

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

—Transcript of a webinar offered by the Clean Energy Solutions Center on 6 June 2014—  
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## Webinar Panelists

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| <b>Brandi Schmitt</b>     | Senior Analyst Entergy Services, Inc.                           |
| <b>Victor Prep</b>        | Executive Consultant, Energy and Resource Consulting Group, LLC |
| <b>Michele DeNegrís</b>   | ISGAN Chair   |
| <b>Howard Rodgers III</b> | Executive Director New Orleans Council on Aging                 |

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**Sean Esterly** Hello, everyone. I'm Sean Esterly with the National Renewable Energy Laboratory and welcome to today's webinar which is being hosted by the Clean Energy Solutions Center and the International Smart Grid Action Network also known as ISGAN. In today's webinar's focused on engaging low income customers with Smart Grid technology. The Entergy New Orleans SmartView AMI Pilot. And one important note I mentioned before we began our presentation is that the Clean Energy Solutions Center does not endorse or recommend the specific product or services, information provided in this webinar featured in the Solutions Center resource library as one of many best practices resources review and selected by technical experts and Heather could you advance to the next slide.

So, before we begin I just want to go over some of the webinar features that we have for audio. You do have two options to listen in, you can listen through your computer or over your telephone so if you do choose to listen to your computer, please select the mic and speaker options in the audio pane, this will eliminate any feedback echo that you might get. And then if you choose the dial-in by phone, select the telephone option and it

will display the phone number, pass code and pin that you should use to dial in. Panelists, we just ask that you please mute your audio device while you're not presenting and if anyone has any technical difficulties with the webinar platform, you can call their help desk at the number at the bottom of the slide, that number is 888-259-3826.

And we encourage anyone from the audience to ask questions at any point throughout the webinar and to ask a question you simply submit it through the question pane and I will receive it there and we'll present it to the panelist during the question-and-answer session. If anyone is having difficulty viewing the material to the webinar portal, you will find PDF copies of the presentation at [cleanenergysolution.org/training](http://cleanenergysolution.org/training) and then you can follow along if speakers present and we'll also be posting an audio recording of the presentation to the Solutions Center training page within about a week of the broadcast. We're also now adding recording to the [Solutions Center YouTube channel](#) where you can find other informative webinar as well as video interviews with thought leaders on Clean Energy policy topics.

That today's webinar agenda is centered around the presentations from our get panelist Michele DeNegris, Brandi Schmitt, Howard Rodgers III, Victor Prep, and Toni Green-Brown will also be on the line during the question-and-answer portion of the webinar. Now these panelist have been kind enough to join us to present the strategies and perspective of Entergy New Orleans, the city council of New Orleans and the community outreach partner and their efforts to introduce AMI technology to the city, educate the participants, produce energy saving and provide the platform for the implementation of the future AMI technologies. And before speakers begin their presentations I'll provide a short informative overview of the Clean Energy Solutions Center initiative and then following the presentation who have a question-and-answer session with the panelist will address questions submitted by the audience, closing remarks and then a brief survey.

And this slide provides a better background in terms of how the Solutions Center came to be. The Solutions Center is one of 13 initiatives of the Clean Energy Ministerial that launched in April of 2011 as primarily led by Australia, United States and other CEM partners. Welcome to this unique initiative includes support of developing countries and emerging economies through enhancement of resources and policies relating to energy access, no cost expert policy assistant and peer-to-peer learning training tools such as the webinar you're attending today.

And the Solutions Center has four primary goals. First goal of the service as clearing house of Clean Energy policy resources, second goal is to serve the share policy of best practices data analysis tools specifically Clean Energy policies and programs and third deliver dynamic services that enable expert assistant, learning and peer-to-peer share of expenses

and then lastly the center host this dialogue on emerging policy issues and innovation around the globe.

Our primary audience is energy policy makers and analysts from government and technical organizations in all countries and then we also strive to engage with the private sector NGOs and civil society. And this slide shows one of the marquee feature that the Solutions Center is proud to offer and that is there are no cost expert policy assistant known as Ask An Expert. Ask An Expert program is established a broad team of over 30 experts from around the globe or available to provide remote policy advise and analysis to all country at no cost. So for example on the area of buildings who are very pass either tribunal, leader of the Mexico Green Building councils serving as one of our experts. And if you do any of these policy assistant and building or any other Clean Energy sector, we do encourage you to use this valuable service. Again, it is provided to you free of charge and to request assistance you may submit your request by registering to our Ask An Expert feature at [cleanenergysolutions.org/expert](http://cleanenergysolutions.org/expert). We also invite you to spread the word about the service to those in your network and organization. So in summary, we encourage you to explore and take advantage of the Solutions Center resources and services including the expert policy assistance, the database of Clean Energy policy resources, subscribe to the Clean Energy newsletter and participate in webinar's like this.

