Shawna Senko

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Sent: Wednesday, June 25, 2014 8:21 PM
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Subject: Re: Docket No. 130223-EI - Electronic filing -- Intervenor Testimony AMENDED FILING
Attachments: Docket 130223 Intervenor Testimony Martin 6-25-19 Complete.pdf

a. Person responsible for this filing:

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b.

Docket No. 130223-EI In re: Petition for approval of optional, non-standard meter rider by Florida Power & Light

c. This document is being filed on behalf of intervenors Shari R. Anker, Alexandra Ansell, Stephanie & Peter J. Austin, Martha Babson, William G. & Margo A. Bigelow, Kathleen Bolam, Patricia DeNunzio, Jeri E. Friedman, George Fuller, Cathy & Mario Grippi, Shirley D. Jackson, Jamie & Douglas Lehman, Marilynne Martin, Victor J. Rohe, Sandra L. Smart, and David E. Watkins

d. The document contains a total of 69 pages

e. The document attached for filing is the Intervenor Testimony of Marilynne Martin

ENNIS LEON JACOBS, JR.

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P.O. BOX 1101
TALLAHASSEE, FL 32302

June 25, 2014

Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

RE: Docket No. 130223-EI

Dear Ms. Stauffer:

Please find enclosed for electronic filing in the above-referenced docket the testimony and exhibits of witness Marilynne Martin, filed behalf of intervenors Shari R. Anker, Alexandra Ansell, Stephanie & Peter J. Austin, Martha Babson, William G. & Margo A. Bigelow, Kathleen Bolam, Patricia DeNunzio, Jeri E. Friedman, George Fuller, Cathy & Mario Grippi, Shirley D. Jackson, Jamie & Douglas Lehman, Marilynne Martin, Victor J. Rohe, Sandra L. Smart, and David E. Watkins. The items in this filing are this cover letter, along with the prefiled testimony of witness Martin and three (3) exhibits.

Please feel free to contact me at (850) 222-1246, or at email address: ljacobs50@comcast.net should you have any questions related to this filing.

Sincerely

/s/ Ennis Leon Jacobs, Jr.

Ennis Leon Jacobs, Jr.
Attorney for Shari R. Anker, Alexandra Ansell, Stephanie & Peter J. Austin, Martha Babson, William G. & Margo A. Bigelow, Kathleen Bolam, Patricia DeNunzio, Jeri E. Friedman, George Fuller, Cathy & Mario Grippi, Shirley D. Jackson, Jamie & Douglas Lehman, Marilynne Martin, Victor J. Rohe, Sandra L. Smart, and David E. Watkins

cc: Counsel for all parties of record (w/encl/)

BEFORE THE PUBLIC SERVICE COMMISSION

MARTIN, ET AL PETITIONERS

DIRECT TESTIMONY OF MARILYNNE MARTIN

DOCKET NO. 130223-EI

JUNE 24, 2014

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I. INTRODUCTION

Q. Please state your name and address below.

A. My name is Marilynne Martin. My address is 420 Cerromar Ct., Unit 162, Venice, FL 34293.

Q. Please describe your professional background.

A. I am an accountant and I have over twenty-five years experience in the field of accounting and financial management for large corporations in the consumer products manufacturing, telecommunications, directory publishing and banking industries. Most of my experience has been in financial planning and analysis, financial systems design and implementation, SEC accounting and cost allocations. I started my career in banking and then became an auditor for Cooper's & Lybrand. I became a Certified Public Accountant in New York State in 1983. While at Coopers & Lybrand I was assigned to the New York Telephone Company and the AT&T divestiture audit. I then spent a total of 11 years at NYNEX Corporation working in various corporate accounting and divisional controller roles. While in one role at Telesector Resources Group, a share service entity, I had responsibilities for cost allocations ensuring costs were properly allocated so that cross-subsidies among the regulated and unregulated groups did not occur. I then went on to Cablevision for a year as a financial planning specialist working on their new voice product Optimum Voice that at the time was in development and field-testing. After that I spent over eight years with Estee Lauder Companies Inc. first leading their financial planning and corporate allocation functions. I was then appointed to Vice President Corporate Controller and after that I led a special projects team, the most notable project being the initial implementation of the Sarbanes Oxley internal control review. I have been semi-retired since 2006. I hold a Bachelor of Science Degree in Accounting from Hofstra University. (see Exhibit MM-1)

Q. Please describe your status in the proceeding.

A. I am an intervenor in this docket and I have been on the Florida Power & Light "postpone" list for smart meter installations since 7/31/12.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to discuss the cost principles, methodology, and cost allocations being used by the Commission and FP&L to determine the cost basis of the Non-Standard Meter Rider ("NSMR") tariff filed by FP&L.

Q. Are you sponsoring any exhibits?

A. Yes. I am sponsoring exhibits MM-1 through MM-3

Q. Please summarize your testimony.

A. My testimony challenges the methodology and underlying inputs for the calculation of purported incremental costs for the NSMR. This calculation, as proposed in this docket, it is not a detailed, thoughtful analysis, and is not consistent with historical tariff requirements by the Commission. The NSMR terms proposed by FP&L in this matter represent a punitive policy towards consumers, and serves only to artificially repress the demand for an alternative to measuring electric service by smart meters.

Q: Did you personally experience FP&L's customer engagement and field operations related to the deployment of the AMI program?

A. Yes. FP&L sent out postcards in my service area in July 2012 stating they would be coming to replace the meter. I called the number provided on the postcard on July 31,

2012 to alert them I did not want a smart meter installed. The representative told me I would receive a call back from another department in 2 days. I received a call from FP&L representative Toni Tookes a few days later. After a discussion with Ms. Tookes, where I explained I lived in a condo and had an electric panel with 10 meters right behind my bedroom wall and it was unacceptable to establish their communication relay network in that location, she finally told me she would put me on a delay list. I then placed a notice not to install smart meters on the electrical panel.

In August I happened to be home when the contractor came to install smart meters. He was installing smart meters on the adjacent building in my condo association when I approached him and told him not to install the meters on my building. After that encounter I spoke with a Ms. Cynthia Guido at FP&L executive offices. She told me I could not stop the installation of the other meters and that customers had to put themselves on the delay list. In my 10 unit building only two of us live here full-time, the rest are either investors or snow birds. I had to go through the process of contacting the other residents who were up north at the time and have them call to get on the delay list. The other residents were unaware of the smart meter installation, as “current resident” mail does not usually get forwarded.

An important point is that the postpone list option was not made known to the public and was very difficult to get on. You needed to be firm with the customer service representatives that you did not want the meter. Also many months prior to the issuance

of the Smart Meter Briefing Report on February 11, 2013, customers were being told there would be a charge to retain their meter.

Q. What review did you undertake for your testimony?

A. I attended the Smart Meter Workshop on September 20, 2012 and reviewed the material submitted in that workshop. I also reviewed the materials submitted in this Docket as well as the testimony on smart meters by Ms. Santos in the 2008 and 2012 rate case filings. In addition, I reviewed related dockets such as Docket 130160, which FP&L filed in 2013 pertaining to smart meter communication issues. In addition, I reviewed the opt-out fee filings of other states.

II. BACKGROUND

Q. Are there any general observations you have regarding the deployment method used for the smart meter project?

A. Yes. First, it is important to understand the method of deployment used by FP&L for the AMI Project. Large multi-year projects can be implemented in one of two ways; either a phased implementation or all at once, what is called "big bang". FP&L chose a phased implementation, which means instead of installing all the smart meters and activating the new standard service all at once (commonly referred to as a big bang approach), they did the installation and activation on a service area by service area schedule. Each service area became activated with the new operations on different dates.

The type of implementation becomes relevant when evaluating the reasonableness of the costs submitted by FP&L, as well as in determining who is the true "cost causer" that should bear the responsibility of the costs being incurred.

Second, it is important to understand that costs will vary significantly as to the timing of when this optional service is elected. FP&L is still in implementation "project" mode. Although substantially completed, they still have approximately 200,000 customers outside of the Miami-Dade area where smart meters have not yet been deployed. This is expected to occur in 2015. After they complete this implementation they will close their project and enter a "ready state" mode where all their service areas will be activated with the new smart meters. At that point a customer residence will either be equipped for service with the old meters or the new smart meters.

There are significant costs differences between taking this service in the project mode versus taking this service in the ready state mode, specifically project capital avoidance savings that I will discuss later. The tariff approved did not address these differences.

Q. Are there any general observations you have regarding the method of determining incremental costs used in this tariff?

A. Yes. First. The determination of incremental costs is highly skewed to advantage FP&L at the expense of the NSMR customers. It appears they have only identified the additional costs that will be incurred, while leaving out the analysis of the costs that will be avoided or reduced by the NSMR customers in the future, and failed to calculate costs

which are likely to be readily absorbed through existing rate recovery. In order to arrive at the true incremental costs you need to look at both sides of the equation to arrive at the net incremental costs.

In addition, the timing of requesting this charge, in isolation of the review outside a general rate case where this would typically be performed, does not produce fair and reasonable rates for the NSMR customers. The incremental costs that FP&L seeks to recover in this tariff are for services generally included in basic rates. Basic rates do not currently reflect the economics of the new standard smart meter service.

Q. Please describe how these timing issues create concern?

A. As mentioned above, the incremental costs under review are for services covered under base rates, which are typically reviewed in detail in general rate cases. It is difficult to arrive at fair and reasonable rates by looking at them in isolation. For example, FP&L has claimed they need additional customer service personnel for this service. Before extra personnel should be approved, I maintain that a more objective analysis of these costs is required. This analysis is a decision tree of sorts, in which you need to evaluate a range of elements.

First, one must evaluate whether the existing work flows and functional units can absorb workload associated with the NSMR under existing budget allocations, and second, will the transition to the AMI program remove or diminish other activities that will not be performed in that unit and thus offset the volume of work added in relation to the NSMR

activities. In the case of the purported incremental costs FP&L cites for the Call Center, the company should address and demonstrate the relative impacts on work flows and functional units as customers without smart meters reduce the volume of calls relating to the energy dashboard, or reduce demand or enrollments in other services offered for the smart meter customers. The true impacts when analyzed fully as I believe an objective incremental cost calculation would do, may demonstrate that net incremental cost do not really exist. Another example is the repair and maintenance costs of smart meters. Setting aside for the moment the issue of comparative costs of maintenance and repair of smart meters versus analog meters, it is accepted that analog meters used by opt out customers do not contain communication modules. Any repairs or service issues for communication problems, such as those reported by FP&L in Docket 130160 will not be incurred for these customers and thus, there will be reduced workloads in the repair and maintenance areas.

Second, if there are not offsetting reductions in work for the NSMR customers but the work can still be absorbed with the existing staffing levels, there would be a need for a cost allocation. You would determine the appropriate cost to charge these customers and make a corresponding adjustment to reduce the costs in basic rates. Since the NSMR customers participate in both pools, they would share in the reductions of base rates as well as be charged for the NSMR service. By handling it outside of the rate case this analysis and cost allocation process gets bypassed creating inequities for the NSMR customers.

