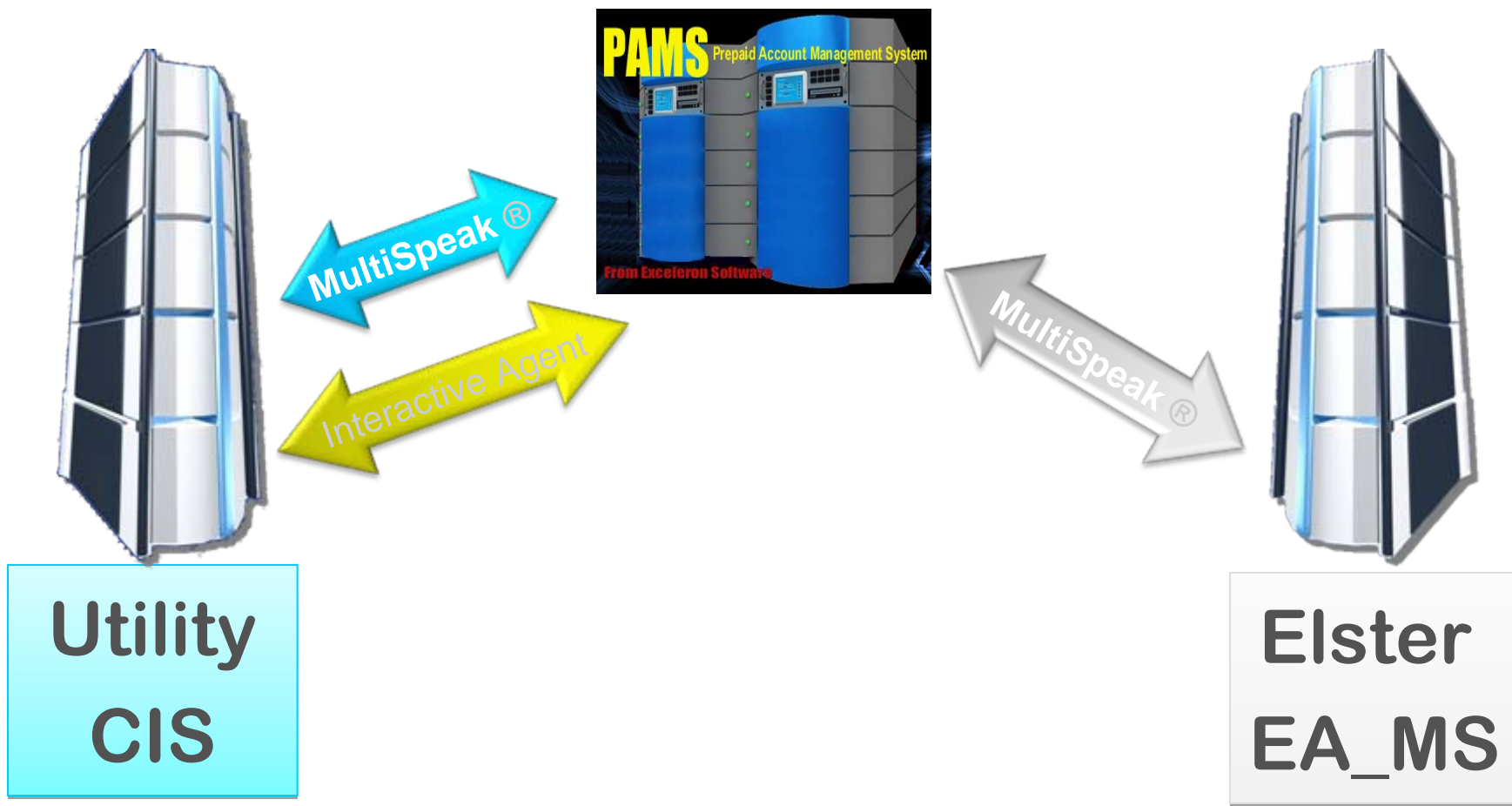
Prepay Software Interface



Prepay with EnergyAxis In Home Display



Software/web based application Example Prepaid Account Management System (PAMS)