And now I'd like to provide brief introduction for our distinguished moderator and panelist, we will be hearing first from Michele DeNegrìs who will be providing an introduction for ISGAN and the RSE and then following Miguel we will hear from Brandi Schmitt and Brandi is the Senior Analyst with Entergy Services Incorporated and she serves as the customer service project manager for the Entergy New Orleans department of Energy SmartView Pilot projects.

And then following Brandi we will hear from Howard Rodgers III. Howard is the Executive Director of the New Orleans council on aging and Area Agency on Aging. And our third speaker today following Howard will be Victor Prep and Victor is an Executive Consultant of Energy and Resource Consulting Group with 29 years of consulting experience in both public and privately own electric, gas and water utility and then engineering related to industrial facility. And then also joining us today for the question-and-answer session of the webinar is Toni Green-Brown and Toni is the Customer Service Representative for Entergy New Orleans Incorporated. And so with those introductions I would now like to welcome Miguel to the webinar.

**Michele DeNegrìs** Hello everybody and welcome to this webinar organized by the Clean Energy Solutions Center and ISGAN. I am Michele DeNegrìs I come from Italy and I am the T&D Director of a Public Research Center in Italy named RSE and I am the chair of the Executive Committee of ISGAN the

International Smart Grid Action Network that is a cooperative program on Smart Grids.

Very good. So just in very few words what ISGAN is? ISGAN that is the International Smart Grid Action Network is an initiative from the Clean Energy Ministerial organized as implementing agreement of DIA. It is a governmental organization. It includes representatives from governments, national laboratories and research institutions and now gathers 24 countries plus the European commission.

If we can go to the next one. ISGAN is the platform that wants to give attention to accelerate the development and deployment of Smart or Clean Energy and Electricity Grids around the world and does that collecting and sharing best practices and lessons from the different applications in the different countries that represent in the initiative. As an example, we can mention the very recent casebooks that again published and in particular, the second one that is the demand side management casebook, which identifies best practices, which has been presented at the latest Clean Energy Ministerial gathering in Seoul few weeks ago. Moreover on the just trying to understand what is going on in the different participating countries, we have setup an online database catalog on Smart Grids activities where the different governments highlight about to 100 projects in the 17 countries so far bringing together information about the most recent applications and lessons learned from the major Smart Grids projects and deployments.

We also organized and this is one of the examples webinars, highlighting lessons learned in specific projects. If we—you can go to the next one. What's does technical cooperation in the ISGAN framework means? So we want through our annex to identify the core transmission and this to mutual system needs and we want to help, give support to the policy makers and to the government based on the knowledge of the most experience network cooperators and our technical partners to have a clear overview of what are the implication, the benefits and the costs and also the technical implication of the development and application of Smart Grids technologies.

Of course, like many others already pointing look in this respect, Smart Grids is not a single solution. It is a portfolio of tools and technologies and of course, the different mix of technologies and solutions must be adapted to the specific characteristics of the specific place we are speaking about. So as an example, we are developing a network of test beds, test methods to evaluate the performance and the interoperability and the protocols, the test protocols of different Smart Grids equipment like for an instance the portable types inverters. An overview of the ISGAN geography is reported in the next slide.

We have 25 countries over the different continents so you can see what the geography is and we are in process of hopefully gather also Denmark,

Israel and Turkey that have been invited to take part in the initiative and there we have the different representatives from the different governance. So to come to the real core of this webinar next slide among the different activities that is again organizing this year for the first time we've organized the ISGAN world of excellence. This is a competition where we want to showcase leadership and innovation Smart Grid projects and we have selected as a team for 2014 the subject of customer engagement and empowerment.

We had 41 applications and the winner has been announced during the fifth Clean Energy Ministerial in May 2014 in Seoul and I think we all need to congratulate the Entergy New Orleans Smart for AMI Pilots that this year has won this competition which has been driven by independent international jury of Smart Grid experts that has selected the winner. Now, for those who have not won this year and new rounds of competitions maybe announced at the end of this year and all of the information can be gathered in the ISGAN website. So this concludes my short presentation, I want to welcome Brandi Schmitt from the Entergy New Orleans and that she will describe the features of the winning first—winning of worlds of excellence 2014 in the ISGAN competition. Thank you for your attention and the word is yours to Brandi.

#### **Brandi Schmitt**

Thank you very much and on behalf of Entergy New Orleans City council and our non-profit partners we like to thank you for this award and are very honored to be the first recipient of the ISGAN award excellence.

Okay to the next slide. So Entergy New Orleans is an electric and gas utility that serves Louisiana Orleans Parish. It's an investor on utility that is regulated by the city council of New Orleans and provide electricity to more than 169,000 customers and then another 100,000 of natural gas customers. Entergy New Orleans is subsidiary of Entergy Corp which is an integrated energy company engaged primarily in electric power production and retail distribution operation. Entergy owns and operate power plants with approximately 30,000 megawatts of electric generating capacity including more than 10,000 megawatts of nuclear power making it one of the nation's leading nuclear generators.

We deliver electricity to about 2.8 million utility customers in Arkansas, Louisiana, Mississippi and Texas and have annual revenues of more than 11 billion at approximately 14,000 employees. Next slide.