Q. Are there other concerns regarding timing of this charge that create inequities?

A. Yes. The biggest concern is in regards to project savings. These savings have not been reflected in base rates and were not accounted for in the recent rate case settlement. Without an objective analysis of the savings generated by the transition to the AMI program, then efforts to project incremental costs in the manner suggested by FP&L, i.e. by stating that the project is completed and it is time to recover these costs through compensatory tariff rates, is null and void unless FP&L is willing to adjust base rates to reflect the project savings. In the tariff as filed, FP&L wants their cake and then to eat it too, so to speak. This project was originally approved in the 2008 rate case based on annual O&M savings of $36 million dollars. However, current rates are based on a 2013 test year, which does not fully reflect the new cost of service for the AMI program, now a new standard service, as the project was not anticipated being completed until September 2013. Current rates reflect a project mode, not "ready state" and include net project *costs* of $3.7 million, rather than net savings. The costs included in 2013 basic rates are a hybrid of both the smart meter and the analog meters; reflecting costs to read 453,000 analog meters through 2013.[1]

It seems more practical to avoid developing any compensatory rates related to the NSMR until the FP&L cost of service accurately reflects its true costs under the AMI program. The more proper approach would be to capitalize the AMI program operations until such an analysis is complete. As Witness Onsgard confirms, all costs included in the NSMR

[1] See FP&L Response to Office of Public Counsel Ninth set of interrogatories no. 173, Docket #120015

revenue requirement are incremental to the costs recovered through base rates. [2] Now that the operational savings anticipated from the meters – estimated at $40 million – are not projected to appear before 2015,[3] that seems to be the most appropriate time to begin consideration of any rate issues related to a NSMR.

It is improper and nonsensical to look at this analysis, and the impact of the NSMR on operations in a vacuum, as suggested in this docket. One must ask to what extent are FP&L's base rates calculated on expenses that FP&L is not now incurring. That is, if the anticipated savings from the smart meters are understated in the test year for base rates, and now FP&L is in fact realizing significantly higher savings than projected in the test year, how should this situation be addressed? Even, more significantly, should the company engage in a "true up" of actual economic impacts before imposing a surcharge based on opt out customers, in the face of the negligible impact of opt out customers on FP&L's overall costs.

Q. Why should the Commission be concerned over long-term policy implications if it approves this tariff?

A. The policy implications are very important because of the nature of these NSMR fees, in relation to the totality of circumstances surrounding the AMI program which bear huge impacts and represent a message the Commission sends as to regulatory management practices. Specifically, FP&L has indicated that they developed the postpone list as early as August 2010, and decided to maintain a postpone list until the end of the entire project

[2] Direct Testimony of Robert A. Onsgard, page 19.
[3] Docket No. 120015-EI, Rebuttal Testimony of Marlene E. Santos, page 6.

before making a decision on how to handle the customers refusing a smart meter. This management of the postpone list might make sense in a big bang implementation but not in a phased implementation as was done in the FP&L deployment of the AMI program.

The body of customers not interested in utilizing a smart meter was evident early on in the implementation process. FP&L had enough information at the time of its 2012 filing in January 2012 and should have requested this tariff at this time. At the end of December 2011, there were more than 1,300 customers on the postpone list and at the time of the settlement of this rate case in November 2012, they had over 20,000 customers. Additionally, statements by FP&L at the Commission staff workshop on September 20, 2012, clearly demonstrated this knowledge and awareness. Based on the responses to the OPC's production of documents requests, FP&L started evaluating the costs to offer an opt-out provision in 2011. In addition, dating back to 2011, a general response in the electric industry to the issue of customers opting out of smart meters was to offer an opt-out option. I have included a report entitled "National Action Plan – Communication Plan Umbrella – Action Guide – Part 1", dated July, 2011, included as Exhibit MM-3, which was published by an industry group in which FP&L has membership, to document this industry-wide position.

Thus, FP&L should have managed and optimized their operations in relation to these opt out customers throughout the implementation process. This is especially so given the substantial operational changes which FP&L asserts were required simultaneously to implement the smart meters. To approve the methodology proposed by FP&L is to

tacitly approve a management practice that waits until the end of the project to recognize that the transition caused operational inefficiencies and up-front costs that fuel the specter of subsidization. Proper project management calls for a quick resolution. It is inappropriate to wait until the end of the project in a phased implementation to consider overall functional impacts. To approve this management practice is to approve a policy which serves to distort and repress the actual public interest favoring an alternative to participating in the AMI program.

Q. Does the Smart Meter Briefing Report provide adequate support for applying these cost principles used in the NSMR tariff?

A. No. Both the Commission and FP&L are pointing to the Smart Meter Briefing Report as their source and justification. However, the Commission has an obligation to review the circumstances that require the use of these cost principles at a level consistent with the analysis related to burial of overhead power lines in Rule 25-6.115, Florida Administrative Code.

Q. Should this filing be viewed as a revised tariff or optional services?

A. It is debatable. By nature of the plan of implementation selected by FP&L, a phased approach, and their use of a postpone list for approximately four years, it is a stretch to call this a "new" optional service. Customers have been receiving this service for a long time and arguably the services are paid for through basic rates. Since this service was in

place at the time of the settlement without an existing tariff, one can reasonably question how it is considered a "revised" tariff or "new optional service."

III. COST PRINCIPLES BEING APPLIED

Q. Can you describe the cost principles being applied for this tariff?

A. Yes. FP&L's tariff filing, and the Commission's Orders related thereto determine the rates for the NSMR tariff based on two cost premises. First, that a non-standard service should be cost-based so that the general ratepayer is not subsidizing any costs for those ratepayers choosing the service ("cost causer"). And second, that incremental costs associated with the non-standard service should be used to determine the tariff amount. These two principles were referred to as "long-standing" practices used by the Commission to fix just, reasonable, and compensatory rates.

Q. What general observations did you make regarding the cost principles applied in this filing to support the non-standard tariff service amounts?

A. The NSMR tariff imposes a monthly surcharge on customers who opt out of the FP&L Smart Meter program. It relates to *existing* customers retaining *existing* services, with *existing* service delivery equipment. Contrary to the testimony of FP&L Witness Onsgard, I am of the view that customers who opt out of the FP&L AMI program impose

little if any incremental operational costs to FP&L's cost of service. The FPSC must therefore undertake a careful, and reasoned analysis of any costs allocated to these customers by FP&L, and the associated charges, to ensure that there is no discrimination as to the rates the opt out customers pay versus the general body of ratepayers. The cost justification offered by FP&L in this tariff case discriminates against the "opt out" customers by attributing highly speculative "incremental" costs to those customers who choose to opt out of FP&L's smart meter program, and by determining that these uncertain costs justify additional, recurring surcharges to these customers that no other customers pay, again to retain services that have not changed in any respect.

Q. On what basis do you reach this conclusion?

A. FP&L witnesses cite a number of areas where additional operations are necessary to accommodate customers taking service using analog meters. As discussed more fully below, the evidence used to support these additional efforts is not rational or reasonable.

Notwithstanding that these are historical procedures adhered to by the Commission, their application in this proceeding is highly questionable. As to the cost subsidization concept, the evidence produced by FP&L to support the existence of a cost impact by opt out customers lacks credibility. FP&L fails to demonstrate that the company deserves to charge opt out customers for keeping their existing meters, particularly given the nature of existing operations related to analog meters, and the totality of circumstances surrounding the implementation of smart meters.

As to the second principle, i.e. the allocation of this "incremental cost" to opt out customers, FP&L fails to appropriately perform a complete cost and benefits analysis for the NSMR, and the underlying impacts on FP&L operations. Any attempt to charge opt out customers must be scrutinized to ensure that it is rational. As described more fully below, FP&L has not met that burden in this docket.

However, should the Commission find that FP&L can identify true incremental costs based on the withdrawal of opt out customers from the smart meter program, I maintain that, in contrast to the overall scope of the smart meter program, and the uncertainty in the overall economic benefits, any incremental costs attributed to opt out customers are negligible to the overall program. It is absolutely reasonable that where a non-standard service imposes deminimus costs, a special surcharge might be waived and those costs can be shared by all ratepayers.

Q. Is there any history of FP&L foregoing charges for non-standard offerings?

A. Yes there is. A review of FP&L's current service offerings finds that FP&L offers many non-standard services without charge. For example, there are no fees for: 1) accessing the Spanish Customer Services or receiving FP&L information in Spanish; 2) TDDY; or 3) budget billing services. Each of these represents a non-standard service that benefits only a segment of its customers but the costs are borne by the entire ratepayer population. Certainly there were incremental costs associated with establishing such services when originally initiated and there are on-going maintenance costs associated with offering these services, but it appears those costs are borne by all ratepayers. In the

case of TDDY services you can justify the lack of fees, as it is required to accommodate the disabled under the American With Disabilities Act. The Commission has not justified why the other services such as Spanish customer service or budget billing can be offered without charge and the costs of service absorbed by all ratepayers, but NSMR customers must be charged. So the cost principle appears to be discretionary, not mandatory.

It is important to mention some of the reasons for customer refusal of a smart meter, as they are not frivolous. An examination of the consumer correspondence file in this docket will reveal that many customers have a sensitivity to the communication equipment used in the smart meter and some have medical implants and their doctors have advised them to avoid equipment with radio transmitters. Similar to a customer who may not have a strong command of the English language and has special needs, these customers have valid special needs that warrant an alternative service offering.

The Commission has a responsibility to make sure rates are not discriminatory and that they are fair, just and reasonable. In reviewing the use of this long-standing principle, this case contains fundamental inconsistencies in applying this principle.

Q. The use of the cost principle has been compared to that used for burial of underground wires, is that appropriate?

A. No. FP&L suggests that the NSMR tariff can be compared to the current practice of charging for the burial of overhead wires at a customer request. This is not an appropriate comparison; it is like comparing apples to oranges.

In the case of a customer request for burial of overhead wires, it is clearly a new service, and the company's efforts to initiate improvements to the transmission lines are measured and quantifiable. This request clearly falls outside of normal, customer support and service delivery guidelines for on-going operations.

In the case of the NSMR tariff, the retention of analog meters is not a new service for FP&L; indeed, the procedures necessary to support analog meters have been in place in the company for most of its existence. The major change is the deployment of 4 million meters that impose drastically different operational support requirements on the company. In this context, FP&L's initial practice over four (4) years seems more rational to allow customers living in the same exact residence as when the meters were deployed, to opt out for no charge.

Following the logic of FP&L in comparing the smart meter opt out paradigm to the paradigm of the burial of power lines, leads to some troubling questions regarding the proposed adoption of the NSMR. In the case of the burial of power lines, the Commission engaged in a deliberation of the process and standards to apply when converting overhead facilities to underground facilities, and adopted an extensive rule as a result; Rule 25-6.115, Florida Administrative Code. This rule establishes the requirements for a tariff to impose charges, and goes so far as to offer the customer/applicant for this service the opportunity to challenge an electric utility's cost estimates to complete the service.