Typical Integration Partners

CIS	Payments	Communications
Oracle	MoneyGram	Milsoft
SEDC	US Payments	CRC
NISC		Open Market
ATS		IVR
CSA		Face Book
PCS		Twitter
Logics		

Advantages to AMI Prepayment



- ✓ Leverages AMI metering and communication infrastructure
- ✓ Once AMI is in place, utility has a low incremental cost to deploy prepayment
- ✓ Utility is able to standardize on single metering technology for both post-paid and prepaid consumers
- ✓ Allows for much more flexible vending infrastructure; no need for smart cards, etc.
- ✓ Frequent, automated meters reads provide a check to prepayment system
- ✓ Ability to add / remove prepay consumers through software eliminates burden of physically changing meters

Benefits to the Utility

- Reduce existing A/R
- Increase cash flow
- Limit future bad debt
- Provide a higher level of service to low income and credit challenged consumers
- Reduce customer bill rendering
- Reduce customer care/billing calls
- Eliminate collection calls



Benefits to the Utility

- Provides means to reduce delinquent arrears and credit losses
- Low-risk way to provide access to low-income customers
- Reduces administrative cost of managing payment cycle
 - Processing and sending bills
 - Delinquent account collection expense
 - Truck-rolls for disconnections, reconnections
- Provides ability to manage transient customers
- Improves customer service
- **Allows all customers a possible vehicle to monitor their own usage!**

Benefits for the Consumer

- Reduce consumption by 10-15%
- Understand pay as you go model
- Monitor consumption on a daily basis
- Pay less but more often
 - Average 4.5 payments per month
 - ~\$30 to \$40 each payment
- No deposit required or can apply deposit to the utility to join the program



Utility Benefit – Debt Recovery

- Consumption based payment arrangement
- Based on a percentage of each payment posted
- Consumer will receive energy credit regardless of the amount of the payment
- Recovery rate can be set at the account level
- Requires no changes to the CIS account
- Consumer can monitor progress
- Automatically stops when repayment is complete



Turn Write-offs into Credit Balances

Utility	Total Credit Balance	Average Credit Balance Per Account	Average Daily Charge	Average # of Days Ahead
Central	\$17,914.80	\$65.62	\$5.55	12
COMO	\$15,178.99	\$64.05	\$3.78	17
LREC	\$3,393.91	\$41.39	\$4.11	10
OEC	\$125,844.01	\$76.32	\$6.30	12
PDEC	\$18,358.06	\$31.65	\$5.25	6

Case Study: Debt Recovery

Date of Purchase	Amount of Purchase	Amount to Balance	Amount to Arrearage	Arrearage
				Beg Bal. - \$595.60
6/9/05	\$20.00	\$12.00	\$8.00	\$587.60
6/13/05	\$20.00	\$12.00	\$8.00	\$579.60
6/15/05	\$3.00	\$1.80	\$1.20	\$578.40
6/16/05	\$20.00	\$12.00	\$8.00	\$570.40
6/18/05	\$5.00	\$3.00	\$2.00	\$568.40
6/19/05	\$3.00	\$1.80	\$1.20	\$567.20
6/20/05	\$9.00	\$5.40	\$3.60	\$563.60
6/21/05	\$5.00	\$3.00	\$2.00	\$561.60
6/22/05	\$12.00	\$7.20	\$4.80	\$556.80
6/23/05	\$5.00	\$3.00	\$2.00	\$554.80
6/24/05	\$3.00	\$1.80	\$1.20	\$553.60
6/25/05	\$6.00	\$3.60	\$2.40	\$551.20
6/26/05	\$7.00	\$4.20	\$2.80	\$548.40
6/27/05	\$3.00	\$1.80	\$1.20	\$547.20
6/28/05	\$6.00	\$3.60	\$2.40	\$544.80

Debt Recovery Case Study (cont.)