Okay so Entergy New Orleans received a \$5 million Smart Grid investment grant from the U.S. Department of Energy for a pilot project help low-income customers better managed their electric bill and determine their acceptance of several advance need infrastructure enable the demand response programs. The stimulus grant was part of 800 billion economic stimulus bill passed by congress with some projects targeted to improve utility infrastructure. In May of 2010, the New Orleans city council approve the pilot project and approves the match the grant.

Customer research began September 2010 with stakeholder training and education begin in the later in that year following solicitation and enrolment which began in December of 2010.

This was an opt-in program. Installation of AMI meters and in home display devices were conducted from February to May of 2011 with the actual pilot measurement period beginning in June of 2011. Next slide. The Entergy New Orleans developed and implemented the Smart Grid power program known as SmartView. The customers evaluate customer behavior and the impacts of TCAM rebates air-condition low control and other enabling technologies with the potential to reduce customer electrical usage intake demand. The pilot targeted Entergy New Orleans low-income customers and included Smart meters and home displays program will balance back in web portals.

Entergy New Orleans Smart pilot was the only Department of Energy funded Smart Grid pilot program is exclusively focused on low-income customers. So specifically the pilot was aimed to educate our low-income customers on the use of new technology and to promote life changes that led to low energy usage. In addition, we wanted to assess the customer's behavior measure the impact of energy usage, measure the value of the in home display devices and assess the levels of support necessary to achieve the full potential of the advance technology. So the primary measure for engaging success of these initiatives well customer's overall energy usage measure in kilowatt-hours, changing customer's low profile and reducing—reduction and peak usage measured in kilowatt per hour and the customer's overall satisfaction and involvement with the program.

Next slide. So the Entergy New Orleans pilot program again with the only one focus on low income customers. The target population for this pilot consisted of Entergy New Orleans lower income electrical residential customers. Lower income is define is add or below 80% of the U.S. Department of Housing and Urban Development published area median income based on family size. As the utility, we did not have a way to easily identify these low-income customers. We knew that the lower income population was well defined geographically by the 2000 census block income data adjusted to 2009. So using geographic information are GIF mapping technology, we match the customer addresses to the census blocks and that's how Entergy New Orleans was able to identify the target population for solicitation. The additional program qualification including that the account customer must have had an active residential electric account for at least 12 months provide verifying proof of income and defined application by the Entergy account holder or record. Nearly 170,000 electrical residential customers identified approximately 45,000 were considered low income. Additional qualifications on the application included things like the size of their home, the type of home, if they had central air or not determined which program participant will be qualified for.

Next slide. After evaluating a number of responses for our RSPO request for proposal Entergy wants selected census as a vendor for AMI system. One benefit was that census part within New Orleans company Home Automation Incorporated to provide the in-home displays at Smart thermostats. The census system known as Flex Net use the license frequency power based radio system to communicate with the meters. It's a point to multi point architecture that has low interference and minimizes the number of hubs to reach each meter. This model was well suited to the geographical department and has had excellent reliability.

We have five power gateway stations four of which will install on one existing energy towers was provide ample covers of the city and they have back call is through Entergy fiber on all but one lease power sites. The Flex Net server software reside in Entergy data centers but the system is monitored and managed by census. Entergy's customer service personnel used the system to register new devices in the system and to monitor performance of the network. The in-home devices communicated with the meter using big, big technology. The in home display devices, the thermostat and web call displays current usage month to date and projected month and usage and build them out.

The graphs of electrical usage for the previous 24-hour period and 30-day period are also available through the in home display devices. Next slide. So our program design this was an opt-in program and we did have a total of 4,608 participants for about 10% of the targeted population. Again utilizing the census Flex Net solutions, which provided real time information participants, were asked to identify preferences during the enrolment phase of the program and could choose from one of the four different program types.

If you are a participant in home display device—in home display program customers received an in home display device and Smart meter. Participants in the quarter program will receive a Smart meter and they will access their information through interviews web portal. The peak time rebate display participants will receive an in home display device and a meter and our AC load management control participant will receive a Smart meter as well as a programmable thermostat. And additional we had a control work that we use to compare for analysis purposes. Some of our program did offer incentive or AC load management and peak time rebate they were incentive to sign up for the program as well as to the end of the program. They will receive incentives throughout the program for reducing a usage or participating and the AC load management and the peak time rebate. Again, this was an Upton program and customers were able to act out at any point if wanted to. The entire Orleans geography we had coverage for everybody—to everybody in the area could participate, rebate incentive again were offered. Customers were able to see their near real time energy usage through a tabletop in home display as well as the program thermostat.