The smart meter deliberations have taken place at a high level, and have not covered the level of detail on actual implementation specifications as covered in Rule 25-6.115 for burial of power lines. Most notably, Rule 25-6.115 addresses details and establishes standards for the calculation of the incremental costs to the utility.

By contrast, in the name of developing a cost-based tariff, and without a granular analysis, FP&L seems to make general assumptions for opt out customers, which in the glare of common sense, seem highly speculative.

IV. COST ANALYSIS – UPFRONT COSTS

Q. What are the upfront costs FP&L has included in the tariff?

A. FP&L is asserting that they have upfront capital costs of $2.1 million primarily for system changes and $368,000 in O&M expenses relating to customer brochures, research and mailings. FP&L is claiming they have handled these customers for the past four years outside their systems and need to make system changes to properly identify customers as NSMR and adjust associated workflows for meter readings and repairs. These changes account for approximately $865,000 of the system costs. The remaining $1,223,000 relates to system changes necessary to bill these customers for the NSMR service.

Q. Was the methodology utilized by FP&L to calculate the estimated number of NSMR customers appropriate?

A. No. The decision by FP&L to allocate the incremental costs across 12,000 customers when there is evidence that at least 24,000, if not 36,000 customers have substantial reservations about the program by signing up for the initial postpone list is not justified. The evidence presented by FP&L to support its choice of the 12,000 relies heavily on purported experience of other utilities around the country. However, the analysis of FP&L unnecessarily skewed this data to reach a lower estimated number of enrollees. For example, FP&L should have also excluded Sumter & Lakeland FL from their schedule, as these are small operators and not representative of FP&L. As stated, the inclusion of these estimates significantly skewed the estimates of take rates downward. Without a more discreet review of the inputs and assumptions in the estimates of NSMR customers, the analysis is insufficient to support the conclusions of FP&L. The 24,000 – 36,000 customers who sought relief from the smart meters prior to any suggestion of an opt out charge, are the best evidence of the potential audience for the number of customers who would opt out of the program if the Commission were to adopt a reasonable and rational opt out policy.

FP&L witness Onsgard indicated in his testimony that one of the benefits to the use of the postpone list was to quantify the number of customers who expressed concerns about smart meters. It defies logic, not to use that number to calculate the NSMR population. By using a lower population estimate you artificial increase the costs per customer and essentially out price the fixed and lower income populations from affording such option.

The methodology creates a self-fulfilling prophecy, resulting in a lower population able to pay the service fee and is discriminatory against the lower income customers.

Q. Should the costs identified by FP&L for upfront customer enrollment in the NSMR be allowed?

A. No. The Customer Care one-time Enrollment fee relates to the customer care activities to enroll the estimated 12,000 customers in the initial program and should be disallowed because they are excessive and FP&L should be considered the "Cost Causer" and bear the costs.

Most of the prospective enrollees were self-motivated, as indicated by the early enrollees on the postponement list. Based on my experience and that of other intervenors, which is corroborated by the consumer correspondence in this docket, FP&L did not properly inform customers in the initial deployment. Thus, most of the customer relations' effort was necessary to resolve confusion resulting from the initial lack of customer engagement. Had FP&L conducted a true phased process, with customer input, there would have been no real project justification to create and maintain a postpone list for 4 years. These costs would not have been incurred if FP&L made a decision quicker in the process and handled this properly when entering a service area to deploy.

Since these customers were self-motivated and educated on smart meters in order to get on the non-disclosed postpone list, the necessity of developing expensive communication

materials that underwent expensive research, which did not benefit these NSMR customers cannot be justified as necessary expenses.

Q. Should the costs identified as upfront systems costs in the NSMR tariff be allowed?

A. No. As I mentioned earlier, in this situation you have different costs as to when this service is being taken. As an example, during the project phase customers are rejecting the new meter, in the ready state phase they will be requesting a meter change out.

If you evaluate the initial project phase you find that there is significant project capital avoidance, as the need to install smart meters for this pool of customers did not occur. Fundamental fairness dictates that if opt out customers must pay incremental program costs, they should also receive the incremental benefits, specifically the benefits of the avoided capital cost of not installing the smart meter for these customers as well as the avoided cost of disposal for the "obsolete" meters. If you refer to Exhibit MM-2, you will find there was adequate avoided capital within the project costs allocated to opt-out customers to cover the unforeseen incremental costs FP&L is seeking for additional cost recovery. Each FP&L customer contributed $145 for a new smart meter. The number of customers refusing the smart meter is between 24,000 and 36,000. Considering both system & communication costs, the per customer share of the upfront costs would equate to between $93 - $140. There were ample project funds that could be reallocated to these additional unforeseen project costs. Since FP&L has stated that the customers will retain their existing meters, there are also the avoided write-off costs of approximately $22 per

customer to cover any incremental costs. The request for the upfront capital costs for opt out customers should not have been allowed and creates a windfall for FP&L at the expense of these customers.

FP&L stated in response to staff data requests and OPC interrogatory #8 that the smart meters not installed for opt out customers did not represent avoided capital because the meters would have been purchased anyway. This assertion is not reasonable and should not be accepted. This is a multi-year project and there was adequate time to adjust the purchase orders. Also, most large companies negotiate the option to make returns to vendors. Finally, there may be some evidence that the additional smart meters benefited the general ratepayer. In Docket No. 130160 FP&L applied for the ability to conduct predictive testing. In this docket they outlined that they were having operational issues with some smart meters not communicating properly or overheating. FP&L noted 9,286 smart meters already needed to be replaced and at any given time approximately 6,000 are not communicating properly. The additional smart meters on hand certainly benefited general ratepayers.

V. COST ANALYSIS – O&M ONGOING COSTS

Q. What are the O&M on-going costs that FP&L has identified and included in the NSMR tariff?

A. FP&L has included a one-time fee for 1) customer enrollment, 2) establishment of meter reading routes, 3) an initial service visit and 4) meter sampling and testing. They have also included a monthly fee for 1) meter reading & OSHA costs, 2) billing & project support, 3) field visits for collections and disconnect/reconnects, 3) physical investigation of outages due to unnecessary truck rolls to verify power when no power issue caused by FP&L exists and 5) a full-time project manager to oversee the program.

Q. Assuming, for purposes of illustration, that it was necessary to address incremental costs from the opt out customers, did FP&L appropriately apply the incremental cost principle to the monthly operational charges?

A. No. When determining incremental costs, you need to evaluate both sides of the ledger to get to a net incremental cost. That was not done. The analysis performed overlooks ongoing variable costs and whether there were offsetting reductions in workload for the departments under inspection.

In order to arrive at fair and just incremental costs you need to consider the variable costs that exists in the new standard service and make adjustments in the calculation of the incremental costs. The analysis for this was not performed.

The objective is to determine what the incremental cost is that you need to charge these customers. This requires a comparison of the cost of the new standard service verses the cost of the non-standard service. Each will have separate and distinct workflows. Each

operation will have fixed costs, which are costs that do not change based on volume, and variable costs, which are costs that may be volume sensitive.

Q. Are there any potential variable or reduced costs that should be taken into account?

A. I believe so. I have not performed a formal detailed analysis but I will mention some items that are typically volume sensitive and should have been considered. Smart meters involve communication and information technology costs that do not exist in the NSMR meter service. The new standard service is collecting a lot of interval usage data, which is why the industry refers to it as "Big Data". This data will not be collected for NSMR customers, therefore there will be significantly less data that needs to be stored, managed and processed. A NSMR customer will have 12 meter readings per year. The smart meter customer will have readings every 15 minutes, which equates to 96 data points collected per day or 35,040 data points per year. Other examples of volume sensitive costs in information technology are software license and maintenance fees.

In the customer service area there will also be less calls for assistance for questions with the Energy Dashboards, as well as less trouble tickets for communication problems for smart meters, such as we see described in Docket No 130160. There may also be depreciation impacts and savings from longer useful lives of the non-communicating meters that need to be factored in to arrive at net incremental costs.

Q. Is the one-time customer enrollment fee appropriate?

A. No. This cost relates to the customer care activities to enroll the estimated 12,000 customers in the initial program and should be disallowed because FP&L should be considered the "Cost Causer" and bear the costs out of the project cost pool. As mentioned previously, there was no real project justification to have a postpone list for 4 years. These costs would not have been incurred if FP&L made a decision quicker in the process and handled this properly when entering a service area to deploy. For the customers who enroll after this initial enrollment, these calls will most likely come into play in the request for initiation of service call a customer makes and can be easily absorbed and offset. The customer service representative may need to enter the customer request for a non-standard meter but may also get to skip the activation process for a smart meter or other smart meter services that do not apply to non-standard meter customers. There is no evidence to suggest additional staffing is required.

The staff adjustment to this portion of the fee warrants a special observation. Staff indicated in its recommendation that their opinion of the workload requirements was that after initial enrollment there was a reduction in volume to warrant a decrease in staffing from 4 representatives to two, and this should happen in year two. While the rational for a reduction in costs is sound, this specific adjustment lacks objective reasoning because there are no projected volume estimates to support it. The Staff cost calculation is based on getting the 12,000 initial customers enrolled for a period of two years. A more rational estimate is that the enrollment period is 3-4 months, not two years.

Q. Is the one-time fee for establishment of meter routes appropriate?

A. No. For the initial enrollees this activity took place upon activation some years ago and should be absorbed through project costs. As for customers enrolled after the initial enrollment period, it has not yet been determined whether there are offsetting reductions to justify the incremental costs. A customer requesting initial service and requesting a NSMR does require a change in routing but will also not require an activation of their meter and testing to ensure it was activated and communicating properly. No analysis was performed on workflows that determine if there is a true incremental cost to FP&L to handle this task. The observation made above relating to Staff's adjustment to a two-year period for a one time fee applies in this analysis as well to further reduce that adjustment to 3-4 months.

Q. Is the one-time fee for the initial service visit appropriate?

A. The explanation provided for this charge is that a field visit will be required for one of four reasons – 1) removal & replacement for meter testing, sampling, repair, 2) installation for relocations, 3) reconnections for collections, and 4) restoration/theft monitoring. This assertion is speculative and not cost based and should be disallowed.

For the initial enrollment customer an initial field visit is not required and it will not be incurred. The customers have elected to keep their existing meters thus negating the need for a meter swap out. For customers enrolling after the initial enrollment, when on-going operations is in a ready state mode, there may be justification for a charge due to a meter swap out that would be incurred on initiation of service. A separate fee schedule should

be established, if deemed warranted, for each field visit that occurs and charged to the "cost causer" when that activity takes place.