Date of Purchase	Amount of Purchase	Amount to Balance	Amount to Arrearage	Arrearage
				Beg Bal. - \$595.60
07/05 – 24 purchases	\$286.00	\$171.60	\$114.40	\$426.80
08/05 – 24 purchases	\$222.00	\$133.20	\$88.80	\$338.00
09/05 – 24 purchases	\$157.00	\$97.20	\$62.80	\$275.20
10/05 – 25 purchases	\$107.00	\$64.20	\$42.80	\$232.40
11/05 - 24 purchases	\$74.00	\$44.40	\$29.60	\$202.80
12/05 – 21 purchases as of 12/19/05	\$70.00	\$42.00	\$28.00	\$174.80

Payment Channels

All payments post to the CIS prior to updating the prepaid balance

Traditional

- Credit Card or check by Phone
- In person (cashier, pay agent etc)
- Web site
- Integrated Voice Recording (IVR)

Alternative

- 2 way text (sms)
- 3rd party kiosk
- MoneyGram

Option Charges

Non-metered charges are pro-rated and charged on a daily basis

- Fixed monthly fees
- Prepaid subscriber fee/service charge
- Security lights
- Surge protectors
- Internet Services
- Others

Consumer Alerts

Consumer chooses Alert types

- Daily usage
- Low balance warning
- Prior to disconnect
- Disconnect confirmation
- Reconnect Confirmation
- After credits have been posted

Consumer chooses contact method

- IVR to home, work or cell phone number
- E-mail
- Text message
- In-home display
- Web-portal

Inbound Consumer Services

Consumers can access their account information at their convenience

- On the Internet –
www.myusage.com
- Over the Phone through 24-Hour Service IVR via a toll free number

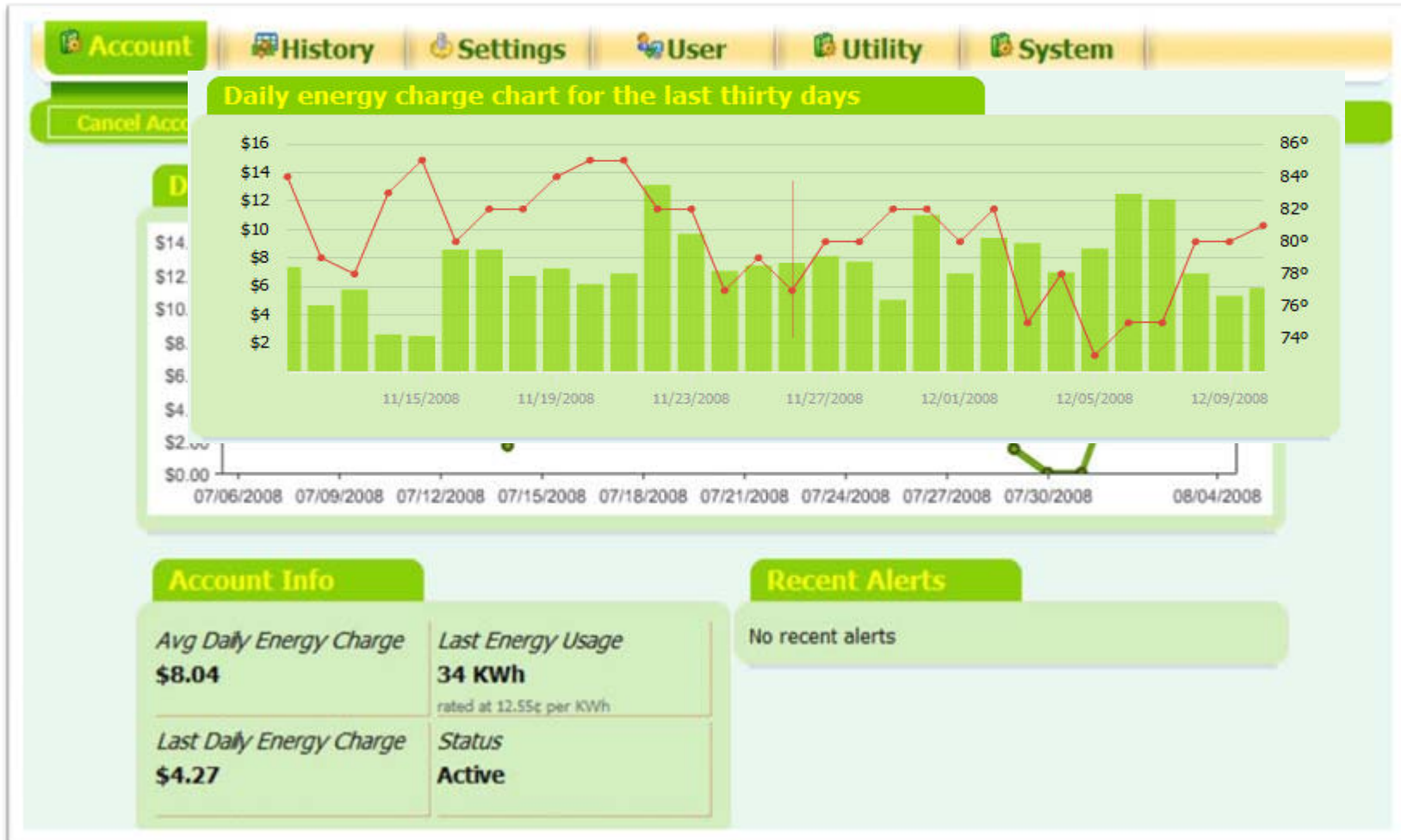
All customer facing is branded by the utility