Next slide. The solicitation enrolment, what is required for participants for the program and to ensure that we were able to reach adequate participation levels, we use a variety of solicitation methods which included mass media, neighborhood events, bill inserts, targeted mail, outbound phone calls and several community partners. You can see that the outbound call and community partners were major sources of participation. If you look at the number of people when we ask them, how did you hear about the program 32% of the participants said that they heard about the program through our community outreach partners. We found it to be a very much a success. Next slide. We invited local New Orleans non-profit to attend a program introduction meeting. The purpose of this meeting was to form the organization about the Smart peak program and to provide information on how they could be involved in a pilot. Thirteen organizations attended the meeting and will all later send a request for proposal. Seven of those organizations responded to the RS feed. They were the New Orleans council on aging, capital charity to New Orleans, Kingsley house, neighborhood development foundation, total community action, pre-live New Orleans and Dillard University, Community Development Corporation.

Individual contracts will award to each non-profit and vary based on individual capacity to produce pay. New Orleans Council on Aging, Capital Charity, Kingsley House, Neighborhood development foundation and total community action all assist in Entergy on this pilot with the solicitation enrolment as well as providing training facilities. Green Light of New Orleans or help us with solicitation and enrolment, they already had a platform where they will go into the customer's homes with light bulbs. And lastly, Dillard University community development corporations they provided us the training facility. All of the non-profits will provide a cost structure that has incentive them to provide a training area, extensive solicitation efforts or high enrolment wage.

Thirty-nine percent our community partners assist with 30% of the participants were enrolled through our community partners. Next slide. A variety of materials were developed based on focus groups, research and finance from other Smart need rollout. We held two different focus groups to ensure that customer acceptance and ask customers that they were interested and would they enroll and where would they like to see the posters. So based on that information these are the final products that we came up, we did print on materials both in English and Spanish. The SmartView name was radically accepted in easily recall by the participants and then we did setup a 1-855 separate number again that was well recognized by our participants.

Next slide. The customer engagement and education. During the enrolment process, participants were asked their preference in training, did they want high-touch, which is based training what they prefer over the found, which is a medium touch, or they would like new instructions. So to our community partners we were able to conduct 32 high touch or face-



to-face training session a various location throughout the city and trained the call about 518 participants. In addition to that, several of our customers did receive training through our walk-in payment location within the New Orleans area. We held 10 conference call type over the phone training sessions at about 130 participants participated than not and by far our largest amount of training that participants use was by mail. We mailed all participants a training packet and then they called us back when they received the information at their time when it was available for them, we were available to answer questions and help them with the devices.

We did have online training, it was not an interactive training but we do provide through Entergy online accounts. You could download the materials that were provided through other methods. When we did our training, it did not just focus on the AMI technology itself. We're really focused on also how do you use the tools, how do you use this information and focus on energy efficiency and the fact that the customers now have this information and they are now in control and by taking that data make adjustments to their light bulb to help them reduce their energy usage. We also did setup a dedicated 1-855 support center and we mean outbound calls throughout the program to check on participants and to ensure and reinforce their understanding of the program and the energy efficiency information that was shared with them. Next slide. So during our—during the whole pilot program our outbound call center really focused on in the beginning, focused on the customer enrolments.

As you can see from January through May of 2011, our outbound calls were high and that was as reaching out to participants to solicit enrolment, the inbound calls really consisted of validating the information, validating that their devices have been received and it's only meters answering questions that effect. From July of 2011 to September that was our—when we did our peak time rebate program and our easy load management. It also included additional training as needed. Then we have the second peak time event in 2012 and those outbound calls were to those customers. When we did our peak time event for PTR customers we did notify the customer the day before the event, to let them know to curtail their usage and for AC load management there was no outbound call, the device was just go into in the event. Next slide.

So one of our results although energy savings were not statistically significant but for some of the program 78 to 90% of the participants believe that they save money as result of the program. The data indicates that doing 68—I'm sorry, 58 and 67% of the customers actually save energy across the program. It's interesting to see that the AC load management while we control and curtail and the PTR where—our customers actually head to curtail themselves savings were about the same at 57% of those participants actually achieving some saving and did not receive any incentive. So again, the programs that receive incentives who are AC load management and peak time rebate but IHD or in home

display device customers and portal customers did not receive any incentive at all. Next slide.

So through our analysis the purpose of the impact analysis was to quantify the change of the energy demand overall consumption resulting from participating in the SmartView pilot. Twenty peak time events were called in 2011 and 14 events in 2012. Each event was from 1 p.m. to 5 p.m. Generally, in we had 23 events for AC load management in 2011. AC load management participants' central air condition use was cycle of 33% each hour at random. Event period were from 1 p.m. to 4 p.m. So as you see on the impact from repayable the AC load management participants reduced that demand by an average of 0.4 kilowatts or 16.3% during the event. And the PTR participants reduced their demand on average by 0.25 kilowatts or 10.6% during the event.

When looking at the energy saving summary table you present estimated changes in the daily use, daily energy usage. Some participants in all four pilot programs reduce the energy usage in the summary season, however, these results were not statistically significant different from view at 90% [Indiscernible] [00:34:55] for many of this participant.

Next slide. We conduct a survey at the end of the pilot program getting the customer feedback as it relate to specific programs within the pilot. Surveys mailed to participants at the end of each pilot program. The overall response was 55% with peak time rebate in AC load management having the highest response rate of 73 to 74% respectively.