In addition, the Commission is allowing a speculative fee that may or not be incurred, to be collected up-front, which may occur in the future, without making adjustments for the time value of money. This is clearly biased towards FP&L. It appears that this amount was categorized as an upfront fee even though it does not occur upfront of the implementation of an opt out process. It again serves essentially to discourage customers from enrollment. This observation is supported by the hearing transcripts in which all parties indicated the intent was to make sure a customer only paid once regardless of whether they had multiple service visits or no visits. This has an especially chilling effect for low-income and fixed income customers who are not interested in the smart meter because it provides no choice of meter yet it makes their choice to avoid the smart meter cost prohibitive.

Q. Is the one-time fee for meter sampling and testing appropriate?

A. FP&L is claiming a need to sample and replace each existing meter in the NSMR program once over the next three years. They are applying sample sizes that are illogical. FP&L has provided no evidence that all of these meters require testing within the next three years. In addition, basic rates include cost recovery for sampling and testing and FP&L has not provided a comparison cost analysis to justify the incremental costs.

Q. Are the monthly cost for meter reading and OSHA appropriate?

A. Not at this time. Since base rates currently include a hybrid of both smart meters and non-communicating meters, it appears FP&L has sufficient compensation in base rates recovery for these costs. In addition, there are offsets to consider, as the non-standard meters will not have communication repair issues that the smart meters are currently experiencing. This issue should be deferred and handled during the next general rate increase or at a minimum the share of savings for these customers not included in current rates should be credited to compensate. Alternatively, the Commission should explore the self-read or estimated billing options to significantly lower the costs for these customers. An examination of the consumer correspondence in this docket indicates a strong preference for a self-read program in lieu of FP&L having to do monthly readings. This option would create more reasonable rates and allow lower income customers to have a choice of meters.

Q. Are the billing and project support costs appropriate?

A. FP&L is requesting 1.2 FTE for the first year and .6 FTE thereafter to support initial enrollment and initiate meter change & re-routing orders, bill charges, support service order processes and miscellaneous ongoing support. The initial set up should be charged to the project costs for the initial enrollees as FP&L is the cost causer as noted earlier. For customers electing service after the initial enrollment period it is questionable that there won't be any offsets. Again, if a customer is initiating service, there will be work orders to activate the smart meter that will not occur as well as other services available to smart meter customers that NSMR customers will not be enrolling in that may offset any incremental costs.

Q. Are the field visits for collection costs appropriate to include?

A. These charges represent the additional costs in collections for field visits and disconnects. FP&L has applied the system-wide rate to this small sub-section of customers without analysis, which may not be appropriate. Collections are a highly subsidized function in general and it would be unfair to further penalize the good paying customers in this pool with additional costs. It is not cost-based to charge each customer for these costs. The Commission should consider requiring deposits based on credit worthiness or alternatively the loss of eligibility to have a non-standard meter in order to avoid any potential costs.

Q. Are the charges for physical investigations of outages appropriate to include?

A. No. This fee appears to be covering instances where an outage needs to be investigated and when investigated it turns out not to be FP&L's trouble but the customers, for example tripped circuit breakers. This portion of the charge should be disallowed as speculative and not cost based. FP&L should initiate a charge similar to what the telephone industry does. Customers should be told that if the trouble is not with FP&L's facilities that they will be charged for the service visit. This will result in the cost causer paying and not socialize the cost to all the customers in this pool.

Q. Are the costs for a full-time high-level project manager appropriate?

A. No. FP&L is claiming that they need a full-time project manager to tend to this program including oversight of processes across multiple business units, system

integration, cost accounting, reporting, and regulatory requirements. They have not substantiated this requirement. This program does not have ongoing needs to require a full time manager and most likely can be absorbed through an existing position. This cost request is excessive and should be denied.

Q. Are there other special considerations?

A. Yes. The charges proposed unjustly penalize those with multiple meters in the same location and are not cost-based. The costs for initial field visits and meter reading are inflated as they assume separate truck rolls that will not occur. A different tariff structure should be considered which reflects the actual costs of multiple meters more properly.

VI. CONCLUSIONS

Q. What should the Commission do to arrive at fair, just and reasonable rates for NSMR customers?

A. In order for fair, just and reasonable rates to be calculated the Commission should either 1) open up the entire AMI project for review now that it has been completed and adjust basic rates to reflect the new standard service as well as determine the incremental costs for non-standard service or 2) wait until next rate case when costs of the new standard meter service are better known and the incremental costs can be better determined.

Q. Will not charging NSM customers at this time result in discrimination against other customers?

A. No. The other customers are not going to see a change in their rates at this time. It will only be a problem if the issue is not addressed and properly evaluated at the next general rate tariff.

Q. Should the Commission consider an alternative to FP&L manual monthly meter readings?

A. Yes. There is also a basic business and ratemaking principle to be cost efficient and mitigate costs. The question of whether it was possible to use estimated readings or self reads for the NSMR customers was never addressed in this proceeding or previously. The docket consumer correspondence file includes many customers who expressed a preference for this solution. The current rules allow for estimated billing, not to exceed six months. The Commission needs to further explore why this option cannot be utilized at least on a temporary basis. This would significantly lower the costs of providing this service and provide an affordable rate structure for the NSMR customers.

Q. Does this conclude your testimony?

A. Yes.

DOCKET NO. 130223-EI
TESTIMONY OF MARILYNNE MARTIN

RESUME

EXHIBIT MM-1

MARILYNNE MARTIN, CPA

420 Cerromar Ct. #162
Venice, FL 34293

(941) 244-0783 Home
mmartin59@comcast.net

SENIOR FINANCIAL EXECUTIVE / CFO / CONTROLLER

Results oriented **SENIOR LEVEL FINANCIAL EXECUTIVE** recognized as a leader who successfully initiates, evaluates and implements operational improvements to realize strategic and financial objectives. Hands on professional with solid technical skills and proven global management experience in both corporate and divisional controllership roles for operations ranging in size from $20M to $13B. Diverse industry experience includes consumer products manufacturing, telecommunications, and directory publishing/advertising.

Self-motivated, operationally-oriented with a passion for excellence who has demonstrated ability to quickly learn the business operations, add value, and gain the confidence and respect of others. Strong analytical skills with a fine attention to detail. Significant experience in providing accurate and timely financial reports, establishing financial policies and controls, implementing financial and operational systems and initiating process changes to produce cost and productivity improvements. Maintains a high level of professional ethics and integrity at all times.

Areas of Expertise

- SEC and Management Reporting
- Financial Accounting (GAAP)
- Financial Planning and Analysis
- Financial Systems Implementation
- Sarbanes-Oxley (SOX)/Internal Controls
- Cost Reductions/Process Improvements
- Financial Policies and Procedures
- Organizational Analysis and Design
- Acquisitions /Business Integration
- Strategic and Business Planning

PROFESSIONAL EXPERIENCE

ESTEE LAUDER COMPANIES INC. - Long Island, New York **1997 - 2006**
($6 billion multi-national cosmetics manufacturer and marketer)

Corporate Vice President - Finance, 2002 - 2006

Promoted to assume overall authority for the leadership of financial governance including Sarbanes-Oxley compliance, financial policies and procedures, and financial systems strategies and development. Reported to the CFO.

- Successfully led global multi-disciplined senior management team to document and assess internal controls for compliance with SOX 404. Coordinated efforts with external auditors. Regularly presented updates to audit committee.
- Established quarterly review program to facilitate compliance with SOX 302.
- Wrote Global Financial Policies & Procedures Manual to ensure compliance with GAAP among reporting entities.
- Analyzed the financial closing process. Recommendations reduced the days to close by 25%.
- Directed cross-functional team which identified and corrected $60M inventory accounting and control issues.
- Designed process which enhanced accountability for financial system development and improved communications between user and information systems groups.

Vice President - Corporate Controller, 2000 - 2002

Promoted to oversee the global consolidated financial reporting and analysis, SEC filings, accounting, budgeting, A/P, A/R, payroll, acquisition analysis and cost accounting functions. Reported to CFO and supervised dept of 250.

- Created objective-based incentive program for financial staff to provide motivation for achievement of company and department goals as well as attract and retain talent. Program was later implemented by other dept.'s.
- Consolidated Canadian financial operations creating shared service center and reducing headcount.
- Initiated review of finance reporting structure and recommended reorganization to achieve greater control and accountability. Recommendations were implemented by CFO.
- Implemented JD Edwards financial systems and standardized chart of accounts in European Plants.
- Integrated financial operations of several new acquisitions onto corporate Oracle systems.

Staff Vice President - Corporate Financial Planning and Special Projects 1998 - 2000
Executive Director - Corporate Financial Planning 1997 - 1998
Brought onboard to upgrade the financial planning processes. Promoted within a year to assume additional responsibility of acquisition analysis. Directed the annual budget process and monthly forecasts, monitored actual monthly performance to plan, managed the corporate department's accounting functions and provided financial analysis and guidance on acquisitions. Supervised a staff of 12.

- Migrated monthly forecasting process from Excel to Hyperion which improved timeliness and accuracy of consolidation and provided enhanced reporting and analysis for monitoring brand and regional performance.
- Developed and issued formal planning guidelines along with Operating Expense Targets for brands.
- Revamped Corporate and Shared Service Allocation methodologies improving accuracy of business unit's financial results and greater accountability for overhead costs.
- Designed and implemented the financial review process for use in evaluating potential acquisitions.

CABLEVISION – LIGHTPATH – Long Island, New York **1996 - 1997**
Director of Business Planning & Finance
Recruited to develop business and financial plans for new markets and services. Created financial plans and models for new residential telephone business. Developed business plans to launch commercial telephone service in a new geographic market.

CONSULTANT **1995 - 1996**
Provided consulting services in accounting, financial systems, internal controls and business planning. Developed accounting policies and procedures for Great Plains accounting systems, established inventory controls and created business plans to diversify product lines and sales channels for a silver jewelry importer.

NYNEX CORPORATION *(currently known as Verizon Communications Inc)* **1983 - 1994**

Chief Financial Officer – Manhattan Market Area, 1994
New York Telephone - New York, NY
Oversaw divisional financial reporting and analysis, capital planning, budgeting and asset management. Established profitability criteria for existing capital program and new product development focusing on improving capital utilization. Managed staff of 15 reporting to both the Corporate CFO and Division President for this $1.5 billion business unit.

Director - Finance and Accounting, 1992 - 1994
Telesector Resources Group - White Plains, NY *($1.2B subsidiary of NY and New England Telephone)*
Brought in to resolve control issues identified by external auditors. Directed controllership functions which included financial reporting and analysis, budgeting and planning, inventory control, accounts payable, billing, regulatory accounting and audit support. Managed department of 90.

- Created integrated budget system that prioritized projects and identified opportunities for cost efficiencies. Directed teams that developed cost reduction goals. Decreased year over year expenditures by $60 million and exceeded financial targets by $90 million.
- Identified and corrected control deficiencies in fixed assets and inventory. Conducted self-assessment programs of internal controls throughout the company and implemented plans to correct problem areas. Reported progress to audit committee and senior management.
- Designed and facilitated an upper management seminar on critical issues affecting the telecommunications industry. Trained over 500 managers. The program heightened employee awareness of competitive market conditions and gained their commitment to changes necessary to achieve newly established strategic goals.

