

Engaging Low-Income Customers through Smart-Grid Technologies: Entergy New Orleans' SmartView AMI Pilot

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Entergy Services, Inc.

June 6, 2014

Entergy in New Orleans

Entergy New Orleans...

- ...is an investor-owned utility regulated by the New Orleans City Council
- ...has provided dependable, affordable electricity and gas service to New Orleans since 1922
 - *Currently serves approximately 169,000 electric customers*
 - *Currently serves more than 100,000 natural gas customers*

Entergy Corporation...

- ...is the only Fortune 500 company headquartered in New Orleans
- ...delivers electricity to 2.8 million utility customers in Louisiana, Arkansas, Mississippi and Texas



Background:

- U.S. Department of Energy granted \$5 million to Entergy New Orleans for an Advanced Metering Infrastructure pilot project
 - Matching grant for total of \$10 million
 - Pilot project approved by the New Orleans City Council
 - Pilot project helped low-income customers better manage their electric bills and determined their acceptance of several AMI-enabled demand-response programs
 - Smart meters and in-home devices were installed in the spring of 2011
 - Pilot measurement period began June 1, 2011



Pilot Objectives:

- Educate low-income customers on the use of new technology and promote lifestyle changes that lead to lower energy use
- Assess customer behavior
- Measure energy-use impacts
- Measure the value of in-home display devices to customers
- Assess the level of customer support necessary to achieve the full potential of advanced technology