Each survey ask a variety of questions focus on customer satisfaction. So one of the questions asked was what did you like most about participating in the SmartView program. 62 to—65 to 82% of participants responded that they like the money saving of most. With the second highest being energy savings information. Another question was are you interested in participating on a permanent basis? As you can see between 88 and 96% of the population said yes. Next slide. The lessons learned. One of our key takeaways in key success factors that we really need to make sure that you involve all of the stakeholder groups. It was a partnership with our community departments at New Orleans city council, our company as well as the customer. Another significant learning was that by engaging our community partners in the solicitation and education strengthen our relationship with those partners and our customers. Low-income customers can benefit from use of Smart Grid technology in a very diverse within themselves. They had different education levels, different housing, different needs. Customers' motivation can vary amongst participants. Some of the customers that receive their in home display device use every day. There were other that just received and put in a draw and never activated it.

We found one of our lessons that you do have to offer diverse training options, by asking customers their preference if they want to go face-to-

face training versus receiving information in the mail or talk to someone on the phone. Initially our thought that was everyone may want to use face-to-face training but we found that a lot of the customers prefer if we mailed them instructions and they contacted us and but they did like to have the opportunity and flexibility to go to have a face-to-face training if needed. In selling and in home display devices especially the thermostat do require significant support from the customer service side as well as technical areas. The thermostat that we have were such challenging to some of our participants as some of our people that we installed it they had the slide thermostat are going from a non-digital thermostat to digital thermostat with the learning curve to some of our participants.

And lastly, the highlight contribute expiration of Smart Grid technology additional benefit that we can gain as utility. Next slide. So in conclusion, we did want to include a list of our non-profit that helped us and will part of this pilot program and in presentation effectively when you get through their link their website additional information from them. So now, I would like to turn over to Howard to talk one of our non-profit organizations and from his point of view on SmartView Pilot.

### **Howard Rogers III**

Hello. I'm Howard Rogers, Executive Director of New Orleans council in Aging. In the State of Louisiana, we have 64 parish councils on aging and seven area agencies going on age. We are one of 64 parish councils on aging and we are one of eight area agencies. If you would go to the next slide please, this just tells you a little bit about the council on aging application our vision and we've been around 40 years now. Let's go to next slide. We served over 30,000 clients on an annual basis so we have a database that was able to help Entergy as we look at and trying some fine individuals to participate in this program.

We are charged with serving anybody over the age of 60 in the city of New Orleans. Additionally, outside of being the council on aging in the area [Indiscernible] [00:39:52] aging some of the services that we provide we administer Entergy's Power to Care utility bills systems program, we've been dealing in this particular program for at least in the last 12 years.

We have 14 senior centers throughout the city in New Orleans and those particular locations we provide a healthy meal to the seniors via the senior centers. We also operate what is called meals on wheels where we touch close to about 2,000 people on the daily basis with a hot meal delivered to their home. We have volunteer opportunities throughout the city of New Orleans where we provide volunteers and we also have another program, which is called adult disability resource program where we held individuals find low cost prescription drugs and assist them with any type of medication that they might need to sustain their life.

Could you go to the next slide? Why the SmartView Program partnership? Well it was the extension of the energy efficiency outreach program that we already had so it will provide an additional cost to us. One of the things

over the years that we found on that senior have a tendency to go in and turn the lights on, leave the lights on and they'll turn the lights off and eventually they start to wonder why their bill so high. So the AMI program was aware of us getting to those seniors and help them demonstrate the deal how we can assist them in trying to improve not only the quality of their life but also cut down on their Entergy bill. So it gave us the opportunity to achieve working with Entergy, which is one of our strong supporters in the community here in the city of New Orleans.

Could you go to the next slide? Well why it was successful? Well number one we know our clients. We add—we interact with them on a daily basis and we also provide trainings to our client. First of all our clients trust us. We've been providing these services, senior services as I've said earlier over 40 years and we've been able to establish a relationship with our clients in terms of not only our services but the individuals who we presented them who we think may be able to help them. So we had somewhat easy and talking to them about the SmartView program and how that they could participate and the ease of incorporating the individuals into the SmartView program first of all we were able to prequalify them based on the qualifications the Entergy was looking for especially in terms of low-income customers. And throughout this entire process, we have supports from Entergy and also other community partners. We act as a team in terms of looking at the low-income community and dividing who are able to identify and enroll in the program.

And last but not the least, the clients enjoy being part of participating in this particular program. Could you go to the next slide? Well, you know, in conclusion I experience this as that and get the senior's idea of what it was to be responsible for their own energy usage. As I said earlier, seniors have a tendency disability and turn the lights on and leave the lights on and not think about turning lights off. It also give them an opportunity to not just be consumers but informed consumers. Now we went through this education process with their plus some of those individuals and caught on to them as, "Hey, okay turn the lights off. I look at my mirror I might be saving a few dollars and it also provide an insight on how utility company provide services to their customers. And last but not the least it made us appreciative of our partnership with Entergy that they were helping us forgive and understanding to help the seniors of how Entergy is used, how a company act with our community and last but not the least was able to show that they were saving utility bills. Thanks.