Vice President - Finance and Administration, 1988 - 1992
United Publishers Corporation - Los Angeles, CA *($18 million Yellow Page directory subsidiary)*
Re-engineered company from manual to totally automated systems requiring major cultural changes. Reporting to the President, assumed full responsibility for all financial, administrative, human resources, information systems, sales recruitment and training, and customer service functions. Managed department of 35.

- Installed financial systems that improved controls and reduced accounting staff by 40%.
- Revised collection department procedures improving cash flow by reducing bad debts by 33%.
- Designed and implemented production and sales systems. Computerized customer advertising profiles, providing sales personnel with the tools to better manage their territories and plan customer programs. Improved sales productivity while reducing number of customer contacts by 25%.
- Analyzed human resource needs and developed recruiting strategy that upgraded the skill set of the organization and reduced sales employee turnover by 160%. Developed intensive sales training program.
- Developed and implemented reorganization plan. Consolidated 3 regional offices into one operation and reduced staff and associated overhead costs by 10%.
- Created customer service policies which improved the overall quality of the directories and reduced the average complaint resolution time from 60 to 10 days.

Congressional Assistant - Senate Environment and Public Works Committee, 1987-1988
Congressional Assistant Program - Washington, D.C.
Nominated by CEO to be the NYNEX representative in the Congressional Assistant Program sponsored by the Conference Board. The program is designed to give business executives a working knowledge of the legislative process.

Assistant Controller, 1985-1987
NYNEX Information Resources Co. - Boston, MA (*$700M Yellow Page directory subsidiary)*
Promoted within 18 months to assume full responsibility for divisional controller functions which included financial reporting, consolidation, tax, budgets, payroll, accounts payable, customer billing, credit and collections, cost accounting and quality. Managed dept. of 55.

- Installed G/L, AP, billing and A/R systems which significantly improved controls and financial analysis.
- Centralized collection units. Improved cash flow by reducing over 90-day receivables by 30%.
- Designed and developed a cost accounting system to assist sales and marketing in measuring product profitability by market.
- Developed strategic and financial responses to regulatory inquiries from the FCC and state PUC's.

Staff Manager - Accounting Principles, 1984-1985
Assistant Staff Manager- Accounting Principles, 1983-1984
NYNEX Corporate - New York, NY

Established the initial accounting records for corporate and the new subsidiaries formed as a result of divestiture from AT&T. Developed the financial sections for NYNEX's first 10Q, 10K and annual report. Provided technical advice and guidance on the implementation of FASB pronouncements.

PricewaterhouseCoopers, New York, N.Y. **1981 – 1983**

THE BANK OF NEW YORK, Long Island, N.Y. **1976 – 1981**

EDUCATION

BBA, Accounting, 1980
Hofstra University, Long Island, NY

Certified Public Accountant, State of New York
Member AICPA, New York State Society of CPA's

DOCKET NO. 130223-EI

TESTIMONY OF MARILYNNE MARTIN

NON-STANDARD METER CAPITAL AVOIDANCE ANALYSIS

EXHIBIT MM-2

Docket No. 130223-EI
Testimony of Marilynne Martin Exhibit MM-2
AVOIDED PROJECT COSTS

FP&L's Tariff (1)		
Cumulative Net Book Value of Up-Front System and Communication Costs(1)	$	3,352,312.00
Projected Non-Standard Meter Customers		12,000
Total Upfront System and Communication Costs Per Customer	$	279.36
Scenerio 1 (Including both Postpone List and Unable to Contact)		
Cumulative Net Book Value of Up-Front System and Communication Costs (1)	$	3,352,312.00
Projected Non-Standard Meter Customers		36,000
Total Upfront System and Communication Costs Per Customer	$	93.12
Scenerio 2 (Including Postpone List Only)		
Cumulative Net Book Value of Up-Front System and Communication Costs (1)	$	3,352,312.00
Projected Non-Standard Meter Customers		24,000
Total Upfront System and Communication Costs Per Customer	$	139.68
Capital Cost Avoidance of Not Installing Smart Meter		
AMI Project Smart Meter Capital (2)	$	643,800,000.00
# of Meters projected to be Installed		4,429,000
Cost Per Meter	$	145.36
AMI Project Costs to Retire Old Meters		
Cost of Retirement/Disposal (3)	$	101,081,858.00
# of Meters projected to be Installed		4,429,000
Cost Per Meter	$	22.82
Potential Expense Avoidance of Not Installing Smart Meter (4)		
AMI Project Expenses (2)	$	61,688,000.00
# of Meters projected to be Installed		4,429,000
Cost Per Meter	$	13.93

Source:
(1) - FP&L's Reply to Staff Data Request No. 9, Tab 1 of 2; Docket No. 130223-EI
(2) - FP&L O&M project costs submitted in Docket No. 120015-EI, OPC interrogatory #173
(3) - Docket No. 080677-EI, Order No 10-0153-FOPF-EI, page 25
(4) - Illustrative only. Unknown how much of total expenses are unit based expenses.

DOCKET NO. 130223-EI

TESTIMONY OF MARILYNNE MARTIN

NATIONAL ACTION PLAN – COMMUNICATION PLAN UMBRELLA – ACTION GUIDE – PART 1

EXHIBIT MM-3

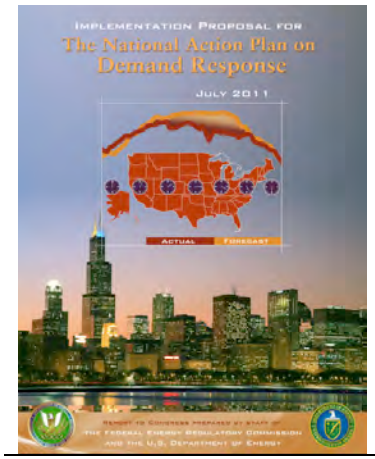
NATIONAL ACTION PLAN
COMMUNICATIONS UMBRELLA

ACTION GUIDE – PART 1

FIRST EDITION • JULY 12, 2011 • NATIONAL ACTION PLAN DAY • WASHINGTON, D.C.

NATIONAL ACTION PLAN
COMMUNICATIONS UMBRELLA

HOW TO USE THE ACTION GUIDE



The Implementation Proposal for the National Action Plan on Demand Response released on July 5, 2011 indicates that "Support materials should be designed to be 'plug and play' so that local entities can either use all available messages and materials or choose which elements to use." The proposal directs the coalition to "develop a message framework with persuasive, adaptable messages aimed at various audience segments, all of which could be tailored by interested local stakeholders."

This action guide is intended as such a reference to be used on an as-needed basis. It seeks to help communications specialists and program managers at utilities, consumer advocacy groups, public service commissions, technology companies and service programs, consultants, and trade groups involved in co-creating a sustainable energy future with consumers.

The guide includes **fundamental processes recommended as part of every communications and energy literacy program,** such as working with and through trusted community-based organizations.

There are other elements that **must be tailored to the priorities and social norms of the region**. One area's most "obvious" vision driver, such as responding to climate change, might be a political hot potato in another place where energy independence is a more persuasive rationale for grid modernization. Creative teams are encouraged to **draw from menus of options provided**, assemble and localize their approaches, and test prototypes with target audiences.

This guide describes how specific messages resonate with different customer segments and energy worldviews. One person's compelling motivator will be another person's turn-off. That is why targeted communication channels and vehicles that permit the consumer to self-select are so important.

Note of caution: We have found that people often project their personal energy worldview onto others. Teams should be conscious of their own perspectives when designing for varied communities who might not share their viewpoint.

? **What is a communications umbrella?**

A A strategic plan and road map that synthesizes existing research, best practices to date, and new ideas to create concepts, models, and language likely to be effective.

COMMUNICATIONS UMBRELLA

The National Action Plan calls for the development of a Communications Umbrella. This includes:

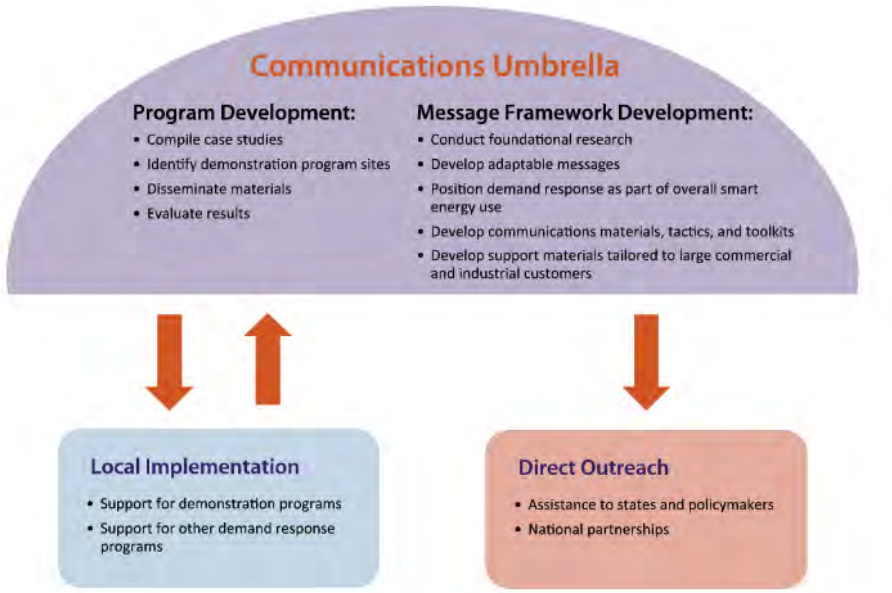
- The **conceptual interpretation of foundational research** (much of which was not available when the original plan was written);
- The structure of the **message framework** (i.e. how messages should be organized);
- **Adaptable messages and positioning**;
- How DR should be positioned in **the broader context of smart energy and smart grid**;
- The definition of a toolkit that includes **creative briefs, examples, and recommendations on how the materials can be used.**

Initially, we are focusing on residential consumers rather than large commercial and industrial customers. Case studies are being developed in a parallel effort.

Research and field experience support that improving **energy literacy will be a multi-tiered effort—a series of conversations rather than a commercial.**

To achieve our goal of a sustainable energy future we need to turn the foundational research into actionable strategies, tactics, and materials.

Figure 2: Program Structure



National Action Plan on Demand Response, page 36, Strategies and Activities

Simple actions like buying CFLs or power strips to reduce vampire load are initial steps in developing a new set of behaviors. Encouraging people to invest time in deferred consumption, or active monitoring of usage and money in home automation and small-scale generation is complex. The Action Guide examines how one encourages changes of behavior among multiple people and generations in the home by engaging them in the process.

? Who is behind this document?

A The National Action Plan Coalition is made up of organizations with a stake in demand response and smart grid. Each group represents its members and constituents. They have contributed expertise and knowledge from within their membership to work in a collaborative effort to implement the NAP.