- Website logos
- IVR messages
- E-mail templates

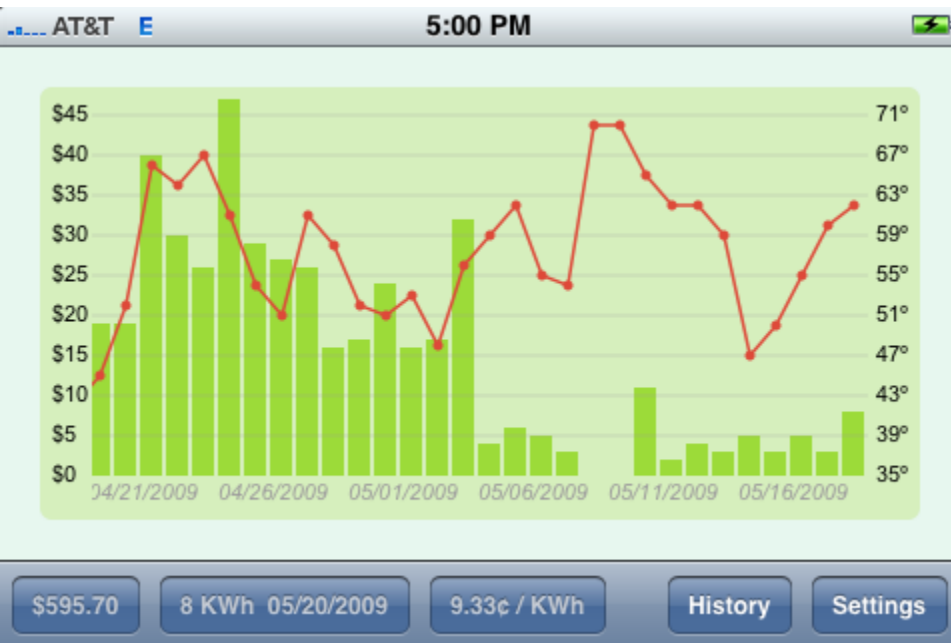
Usage Monitoring

- Provides non-prepaid consumers web access to daily usage information
- Easy web sign-up via MyUsage.com
- Email alerts available for daily usage and high usage events
- **Included service for all non-prepaid or post paid customers**