**Victor Prep**

On behalf of the city council of New Orleans I'd like to welcome all to the SmartView AMI program webinar. My name is Victor Prep and I am with the staff, we are the council advisors—technical advisors in my function to the city council who is the regulator of retail utility services in New Orleans.

Next slide please. The program as viewed from the regulator, the grant from DOE which was matched by the utility funds, the council encouraged very highly promoted email to apply for the grants for testing low income customers willingness to use the technology, the grant initially did not specify any demographics but the council very proactively encouraged and helped in the application to get the program into New Orleans for that purpose. The customer education acceptance, the city council regulator and looking at the services provided to all customers needed to assess their willingness to change lifestyle and their energy use patterns because that's necessary—that change is necessary in the long run benefits of the program and the technology and the increased cost. And in this case here it was difficult to reach this hard read segments and we knew that it was going to take some extra effort and the involvement of all stakeholders. The council was very, very interested in moving in that direction. Based on a definition of—from the housing and urban development the 55% of New Orleans residential customers fell into to the low-income classification and we're particularly interest to the council.

Next slide please. Our role in being the staff of the city of New Orleans council, the regulator was to provide insight and recommendations to oversee the planning and development of the programs, the marketing materials and methods used in the solicitation of participation, the council was firm that we take a proactive role that we checked the council and informed each step of the way in energy efficiency and then the specific AMI program, the council had the circle members who were directly involve with our participation and our role. It was also to monitor and evaluate utilities performance on participants enrolments in the program and that involve that you heard through Brandi's presentation and Howard's customer education and in the participation of how the hard work was installed both from the utility's perspective and the participants area and the homes of the follow up evaluation that was necessary and all along the way the role of community partners. We had personal involvement and visits with the program and community partners to ensure for the councils behalf that the program has intended and then of course the final evaluation which goes to the program itself and then into the future of a program extension of the AMI as Brandi indicated earlier.

So in the loop from recommendations we made oversight monitoring the program was a continuous involvement of the council's regulator. Next slide please. In looking at the request made to the DOE for the program the council granted the request it was very specific in the granting of the request on their concerns of the pilot implementation and the objectives from the council's point of view that it would provide the access to the low income segment in the New Orleans for implementing energy efficiency programs. And also the council was involved in looking at the measurement of the effectiveness measuring how effective each of the measures were in reaching this market segment. The potential benefit of the low-income customers from demand response functionality that is in

terms of using the programmable thermostats for managing the load and also for seeing the customers' reaction to the peak time rebate program demand response being how the customers reacted during specific times rather on the average energy used. And importantly to evaluate the AMI program, the technology for subsequent implementation. There are utilities in the state that put AMI meters on all customers and nationally the expansion of AMI was certainly a target that the council had in mind. Next slide please. The specifics on the program that the council included in its approval of those requests, the cost of that is the matching cost which were about five million that we're not reimbursed from DOE through the grant where we covered through a prorate basis of revenue in retail rates which meant about 41% of those under reimbursed cost and the program where recovered from residential customers.

The council also went in a very specifically to the service regulations of that would bolster to the program the complaint for assets which in the existing service regulations stand about 10 days was extended to 20 days, there were changes in the bill format, the council wanted to reflect the cost clearly to participants. There were specific concerns about the repair and replacement of equipment on customers' premises during and for limited time after the program and there were guidelines developed for resolving any clients from participants related to the AMI program. Next slide please.

The council's involvement as I said generally earlier was specific input into the customer solicitation and enrolment materials, we had a very good arrangement with the utility to have draft of circulated until everyone was satisfied with the how those materials would find with the use with participants. There were concerns participants were very sensitive being identified as low-income customers and they were addressed in the materials and of course the data concern over privacy. We insisted that the customers own their own data and that their personal information be protected between the utility and all of the organizations accessing customer data for enrolments and otherwise. We monitored the focus groups Brandi talked about looked at the results and how they were applied, the online enrolment procedures and the education methods again looking at how each of them would be effective to what extent and throughout process like I mentioned the council proactively supported the involvement of the non-profit community organizations and was certainly a large part of the program.

Next slide please. What challenges did we encounter in the program it was a difficult task with the organization and approaches that were summarized so far in the webinar it was difficult to reach the demographic group there was a significant efforts with the technology, the implementation program was reinforced the throughout the community partners put in significant efforts and that extended from not just the enrolment but the training and the feedback to the participants. The face-to-face education sessions, we looked at the different methods that Brandi

summarized earlier and obviously the hands on and the direct involvement with the participants of reduced of that results in the delivery mechanism some of it was different technology for the customer segment they needed additional training and there were increasing attempts to have better connectivity to have the equipment, the in home devices and the use of the thermostat more effective and each of the participants home. And we did evaluations of the company's efforts to do this throughout the program made changes during the process.