NATIONAL ACTION PLAN COALITION

Members of the National Action Plan Coalition Include:

Alliance to Save Energy (ASE), American Council for an Energy Efficient Economy (ACEEE), American Public Power Association (APPA), Association for Demand Response and Smart Grid (ADS), Demand Response and Smart Grid Coalition (DRSG), Digital Energy Solutions Campaign (DESC), Edison Electric Institute (EEI), Environmental Defense Fund (EDF), National Association of Regulatory Utility Commissioners (NARUC), National Association of State Energy Officials (NASEO), National Rural Electric Cooperative Association (NRECA), OpenADR Alliance, Peak Load Management Alliance (PLMA), Utilimetrics. The National Association of State Utility Consumer Advocates (NASUCA) participates in an advisory capacity.

www.napcoalition.org

This Action Guide was prepared by
Judith Schwartz, To the Point
with input from members of the Coalition

The project was underwritten by

Forms
ASSOCIATION FOR
demand response
smart grid

www.demandresponsesmartgrid.org

TO THE POINT

www.tothept.com

? At most industry events, people talk about the need to document best practices and to come up with meaningful value propositions and messaging. **Why hasn't this been done yet?**

A There are enough effective and different examples and research data out there to know that a single tagline, message, or value proposition will not be equally effective in every region for every consumer. That is why we offer menus of **"next practices"** from which to choose identified with this green icon. 

EXEC SUMMARY OF CONTENTS

? **What are next practices?**

A A willingness to admit that we may need to let go of some of our sacred cows and try some new ways of doing business.

5 CHALLENGES TO GO BEYOND BEST PRACTICES

The utility industry has been around for 150 years and like any mature field, it has established operating practices. We respectfully submit that the fundamental changes we are asking consumers to consider will require industry to modify business as usual especially for communication, regulatory, and customer service teams.

Are traditional silos getting in the way?

1 **TELL THE STORY FROM THE CUSTOMERS' PERSPECTIVES**
Whether Thomas Edison would recognize today's electrical grid is irrelevant to most people. What matters is if the lights turn on when they flip the switch. If a given distribution system is so old that it cannot deliver reliable service anymore, that might be a reason for consumers to want to learn about their infrastructure's past.

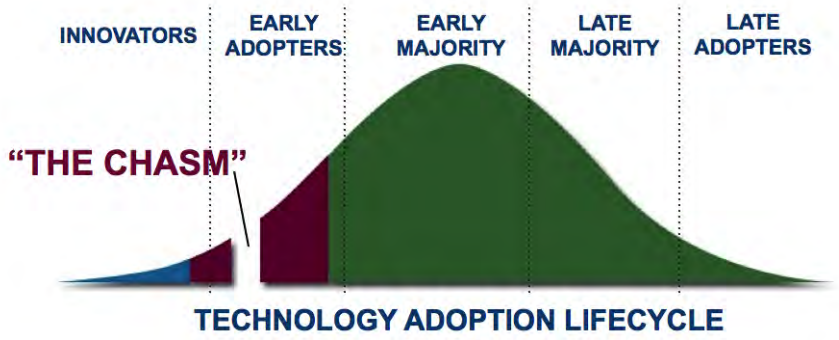
2 **TRUST TRUMPS TAGLINES**
If the person or organization delivering a message or slogan is not credible, it doesn't matter how skillfully words are crafted or how beautiful the production values. Utilities who build trust by partnering with regulators, advocates, and reliable community-based organizations are ahead of the game.

3 **A KILO WHAT?**
Terms of art that may be very meaningful to industry insiders are often obscure to the general public. People can be conscious and careful energy consumers without understanding what a kilowatt is just as they can be daily users of the Internet without knowing their computer's IP address.

4 **YOU CAN'T LEARN A NEW LANGUAGE FROM A TAGLINE**
Becoming energy literate requires a series of conversations, not a great commercial. Two-way exchanges with trusted sources that actively listen to concerns and issues will be far more effective at delivering targeted information (and less costly than big campaigns).

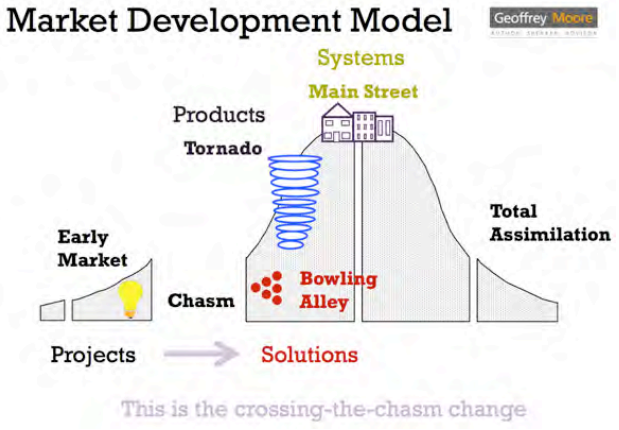
5 **SMART THIS, SMART THAT, WHO CAN TELL THEM APART?**
Program silos may be easier to fund and manage internally but the distinctions are confusing to most consumers. On top of that, it's very expensive to establish name recognition for multiple brands.

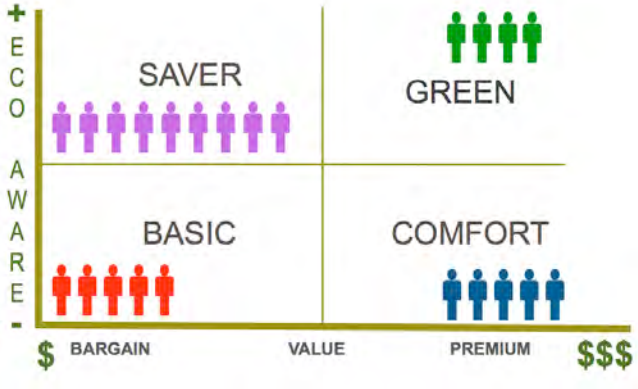
SECTION 1: CONCEPTUAL INSIGHTS



DIFFUSION OF INNOVATIONS BY EVERETT ROGER

CROSSING THE CHASM BY GEOFF MOORE





SECTION 1: CONCEPTUAL INSIGHTS

A. Smart energy adoption model	People, regions, and organizations accept new ideas at different rates. A phased adoption mindset lets us target and deliver messages comfortably to stakeholders at varied stages and approaches.
B. Motivational segmentation and consumer adoption patterns	In developing educational materials and marketing programs, it is critical to know one's audience. Multiple research studies suggest that when it comes to being receptive to a given message, the key distinction among consumers of all ages and income levels begins with their motivations. It is reasonable that some groups will be more receptive than others to changing their behaviors.
C. Utility adoption: regional and timing variations	Not every utility or region of the country will progress the same way. This section looks at what the likely drivers will be for adoption. A portfolio of tools will be needed to support the various approaches.
D. Menu of vision drivers	There are multiple reasons to modernize the grid. A menu approach will allow utilities to choose which reasons to emphasize in their vision statements, integrated vision stories for their constituents, and various outreach materials.
E. Consumer archetypes and personas	The use of a representative example and description of distinct customer types will help keep the discussions grounded in human reality and make it easier for creative teams to keep the range of constituents in mind.
F. Value propositions	Messages are best absorbed if the recipients understand why the idea being put forth is meaningful and valuable to them. The reasons why consumers will see value in demand response and smart grid will vary.
G. Cross-stakeholder conversations	Successful adoption of other disruptive technologies like PCs or the Internet have shown all stakeholder groups and key influencers need to be part of the discussion.

? What is a technology adoption model?

A In 1962, sociologist Everett Roger derived the "**diffusion of innovations" theory** introducing the concept of **'early adopters**' to refer to the group of consumers who try something that an entire population later embraces.

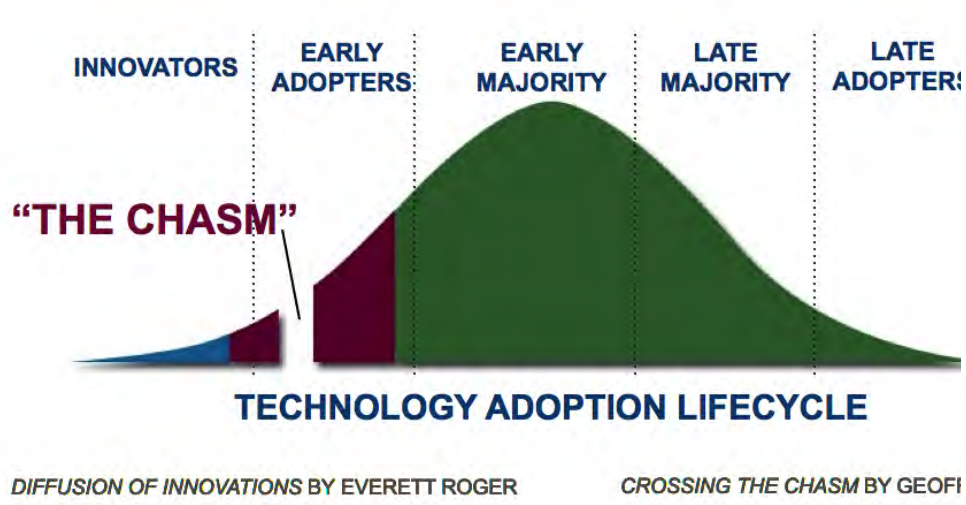
1A. SMART ENERGY ADOPTION MODEL

Early adopters will pay more, tolerate inconvenience, and participate in getting the kinks out. Business strategist and author, Geoff Moore added the idea of "**the chasm"** to Roger's model to describe those situations where the later adopters never materialize.

Moore posits visionaries and pragmatists have very different expectations. Central to successfully crossing "the chasm," includes choosing the right target markets to start, understanding the whole product concept, positioning the product, building a marketing strategy, and choosing the most appropriate distribution channel and pricing. We believe this **model applies directly to consumer participation in the smart energy vision**.

The model applies to stakeholders as well as customers. Those groups that are innovators will need different tools and messages than those who are not ready to embrace this transformation.

Creators of today's smart energy programs owe a debt to the designers of large industrial and commercial demand response and energy efficiency programs. Our common goal is to inspire more conscious energy consumers who—through either self-discipline or technology—use less energy or delay tasks to off-peak hours.



Utilities have the added challenge of serving late adopter customers as well as innovators. Exchanges need to address those portions of the population from their own perspectives and legitimate concerns so consumers don't become opponents of needed grid modernization.

On the following pages, we will make the connection between this model and the consumer segments that have been identified by multiple studies as well as how it applies to the utilities' perspectives. That understanding provides the foundation for a message framework and structure that stakeholders can apply to their constituents.