Usage Monitoring Example



Data Availability Blackberries & iPhones



AT&T E 5:00 PM

Day	Usage	Misc	Tax	Total	Payment	Balance
05/20/2009	-0.75	-1.02	-0.04	-1.81	0.00	595.70
05/19/2009	-0.28	-1.02	-0.03	-1.33	0.00	597.51
05/18/2009	-0.47	-1.02	-0.03	-1.52	0.00	598.84
05/17/2009	-0.28	-1.02	-0.03	-1.33	0.00	600.36
05/16/2009	-0.47	-1.02	-0.03	-1.52	0.00	601.69
05/15/2009	-0.28	-1.02	-0.03	-1.33	0.00	603.21
05/14/2009	-0.37	-1.02	-0.03	-1.42	0.00	604.54
05/13/2009	-0.19	-1.02	-0.02	-1.23	0.00	605.96
05/12/2009	-1.03	-1.02	-0.04	-2.09	0.00	607.19
05/11/2009	0.00	0.00	0.00	0.00	0.00	609.28
05/10/2009	0.00	0.00	0.00	0.00	0.00	609.28

Buttons: Transaction, Usage, Order, Alert, Graphic, Settings

Pre-Paid Metering Benchmarks / Case Studies

Benchmarks in the TN Valley

- ✓ Murfreesboro Electric

Case Study

- ✓ Oklahoma Gas & Electric (OGE)

Note:

I have asked Steve Sax join me before we close and make a short statement about their experience with Pre-paid metering

Case Study: OGE

- Located in Norman, Oklahoma
- 47,000 residential meters
- Service area includes both urban and rural customers - serving 5,000+ apartments and other rental units
- Prepaid launched September, 2006
- 3,000 prepaid accounts
- Average deposit - \$600+

(Published in May 2008 edition of *Utility Automation & Engineering T&D* magazine)

OEC Customer Satisfaction Survey



OEC Survey Question: Please Indicate How you would Rate your Overall Satisfaction with OEC Prepaid.

Somewhat Dissatisfied		5%
Very Satisfied		45%
Satisfied		40%
Very Dissatisfied		4%
Neither Satisfied or Unsatisfied		6%

OEC Survey Question: Do you Feel you are More Conscientious and Conservative about your Use of Electricity on Prepaid?

Somewhat		5%
No		10%
Yes		85%

OEC Survey Question: Would you Recommend OEC Prepaid to Others?

Maybe		14%
No		10%
Yes		76%

OEC Survey Question: Has your Usage Monitoring Led to Dollar Savings?

Yes		50%
No		25%
Somewhat		24%

Keys to a Successful Implementation

Customer Service

- ✓ Adoption should be voluntary
- ✓ Initially target a geographically concentrated customer base
- ✓ Establish convenient vending locations/hours

Deal with operational issues on front-end

- ✓ IT integration
- ✓ Commercial processes
- ✓ Program success is driven more by implementation than by technology

Know your Culture

- ✓ Will need a great communications / public relations plan

Conclusion

- ✓ Pre-paid metering is an option that every utility should consider
- ✓ There are challenges of implementing a prepaid program (any program)
- ✓ There are products and solutions available to meet your challenges
- ✓ Prepaid electricity is here (coming) and will be here to stay
- ✓ Understand the Business Case
- ✓ Evaluate your requirements
- ✓ Consult with the experts
- ✓ Implement the solution that meets your needs
- ✓ Reap the benefits.....
- ✓ Dramatic Benefits to YOUR Bottom LINE!



Questions & Open Discussion

Thank You!

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DELIVERING VALUE TO PUBLIC POWER