Next slide please. So we have some additional observations other than what I'd mention already about 11% of the enrolled participants talked about within one year of pilot launch state and large percentage of those were because of participants moving including renters, we looked at this say in the future how we could better improve the opt out rate and I think that we got some good observations from that. And another one was we looked at into the future clearly delineating which Smart Grid devices and networks in the participant's residence are the utility's responsibility and which would be in the long run those of the residents. Next slide please. And that thank you from the regulator from the city council of New Orleans and I think after that presentation we can move into questions.

**Sean Esterly**

Great. Thank you to each panelists for those presentations, really appreciate it and we did receive some questions from the audience. Before we get started I just want to remind the audience that if they do have any questions for the panelists, you can type those into the question box and go to webinar pane on the side of your screen and I'll be able to present it to them from there. And so with that we'll get started with the first question and our attendee just wanted to thank you for the wonderful presentation and then mention that PTR is considered as not one of the best options for a dynamic pricing strategy since it does not reflect the true cost and it's also based on the customer baseline value.

And the PTR gives you better results; would you still consider deploying it to all customers considering its inherent issues?

**Brandi Schmitt**

Thanks for the question. That Entergy, there's a lot of learning from this pilot program and that some of the things we're hearing this is being into a I guess a larger initiative that they—where do we go with this or what do we do next and these are all of the things that we're considering going forward for the pilot, the way our peak time rebate program was restructured is that the customers receive a credit a 20% credit for every kilowatt saved during a period where we compare to this two-day—before two days after the event.

So that structure is not necessarily a cost structure that if we did a full deployment we would use going forward so yes we're looking at other options and where we go from there and I'm going to let Pauli Roseman, who is the manager of our regulatory group that work very closely with our regulators to kind of chime in with me also. Pauli?

**Pauli Roseman** Yes. So for peak time rebate program we wanted a positive response when speaking to our regulator on this issue for this program and so we did not penalized the participant if they stayed on the peak but only incentive, the participant so if they got also peak they receive the rebate but if they stayed on the peak they pay the normal rate. But in future we would probably most sensitive to that and was probably have a rate that if you stayed on the peak you will be penalized.

**Victor Prep** If I can add to that this is a [Indiscernible] [01:00:41] on behalf of the regulator the rates were not timed based here. There was the structure that Brandi and Pauli mentioned. I think the question involved the—what considerations would there be for full implementation of AMI and I think on the rates side there would probably have to be some consideration on restructuring the rates between peak and off peak times and the benefit that the customers would get from such a program.

**Sean Esterly** Great. Thank you guys. And one of our attendees was wondering if there's any contact information or a way that if they wanted to get in touch with you guys or some of the project if there are some place if they can go for that?

**Pauli Roseman** This is Pauli Roseman. We will provide my information as a contact for the project as project manager.

**Sean Esterly** Great. Thank you, Pauli. And what I'll do is I'll email between the attendee that asked that and you so that you can provide that contact information after the webinar. And so moving onto the next question that we have; did the community partners they involve throughout their projects or just during the enrolment?

**Howard Roger III** No. We stayed involved throughout the entire project and actually did some follow up after project was over with because some of those individuals that we had identified had enrolled in a project, some of those people were saying was [Indiscernible] [01:02:24] back to us later asking for Entergy assistance. So we were able to kind of attract those individuals and also noticed that there was a reduction—still reduction in energy bill.

**Sean Esterly** Great. Thank you, Howard. And the next question that we have is how did you inform the participants of the peak time and AC events. Were they done in a regular schedule?

**Brandi Schmitt** Okay. So for that peak time rebate customers these customers were worked with our internal and we identified what days were a high degree heat day and we notified the customers two ways. One, we notify them with an outbound kind of automated call to let them know that they were going to have an event tomorrow and to curtail their use next day. The other way they were notified is their actual device in home display device to ask why display return call so if they had like a green icon it would turn red during an event. So that's how customers for peak time rebate and it



was random with that. For AC load management customers there were no notifications, it was just the usage would be curtailed and the [Indiscernible] [01:03:42] on the three -day cycle and their devices which is again the thermostat would just turned red back—would turn red window wherein any of that. And again we tried to use the same pattern of high degree-day. The customers or participants were not aware of when the event was going to be held ahead of time.

**Sean Esterly**

Great. And the next questions kind of related to what you're just talking about there, are there any other types of messages that you could send to the participant via the IHDs or just a program display?

**Pauli Roseman**

The functionality that we had in the in-home display devices is we did have functionality to stand the participants a text message or a welcome message, we did not utilize that feature but the functionality did exist. And then moving to the next question, did you establish a separate technical support group or did you train the support center agents to handle technical questions?

**Brandi Schmitt**

We kind of took a prong approach to that, we did have a dedicated SmartView call center and I did—I want to make sure that everyone panelist—everyone on the call understands that, you know, we do had a 1-800 Entergy call center.