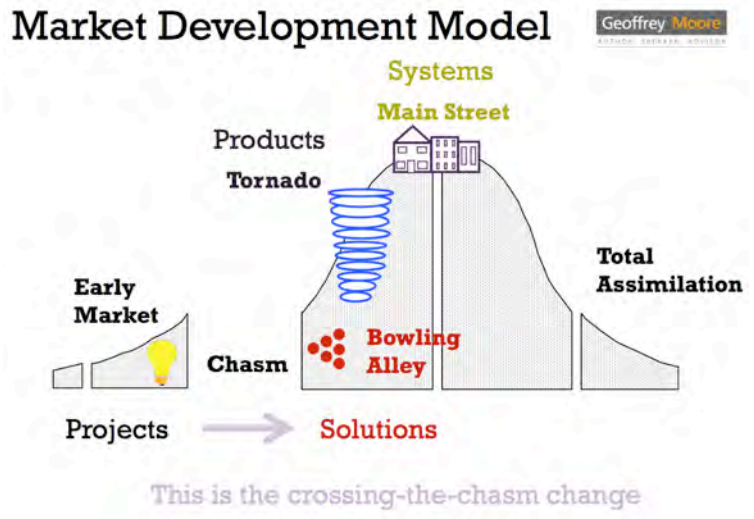
CROSSING THE CHASM REQUIRES SOLVING AN URGENT PROBLEM

In Geoffrey Moore's keynote address at the 2011 ConnectivityWeek, he challenged the audience to think differently if we are to cross the chasm to mainstream adoption of a smart energy culture. Referencing his new book, *Escape Velocity*, Moore described the transition from a project-based (i.e. pilot) approach that tests selected ideas to a **solutions-oriented approach where various products and services are assembled and integrated to meet the pressing needs of specific audience segments.**

Who feels the sense of urgency in 2011?

Foundational research indicates **people ready to act today as smart energy champions or advisors** fall into one of three categories:

- Those who believe the planet and human society are in danger. They are motivated to respond to climate disruption and **proactively deal with extreme climate events**.
- Those committed to making their **homes, institutions, and business locations more efficient as green buildings** either because they feel it is strategically the right thing to do or because the **cost savings are so compelling to them.**
- Large industrial, commercial businesses, and aggregators that have benefited financially from demand response programs and are **eager to identify new revenue opportunities.**



From Geoffrey Moore's presentation *"Escape Velocity: Free the Smart Grid's Future from the Pull of the Past,"* May 23, 2011, ConnectivityWeek, Santa Clara, CA

Holy Name High School in Worcester, MA raised $1.5M to install this wind turbine to offset their rising electricity bills and be "stewards of the earth" (photo by Fox O'Rien)

? **What is an energy worldview?**

A The dominant motivational perspective of an individual with respect to their energy usage. These are more predictive of attitude than traditional demographics. Moving to action also requires a belief that personal effort can make a difference.

1B. MOTIVATIONS AND ENERGY WORLDVIEWS

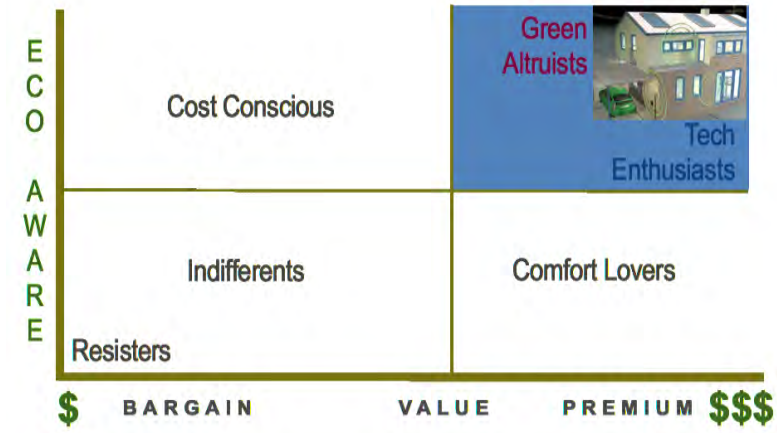
There are different variations of consumer segmentation that have been identified by leading research organizations. The common findings suggest personas of consumers who fit into each of these quadrants. This breakdown explains why a single motto or campaign will not successfully reach all audiences.

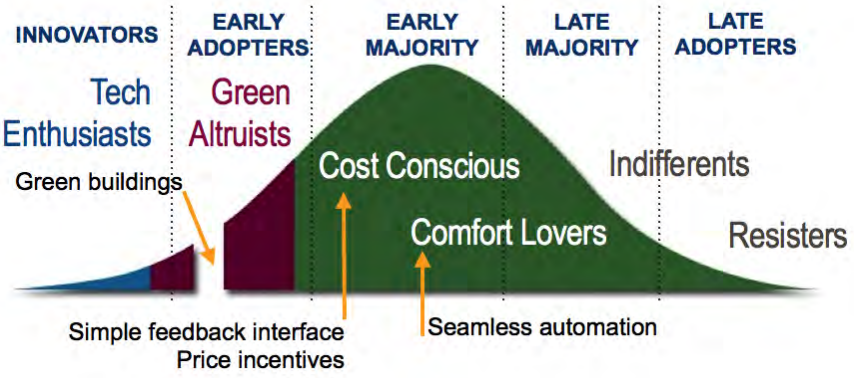
When the segments are mapped to the technology adoption model, we can anticipate trends and trigger points. In the near term, **tech enthusiasts** will embrace early incarnations of feedback devices, HEMS, and micro generation. **Green altruists** will invest in chasm-crossing green buildings (weatherization, lighting, etc.)

C**ost conscious** consumers will require more intuitive feedback interfaces coupled with price incentives before mainstream adoption can be achieved. **Comfort lovers** will likely wait for automation to advance and match their budgets before participating. **Indifferents** and **resisters** will rarely come on board until the social norms in their communities of influence align with active engagement.

Pockets of the country will embrace these technologies rapidly. However, broad national adoption is likely to be spread across a 10-20 year cycle.

Measure size and percentage mix of segments within a given service area to understand your local audience's priorities.





The likely sequence and trigger points needed to reach widespread deployment.

? **What is a utility adoption profile?**

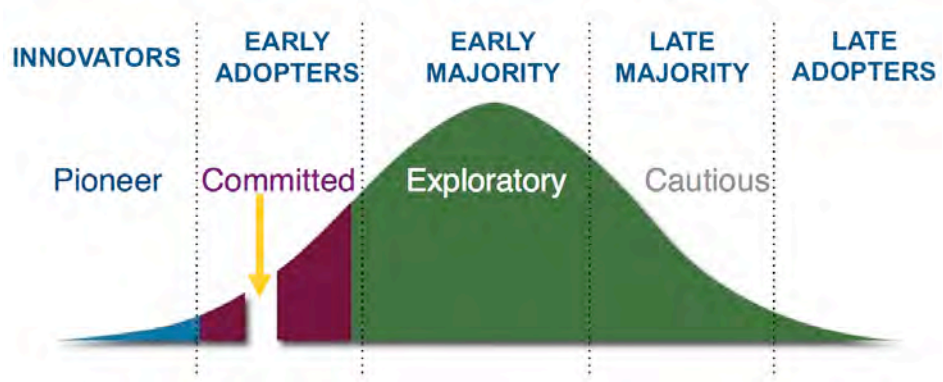
A The likely interest of a utility in embracing smart energy practices and technologies. A new IEE study* quantified the net benefits of smart grid deployment and found that benefits can exceed the costs of AMI deployment for all profile types.

1C. TIMING VARIATIONS: UTILITY ADOPTION

The technology adoption model applies to utilities as well as consumers. These profiles are based on a combination of regulatory mindset, social norms around climate issues, mix of consumer attitudes in the area, and suitability for local renewable generation. However, leadership vision and commitment to smart grid by regulators and utility execs trumps other drivers.

Regulatory mandates are the controlling factor for most of the investor owned utilities. Public perception and regional political attitudes will have a major impact on how quickly utilities embrace the smart energy story.

A range of tools and narratives will be needed for use by utilities in various states of adoption.



Similar prototype designations are analyzed in the Institute of Electric Efficiency Whitepaper: *Cost and Benefits of Smart Meters** (to be published July 2011)

Pioneer	Committed	Exploratory	Cautious
• Leadership vision shared by regulators and utility CEO • May have invested in earlier enhancements like AMR • Limited ownership of centralized generation resources	• Regulatory mandates • Social norm: climate change is an urgent problem • Leadership vision • Renewables are widely deployed in region • Concentrations of green and tech enthusiasts	• Regulatory uncertainty • Social norm: mixed perceptions on climate change • Cost conscious consumers dominant in region • Limited penetration of renewable generation	• Regulatory resistance • Coal, nuclear, natural gas generation owned by utility • Social norm: climate change skepticism • Cost is dominant driver • Many indifferents and resisters • Limited local interest in renewable generation

? **What are vision drivers?**

A The compelling reasons for a given region to make the investment in modernizing their electrical grid.

1D. MENU OF VISION DRIVERS

Not everyone agrees on the reasons to modernize the grid. A menu approach allows utilities to choose which reasons to emphasize in their vision statements, integrated vision narratives for their constituents, and emphasize in their outreach materials.

It is NOT recommended that every utility communicate every driver in their narrative of their vision, nor will they prioritize them in the same order.

It should be noted that it is easier to justify Advanced Meter Infrastructure (AMI) expenditures or adoption of demand response (DR) practices if the reasons for doing so are based on shared imperatives (like sustainability, energy independence, or improving the local economy).

Town hall meetings and venues provided by community-based organizations will allow stakeholders to listen to concerns and issues expressed by consumers. Rather than working from a blank page, we recommend allowing people to react to a list or view prototypes of other narratives and discuss which points resonate with them.

This is one of those situations where a combination of quantitative and qualitative research will be most instructive. While surveys can measure the relative the priorities in a given area, human-centered research will provide greater insights into the nuances of belief and reaction.

MENU of reasons to modernize the grid

a) Energy independence and security
b) Climate change and carbon footprint reduction
c) Population growth
d) Proliferation of consumer electronics
e) Competitive, sustainable energy economy
f) Green jobs and manufacturing
g) More precise and efficient use of limited resources
h) Empowering customers to be part of cost mitigation
i) Make it easier for individuals to control their bills
j) Infrastructure is aging to the point of unreliability
k) Concern for future generations

? **What is a persona?**

A A symbolic identity or archetype that helps program, system and creative designers associate recognizable characteristics to an audience segment.

1E. CONSUMER ARCHETYPES AND PERSONAS

The key to successful consumer education is the ability to speak directly to the individual's pressing concerns. The use of representative examples helps keep the planning discussions based in human reality rather than becoming mired in abstract or unlikely scenarios. This approach has proven effective in designing marketing programs, systems, and online learning tools.

Personas are used to draw out what the members or homes of each defined consumer segment cares about. These are often independent of income level, education, or ethnicity. Written descriptions, photographs and video clips can help creative teams construct targeted campaigns. The descriptive information can be seen as '"Human Business Cases."

★ **Historically, utility programs have primarily been single-issue mass media campaigns. In the new paradigm, campaigns will need to target the range of individuals who make up the audience**.

In the case of Comfort lovers it may be more helpful to focus on their residences to illustrate opportunities for energy savings.