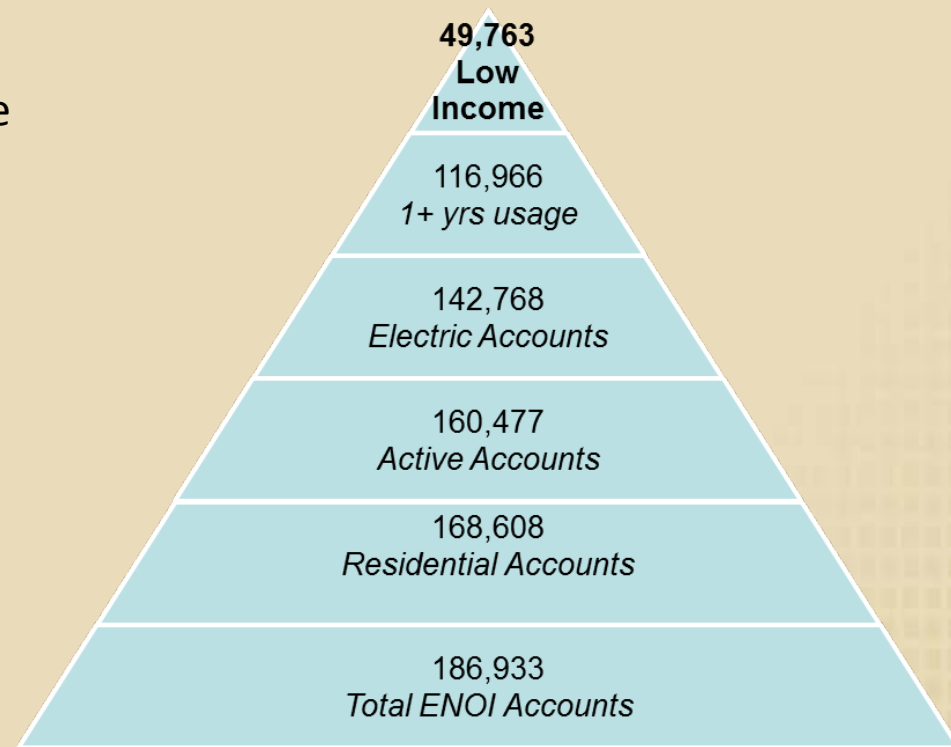
Target Population

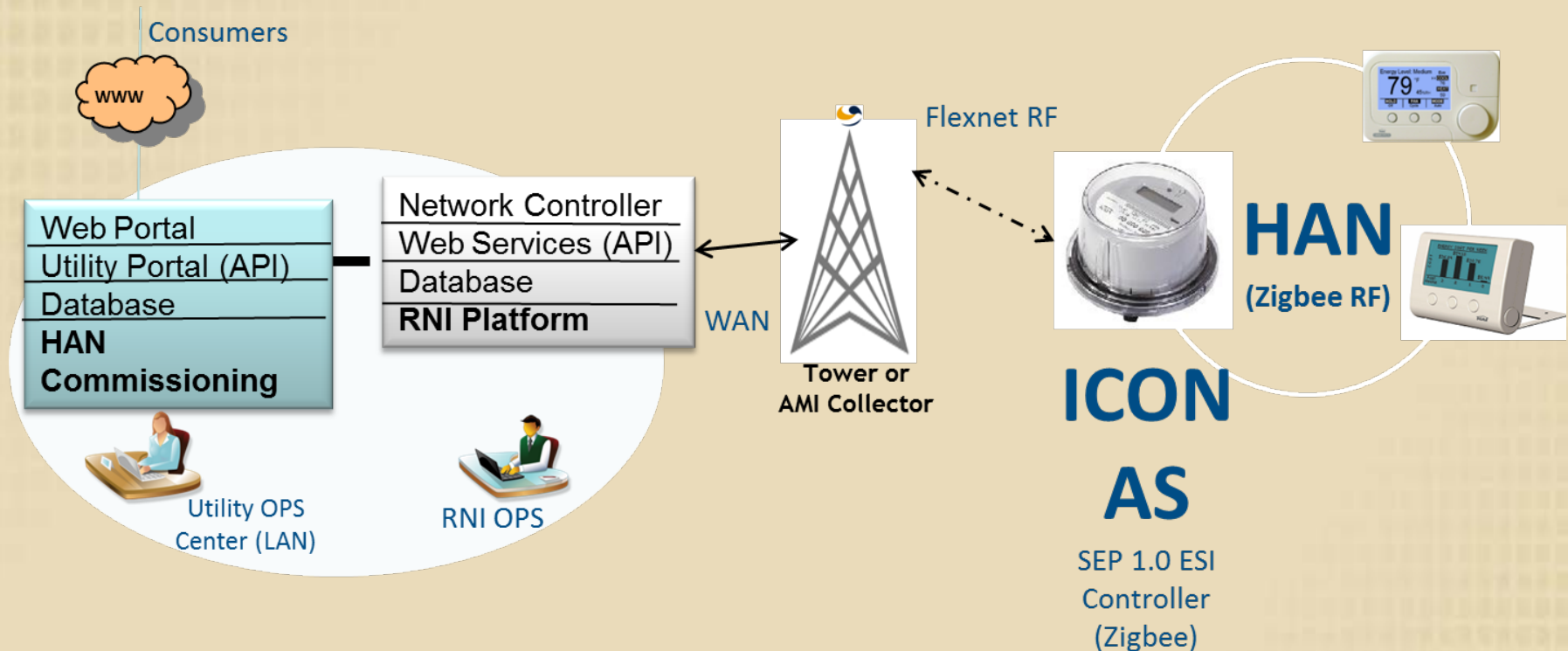
Overview:

- Identified approximately 50,000 low-income customers
- Low-income is defined as at or below 80% of median-area income

Qualifications:

- Opt-in program
- Residential electric accounts
- Active account for > 12 months
- Proof of income level
- Signed release authorizing data usage
- Access to Internet (portal group)
- Properly functioning central air conditioning (air conditioning load management group)





4,689 Participants		AMI Smart Meter	In-home Display (IHD)	Smart Thermostat	Access to Portal
AMI Programs	Number of Participants				
In Home Display (IHD)	2,566				
Portal	393				
Peak Time Rebate	400				
AC Load Management	351				
Control Group	979				