We thought because this is a pilot program and we knew this is different technology we wanted to not money with our regular phone calls, we setup a separate call center with a separate number and those call center representatives were trained on the technology as well as energy efficiency chip and had explain bills to customers. Additionally to that, if there was a technical issue in this field we did have census along with our field services personnel that we're trained technically that should they have to go in a home and test that meter or test the technology they will able to do that so we had both field technicians as well as a dedicated support center that was trained on this particular program in the technology.

**Sean Esterly**

Great. Next question from the audience is how will the devices such as the in-home display and Smart thermostat be financed when this program is deployed to all customers?

**Pauli Roseman**

We will have to—it will have to go through our rates. It would have to be approved by the city council of New Orleans so we would have—if we would choose to do a full deployment of the AMI then that was the approved by the regulators.

**Victor Prep**

I would add—this is Victor on behalf of the regulator, I would add to what Pauli said. The expansion of the program would first have to be done evaluating a business plan to say here's how much change the customer use, we would anticipate, here the long run benefits and if the program seemed to produce more benefits and cost then it would be a question of

how much additional funding should be done upfront in stages and as Pauli said it would have to be done by increasing rates, a council decision. It would have to be done by deciding how much the customer would put in and cost in the whole merry a network and devices and what other considerations that they would receive for doing so, so it would be a very comprehensive evaluation and process and I imagine it would take some time to answer all those questions.

**Pauli Roseman**

Yes. And this is right because we really had depending termed the council and have checked them with regarding our findings with the program. We have provided them with [Indiscernible] [01:08:20] and so the next step is to go through report with them and this was shift to test [Indiscernible] [01:08:28] and sometimes work and sometimes didn't so we would have to figure out the full departments what was the full cost benefit to customers and what will be the rollout and as full deployment of AMI to the city of New Orleans.

**Sean Esterly**

Thank you, Pauli and Victor. And the last question I received so far ask how many complaints regarding the AMI system were made to the regulator during the pilot in which area technical or customer service et cetera had the most complaints?

**Brandi Schmitt**

Okay. I will—this is Brandi. From a support center perspective and we did not receive any complaints that what escalated we have a very define escalation process that we go through that we ever escalated to our regulators. We're kind of very proud of that, that's not to say we didn't have the issues or concern but you know, we were able to address the customer issues or concerns about it. Now as far as where are most complaints came in, it kind of it depends so it was in way. In the beginning, some of the issues that we had to go through is the understanding of—when we change the meters and customers being home and so we had to work through that with our participants and just making sure how we change the meters about and install their devices. Some of the issues, the technical questions were, if we have technical problems like with Bigby which is the new technology at the time when we deployed this we did have a couple of technical issues and the customers devices were provisioned or they matched from the in home display device meter and some what happened a glitch it wouldn't be paired, they have to call us back and it would have to re-sync those in home display devices. But other than that we really didn't have that may—we didn't have any escalated complaints and our complaints were cut out just normal issued. I will say to add to that, the customers that were participants on the SmartView program, we monitored their overall high built complaints through the pilot just customers that normally would maybe historically would've called our 1-800 Entergy number to say hey, I hate my bills high have issues. We did not have or we tracked that very closely very in fact any customers that complained about a high bill once I get the program and once you drag to training again we'll I'm going to plug our community partners, they really were instrumental and help me with that and helping

customers understand it. The in-home display devices in the portal it's just information but what they do with the information and that's kind of we focus in this information for them to have make good decisions and to help them manage their bill.

**Sean Esterly**

Thank you, Brandi. And at this point, that is the last question that I've received from the audience and so I'd like to move on to the survey for our attendee and we administer the survey just to evaluate how we're doing and improve for our next webinar. So Heather if you could go ahead and display that first question. And that question is the webinar content provide me with useful information and insight and you can respond right in the go to webinar window. Great and question number two please Heather. The webinar's presenters were effective. Great and the last question please Heather. The overall the webinar met my expectation. Great and thank you for answering our survey and we have a few more minutes I'd like to give our panelist the opportunity for any closing remarks that they might want to make.

**Brandi Schmitt**

This is Brandi Schmitt and with into the—we definitely want to thank you for the opportunity for us to talk to you today and hope that you get some valuable insights.

**Sean Esterly**

Great. Thanks again guys and on behalf of the Clean Energy Solutions Center I just wanted to extend thank you to all of our expert panelist for joining us today and for the presentation and also to our attendees for participating in today's webinar. We very much appreciate your time and hope you'll be back for other webinars on Smart Grid and other Clean Energy topic and I do invite our attendees to check the Solutions Center website if you'd like to view the slides and also listen to a recording of today's presentation and we have that link up on the slide that you're viewing now. And additionally you'll find information on upcoming webinar, another training events there. Also we are now posting our webinar recording to the [Clean Energy Solutions Center YouTube channel](#) so please check that out there are some great videos on there as well and please allow for that one week for today's broadcast to be posted there. We also invite you to inform your colleagues and those of your network about Solutions Center resources and services including the no cost policy support and with that I hope everyone has a great day and we hope to see you again at future Clean Energy Solutions Center events and this concludes our webinar.