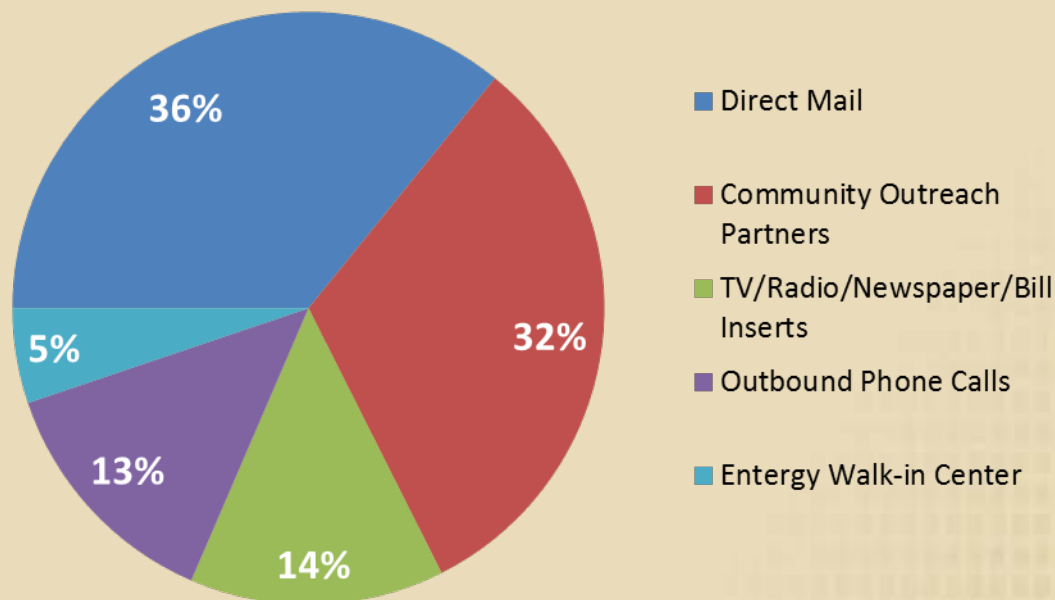
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Solicitation & Enrollment

Solicitation methods:

- TV, radio, print, and Web media
- Entergy New Orleans customer walk-in center
- Neighborhood events
- Dedicated support call center
- Bill inserts
- Outbound phone calls
- Targeted mail
- Community outreach partners

Where participants heard about the program:



Community Partners:

- Leveraged existing community relationships with:
 - New Orleans Council on Aging
 - Catholic Charities New Orleans
 - Kingsley House
 - Neighborhood Development Foundation
 - Total Community Action
 - Green Light New Orleans
 - Dillard University Community Development Corporation
- Community partner organizations were used to help solicit, enroll, and educate pilot participants



***Our community partners enrolled
39 percent of the participants...***



Take Control with SmartView

Solicitation Materials

Brochures/Banners/Posters



Tome el control con SmartView

Si sabe en qué se usa la electricidad en su hogar, puede tomar decisiones más inteligentes que lo ayudarán a ahorrar dinero y a dejar de tener sorpresas cuando recibe la factura del servicio de electricidad.

Comience hoy. Y deje que SmartView le dé el control.

La suscripción es sencilla... Llame al número gratuito 1-855-33-SMART o visite entergyneworleans.com/smartview para recibir información útil, no obligatoria, sobre los programas de prueba de Administración de Energía SmartView. Responderemos a todas sus preguntas y lo orientaremos durante todo el proceso.

Usted tiene el poder de hacer la diferencia. Usted tiene el control.

Entergy
THE POWER OF PEOPLE®

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Take the surprise out of your electric bill and Take Control with SmartView

Signing up is easy. Speak to your Entergy representative today!

Call us toll free 1-855-33-SMART (1-855-337-6278).

Entergy
THE POWER OF PEOPLE®

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Initial Training:

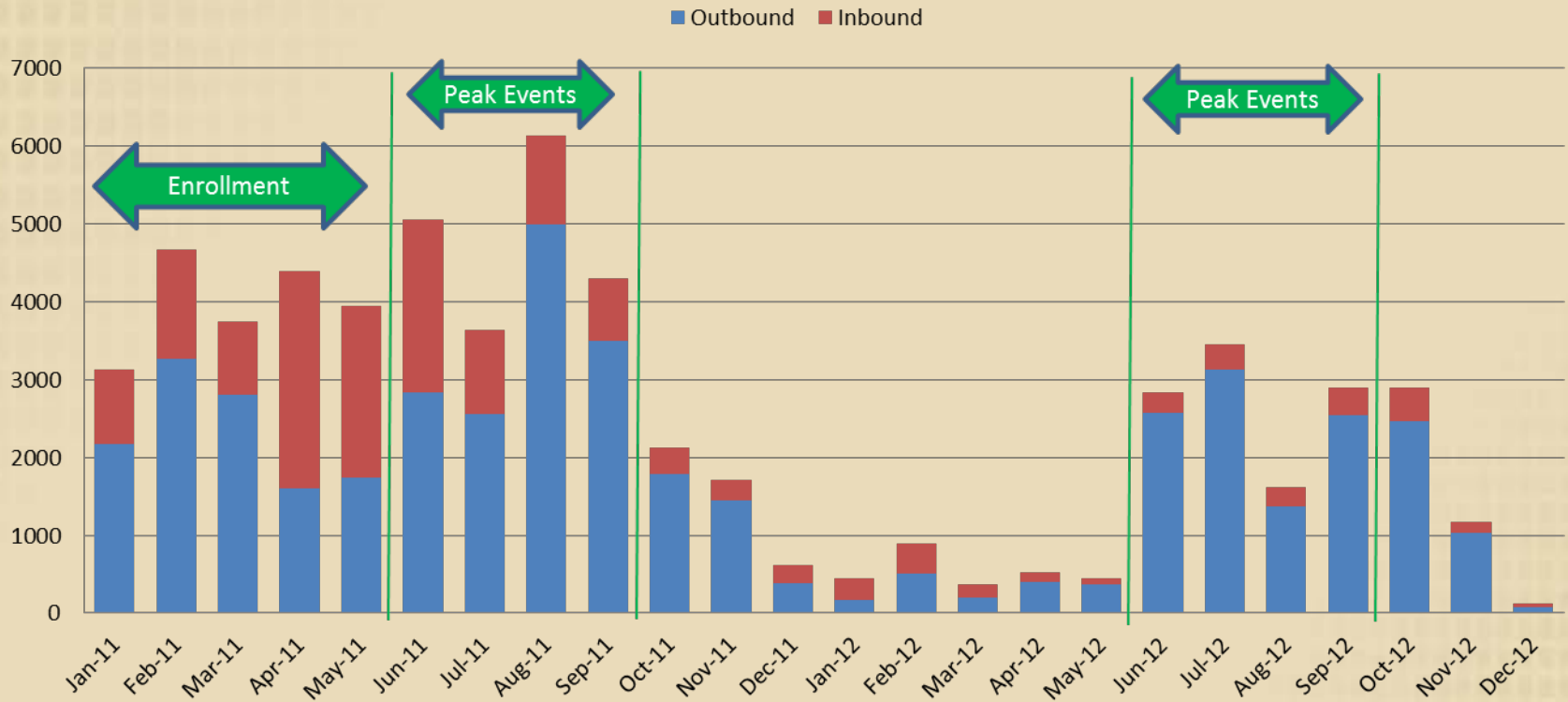
- Initial training was based on customers' training preferences:

- Face-to-face:
 - 32 classes from March-May 2011
 - 518 attendees
- Over-the-phone:
 - 10 group conference calls with 170 attendees
 - Proactive outbound calls
- Mail:
 - Instruction manual, quick reference guide, FAQs to approximately 2,000 customers
 - Proactive follow-up calls
- Web:
 - Online training tutorials were planned as one of the primary training methods, but only used as reference

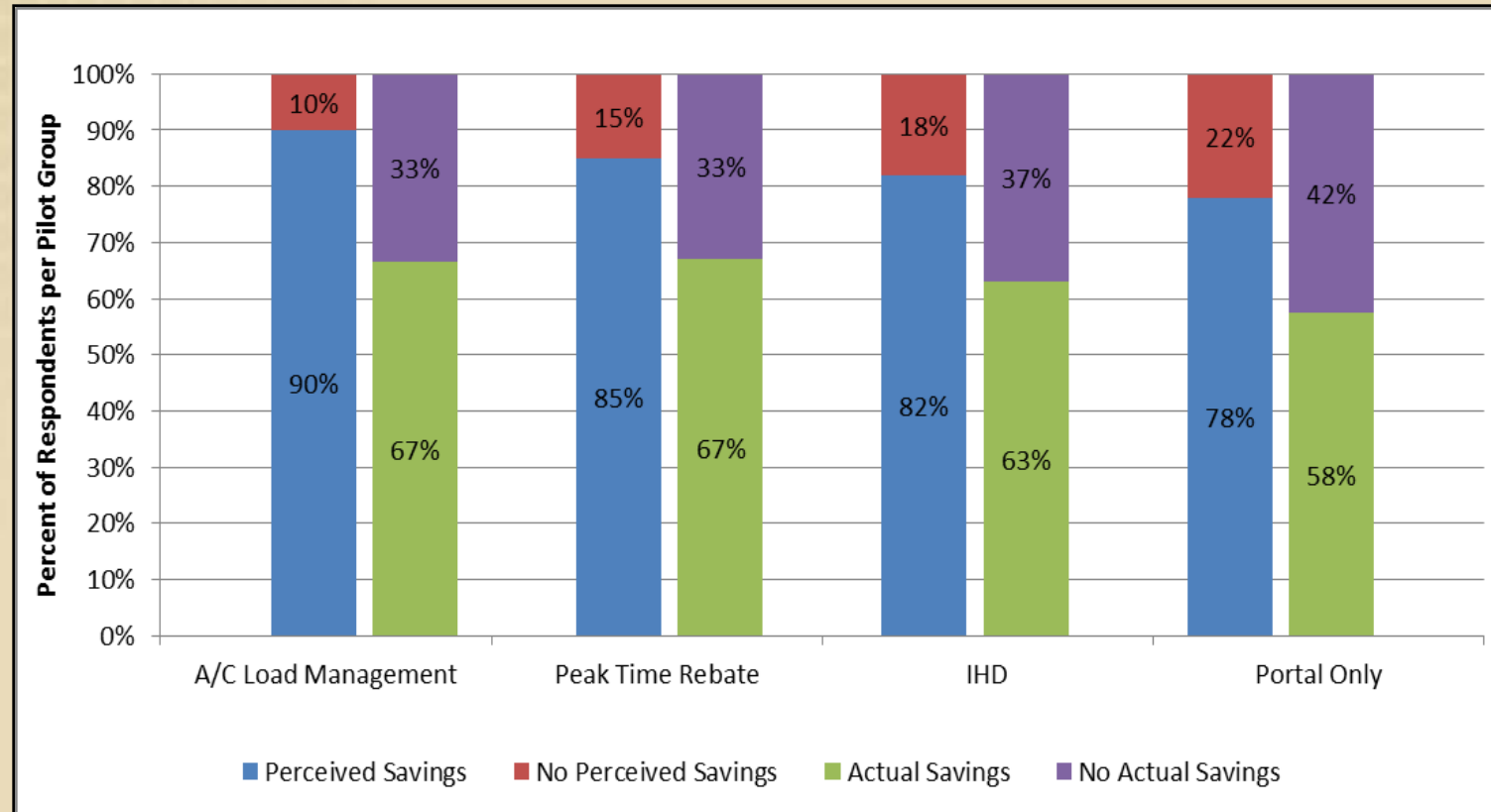


Ongoing Customer Support

Dedicated call center (toll-free number) and proactive outbound calls



Results – Energy Savings



Results – Energy Savings

Event Impact Summary

Pilot Group	Air Conditioning	Number of Participants Included in Model	Demand Impacts During Event			Bill Savings Per Event (\$)
			%	kW	Sig.	
ACLM	All	318	-16.3%	-0.40	***	\$0.11
PTR	All	375	-10.6%	-0.25	***	\$0.41
	Central AC	266	-11.6%	-0.29	***	\$0.48
	No Central AC	109	-7.6%	-0.13	***	\$0.22

Energy Savings Summary

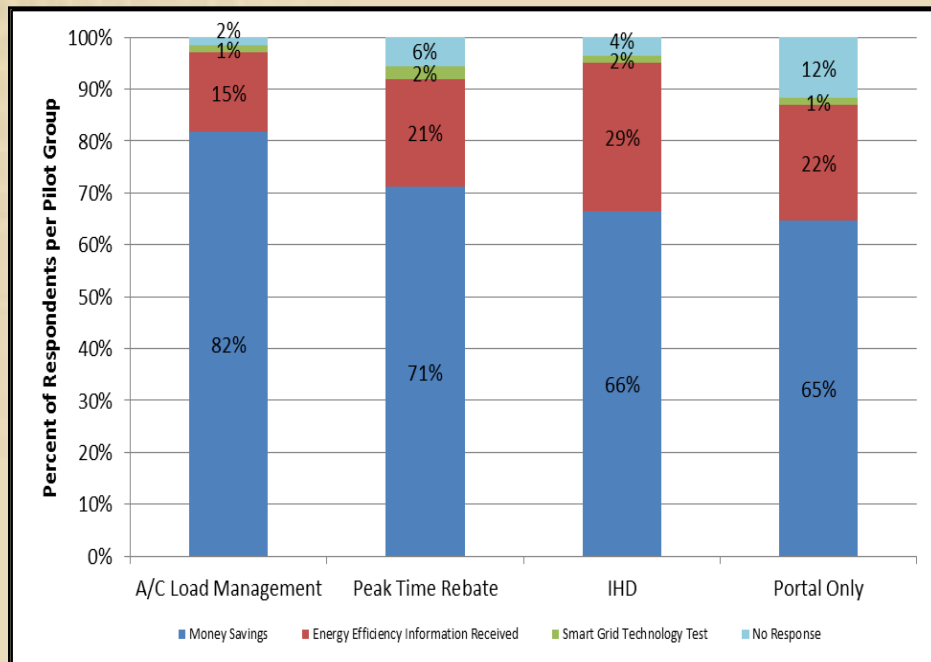
Pilot Group	Number of Participants Included in Model	Daily Energy Use Impacts During Summer		Sig.	Daily Energy Savings During Summer with Face-to-Face Training			Daily Bill Savings During Summer
		%	kWh/Day		%	kWh/Day	Sig.	
PTR	322	-0.4%	-0.22	-	N/A	N/A	N/A	-
Portal	311	-1.8%	-0.91	-	N/A	N/A	N/A	-
ACLM	315	1.0%	0.58	-	-6.4%	-3.65	*	\$0.34
IHD	2073	1.6%	0.88	-	-7.7%	-4.26	***	\$0.40

*** - 99% Confidence; ** - 95% Confidence; * - 90% Confidence;
No Stars - Less Than 90% Confidence

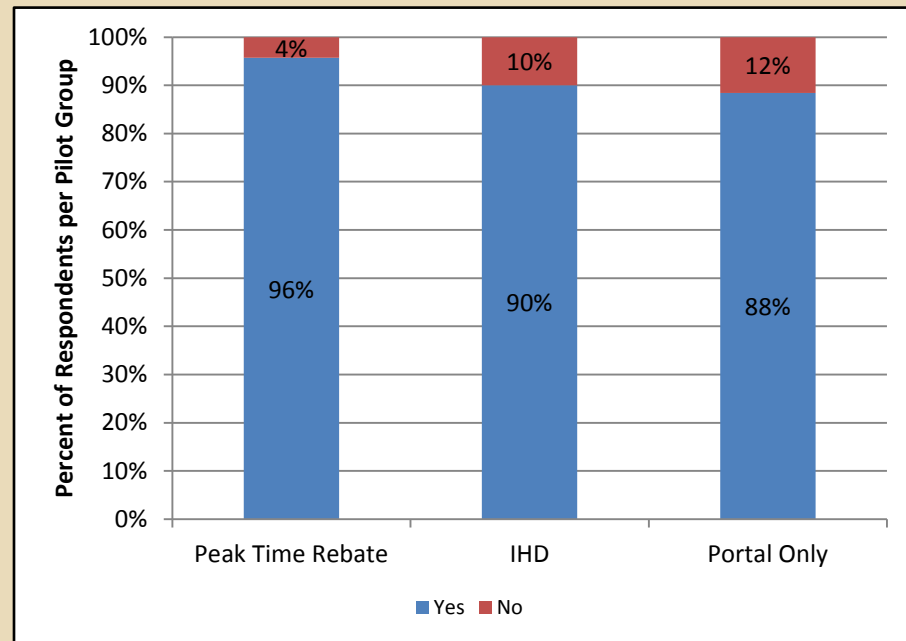


Results – Customer Satisfaction

What have you liked MOST so far about participating in the SmartView program?



Are you interested in participating on a permanent basis?



Some Key Takeaways:

- Key success factor was involvement of all stakeholder groups (customer, community, city council, company)
- ENO's community engagement approach to solicitation and education strengthened the company's relations with community partners and customers
- Low-income customers can benefit from the use of smart-grid technologies
- Low-income customers are very diverse (education, housing, etc.)
- Customer motivation can vary greatly (some used the IHD every day; some put it in a drawer)
- Offer diverse training options
- Installing in-home devices (especially PCTs) requires significant support in customer service and technical areas
- The pilot contributed to exploration of new smart-grid technologies benefits



Community Partner Websites:

- Catholic Charities New Orleans: ccano.org
- New Orleans Council On Aging: noco.org
- Green Light New Orleans: greenlightneworleans.org
- Kingsley House: kingsleyhouse.org
- Neighborhood Development Foundation: ndf-neworleans.org
- Total Community Action: tca-nola.org
- Dillard University Community Development Corporation: dillardcdc.com

*ENGAGING LOW-INCOME CUSTOMERS
THROUGH SMART-GRID TECHNOLOGIES:
ENTERGY NEW ORLEANS' **SMARTVIEW** AMI PILOT*

June 6, 2014

Howard Rodgers – Executive Director
New Orleans Council On Aging
Community Partner

New Orleans Council On Aging Community Partnership



Our Mission

- ❑ The New Orleans Council On Aging (NOCOAA) exists to protect the rights, promote the well being, and enhance the self-esteem of New Orleans' elderly by generating opportunities for self-reliance and independence.

Our Vision

- ❑ To have quality supportive services accessible to older adults in New Orleans so they are able to age in place with dignity - at home, in their communities.

Our Age

- ❑ Established in 1974 - 40 years old.

New Orleans Council On Aging Community Partnership



Our Clients:

- ❑ *We serve over 30,000 clients annually.*
- ❑ *We serve persons age 60 and over.*

What We Do:

- ❑ *Administer Entergy's Power to Care utility bill-assistance program (100% of contributions are used to help our clients).*
- ❑ *Manage 14 senior centers.*
- ❑ *Provide healthy meals to seniors via senior centers and home delivery.*
- ❑ *Provide volunteer opportunities for seniors.*
- ❑ *Manage the Senior Care Program.*
- ❑ *And much, much more!!!!*

New Orleans Council On Aging Community Partnership



Why SmartView AMI Partnership?

- ❑ *It was an extension of our energy-efficiency outreach programs at no additional cost to us.*
- ❑ *It offered us the opportunity to continue to help our seniors engage in an important community, pilot program.*
- ❑ *It helped us demonstrate our commitment to our seniors in improving their quality of life.*
- ❑ *It allowed us an opportunity to continue working with one of our staunch supporters and community leaders at Entergy New Orleans.*

New Orleans Council On Aging Community Partnership



Why were we successful in enrolling and educating participants in the pilot?

- ❑ *Our clients know us.*
- ❑ *Our clients trust us.*
- ❑ *Ease of having a SmartView discussion with our clients.*
- ❑ *Ease of incorporating enrollment with our current intake process.*
- ❑ *Support from Entergy New Orleans throughout the pilot.*
- ❑ *Our clients liked the program.*

New Orleans Council On Aging Community Partnership



Our Experience

- ❑ *Gave seniors an idea of what it takes to be responsible for their own energy use.*
- ❑ *Gave seniors an opportunity to help them be not 'just a consumer' but also 'an informed consumer.'*
- ❑ *Gave seniors insight on how the utility provides service to their customers.*
- ❑ *Made us appreciative to Entergy New Orleans for the opportunity to help seniors understand their energy usage.*

NEW ORLEANS COUNCIL ON AGING COMMUNITY PARTNERS

Thank You!

June 6, 2014

Howard Rodgers – Executive Director

ISGAN Webinar

Engaging Low-Income Customers Through Smart-Grid Technologies: Entergy New Orleans' SmartView AMI Pilot The Regulator's Perspective

Victor Prep, P.E.

Executive Consultant

Legend Consulting Group Limited

Council of the City of New Orleans Advisor

June 6, 2014



AMI Pilot Program in the City of New Orleans

DOE Smart-Grid Investment Grant

- The Council encouraged ENO to apply for the grant with the goal of testing low-income customers' willingness to use AMI technology.

Customer Education and Acceptance

- The Council needed to assess customers' willingness to change their lifestyle and energy-use patterns.
- This was difficult to achieve due to the "hard-to-reach" customer segment.

New Orleans Demographics

- 55 percent of Entergy New Orleans' residential customers fall under the "low-income" classification.
(Source: U.S. Department of Housing and Urban Development)

The Regulator's Role

- To Provide Parties with Insight and Recommendations.
- To Oversee the Planning and Development of the Programs, Marketing Materials and Methods Used to Solicit Customer Participation.
- To Monitor and Evaluate ENO's Performance upon Participants Enrollment in the AMI Pilot Program.
 - Customer Education.
 - Hardware Installation.
 - Follow-up Evaluation.
 - Role of Community Partners.
- Final Evaluation.



The Council's Consideration of ENO's Request

- The Council Granted ENO's Request for Low-Income Customer AMI Pilot Implementation and Noted that It Would Provide:
 - Access to Low-Income Customer Segment for the Implementation of Energy-Efficiency Programs and a Measurement of the Effectiveness of Methods Used to Reach this Market Segment.
 - Potential Benefits to Low-Income Customers from Certain Demand-Response Functionalities.
 - Evaluation of the Technology for Subsequent Implementation.

*Aerial view of the
City of New Orleans.*



The Council's Consideration of ENO's Request

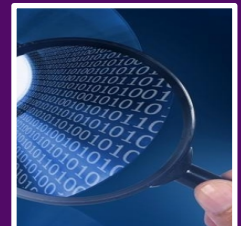
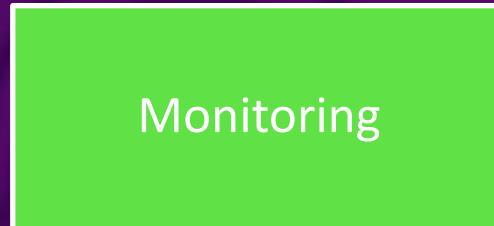
- The AMI Pilot Costs not Reimbursed by the Grant were Recovered Through Non-Fuel Revenue Allocation in Retail Rates.
 - Approximately 41 Percent of ENO's Grant AMI Pilot Costs were Recovered from the Residential Class.
- The Council Adjusted Certain Service Regulations for Participants.
 - Complaints Resolved by ENO within 20 Days Instead of the Existing 10 Days.
 - Changes in Bill Format to Reflect Participants' Costs More Clearly.
 - Repair and Replacement of AMI Equipment on Customers' Premises During and for a Limited Time After the Program.
 - Guidelines were Developed for the Resolution of Any Claims Related to the AMI Pilot Program.

The Council's Involvement in AMI Pilot Program

- Provided Specific Input into the Development of Customer Solicitation and Enrollment Materials.
 - Recognized the Participants' Sensitivity to being Identified as Low-Income Customers.
 - Data Privacy Concern – Customers Own Their Data and Their Personal Information is Protected.
- Monitored Focus Groups, Online Enrollment and the Education Methods and Required Comprehensive Reporting.
- Proactively Supported the Involvement of Non-Profit Community Organizations.



Solicitation
& Enrollment



Monitoring



Non-Profit
Community
Organizations

Challenges Encountered

- Achieving the Economic Benefits Through Customer Demand Reduction was a Difficult Task for this Demographic Group.
 - Significant Time and Effort was Required Despite the Enabling Technology, Detailed Implementation Program and Efforts of Community Partners.
 - Utilizing Community Partners Secured Customer Enrollment.
 - Face-to-Face Education Sessions Focused on This Demographic.
 - Delivery Mechanisms Should Emphasize Interactive Training with the Participant to Improve Connectivity of AMI Equipment in the Home.
 - Mid-Term Program Evaluation was Needed to Ensure Optimal Partnering.

Other Regulatory Related Observations

- Only 11 Percent of the 4,500 Enrolled Participants Opted Out within 10 Months of the Pilot's Launch Date.
 - Of the Opt-Outs, 75 Percent Were Due to Participants Moving Out (Including Renters).
- Clearly Delineate which Smart Grid Devices and Networks in the Participant's Residence are the Utility's Responsibility

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THANK YOU!

AMI Program Documents Required by the Council

Document Title	Additional Description
Solicitation/screening process and questionnaire form for the selection of eligible pilot participants	Questionnaire sent out to customers that have expressed an interest in participating in the AMI Pilot.
Communications Plan	Methodology to inform potential participants of benefits and enrollment opportunities.
Media Plan	
Benefit and Measurement Plan and/or Consumer Behavior Study Plan	Detail on how consumer behavior and overall performance will be measured, including the use of control groups."
Customer Waiver/Release Form	Gives ENO the customer's permission to release "their information."
Document used by ENO and "Complaint Officer" to resolve customer complaints related to the DOE AMI pilot.	
Report documenting "number rejections, the names and/or addresses of the participants rejected and the reason(s) for rejection."	
Customer Identification, Solicitation and Enrollment plans	ENO's methodology for the identification, solicitation, and enrollment of customers.
Report documenting the "policies and procedures needed to coordinate and track the AMI Pilot and Energy Smart Program activities."	
Quarterly progress/status reports	ENO will provide the Quarterly DOE reports.
List Providing "each of the non-profit community partners"	