Fixed income & medically frail

Cost conscious

Tech enthusiast

Indifferents

Green altruists

Photos by Marshall Cetlin. Additional funding will need to be identified to produce images that can be shared among the stakeholders.

? What is a value proposition?

A A statement that explains why a person would be interested in making an investment or purchase. A compelling value proposition should answer the question "What's in it for me?"

1F. VALUE PROPOSITIONS

Messages are best absorbed if the recipients understand why the idea being put forth is **meaningful and valuable to THEM**. Not everyone will see value in smart energy practices or technology for the same reasons. For example, a lower price for a product or service is not the only compelling rationale for a value proposition. Others include:

- Unanticipated benefits
- Enhanced services
- New functionality
- Value may be in eye of beholder

If taxpayers and ratepayers are asked to invest or pay more, then the perceived value of grid modernization must be made apparent from their range of perspectives. Dynamic pricing and cost recovery models will need to be explained to the public as consumers become partners.

Consumers today willingly pay more for smart phones than they did for rotary dial phones because they perceive a greater value.

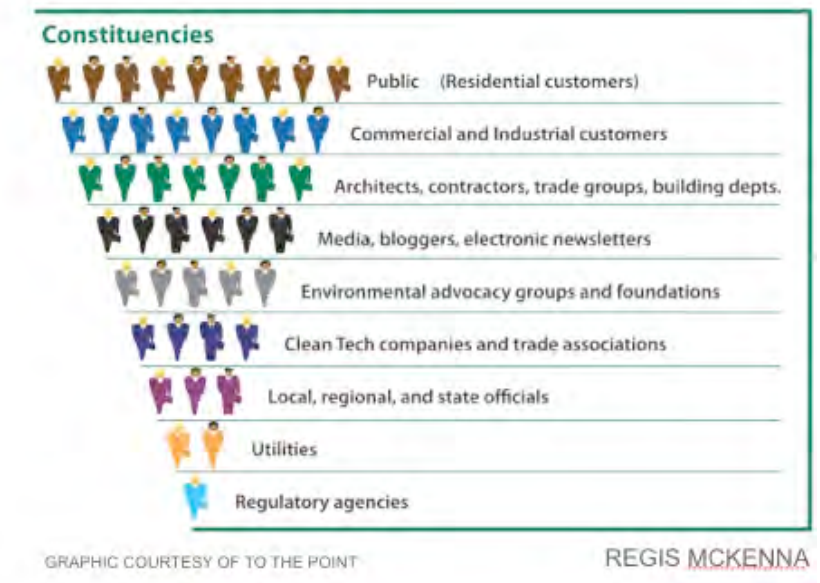
Medically-frail	Cost-conscious	Tech enthusiast	Indifferent	Green altruist	Comfort lover
New technology will enable quicker responses and fewer outages in extreme weather, faster restoration of service for at-risk residents (after first responders), and pro-active contact with loved ones and EMT response teams.	Digital technology on the grid will allow you to know your current balance, get pricing feedback to allow simple actions and automation to keep your bills as low as possible. Frugal use of electricity will be rewarded financially.	The smart grid platform will allow you to know how your home is using energy and control usage anywhere from the device of your choosing. New and innovative tools and apps are hitting the market all the time.	Whether you choose to take any action or not, you will receive system-wide benefits including faster repairs and better customer service. You will be able to control who sees your usage information.	The smart grid will make it possible to support more varied renewable generation, electric vehicles, and energy-saving devices and appliances. Your smart energy choices will reduce the need to build new power plants.	You'll stay comfortable with set and forget automation. You won't even be aware that your home energy management system is adjusting your AC, pool pump, and smart appliances to keep your bills manageable.

? What is the most important recommendation of a national communications plan?

A Encouraging respectful dialog in as many forums as possible with as many individuals as possible.

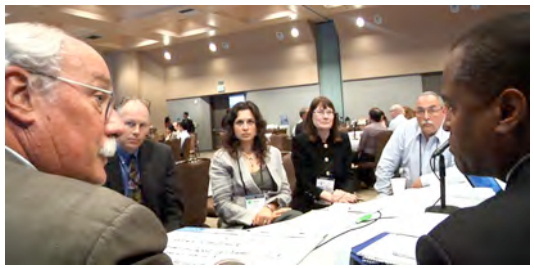
1G. CROSS-STAKEHOLDER CONVERSATIONS

To effectively raise consumer awareness and achieve a sustainable transformation, it is important to engage key influencers and stakeholders. This goes beyond well-designed PR campaigns that distribute information targeted to all layers of the information infrastructure illustrated at right.



The ideal model for effective progress is consistent across regions and jurisdictions. Respectful exchanges among interested parties are critical for any consumer engagement program to succeed. These should be a combination of formal and informal meetings. While online forums can support the process, face-to-face interaction is needed.

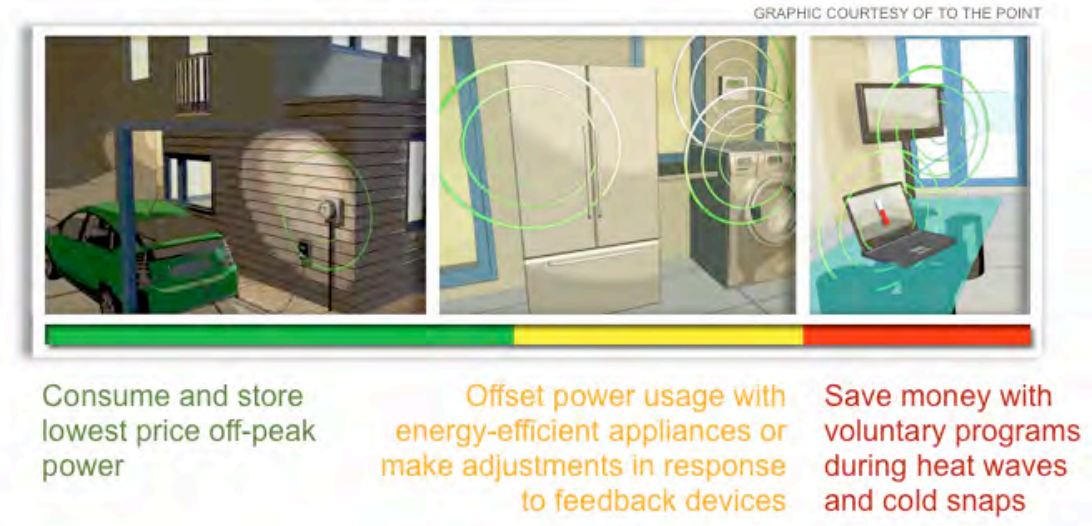
Several cross-stakeholder groups including the National Action Plan Coalition of Coalitions; the Critical Issues Forums held by EEI, NARUC, NASUCA; and the Smart Grid Consumer Collaborative are actively fostering these conversations on a national level. The same activities should be encouraged at regional and local levels as well.



CW11 Consumer Symposium, Santa Clara, California

Appreciative Inquiry Summit in Cleveland, Ohio

SECTION 2: MESSAGING



SECTION 2: MESSAGE FRAMEWORKS

A. Who are we asking to do what?	While motivational mix appears across both genders and all age groups and income levels, there are other patterns related to gender, generation, and responsibility. Direct conversations yield clear insights though few publicly available studies detail the variances. These distinctions are important when choosing which message and communication vehicle to use.
B. DR in larger context	In the context of the national communications program, the NAP suggests DR be positioned as one element in an integrated smart energy story that will be better understood and more compelling to the public.
C. Explaining concepts around DR	Rather than use the industry-centric term of DR with the public, it will be more effective to explain concepts in accessible language.
D. Motivation and message matrix	Consumer segments can be aligned with the appropriate messages.
E. Addressing advocate concerns	Making sure that the concerns of consumer advocacy community are addressed is fundamental to protecting vulnerable populations as well as moving the discussion forward for everyone.
F. Self-selection and choices	Anticipating what a given person will respond to is very difficult outside of the context of a personal exchange. For outbound communications, it is much more effective for people to choose the path meaningful to them from labels and names that are obvious.

2A. WHO WE ARE ASKING TO DO WHAT?

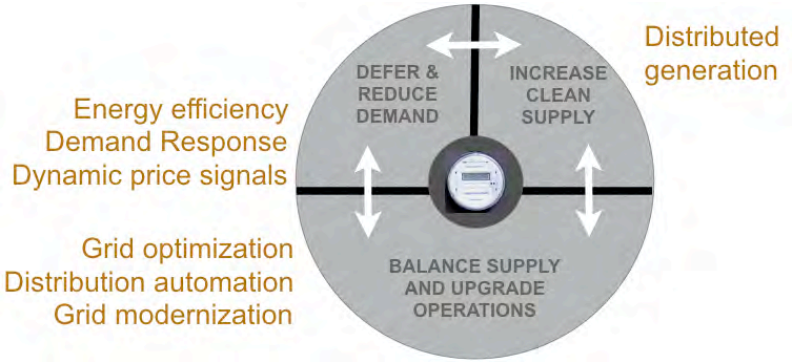
What are we asking?	Frequency	Communication implications	Who is likely decision maker or person affected?
Respond to DR events or other emergencies in real time or with one-day advance notification	~10x/year, random	Because weather reports are not infallible, a pre-arranged communication channel (text, phone call, email) must be triggered either in real time or the day before with a subset of willing participants. "Please pitch in" will appeal to few people's sense of community but broader adoption will require financial incentives.	Homemakers*, elderly, self- and un-employed likely to be home in afternoon. Are they willing or able to be interrupted or change their plans a day in advance?
Allow utility to react to DR events and other emergencies by adjusting consumer AC, pool pumps, etc.	10 - 25x/year, random or 24 hour advance plan	Remote control capability is given to the utility (or aggregator) in advance, in exchange for some agreed upon benefit. Consumers can be invited to participate as part of new service or other outreach efforts and thereafter do not have to think about it.	Bill payer* or could be a family group decision * *high proportion are women*
Consciously use less at peak times and delay tasks	Hot afternoons or very cold mornings/nights	It may actually be easier to get consumers into a habit or routine for deferred energy use. Framing requests in terms of heat wave or cold snap pricing or time of day/season is easier to understand.	Person* who does laundry, dishes, cooks dinner, kicks kids off computer to play outside.
Research and purchase a home energy management system or network	One time or occasionally as new items/apps come on market	Affected by utility smart meter deployment schedule and personal motivations if the utility is not providing a solution. Encouraging use of available options ahead of AMI deployment builds audience for more robust applications.	Gadget person for now. In future, "green digital natives" will perceive as the new normal.
Pay attention to nudges like usage feedback or pricing to defer or reduce use	Intermittent (daily, weekly, or monthly when bill arrives)	Gadget person may not be the same as key user or bill payer. PR and educational outreach cannot overcome need for more accessible interface design. Word-of-mouth, influence by kids learning at school, targeted outreach will be most effective.	Bill payer* is obvious driver but enthusiasm can come from energy champions or other family members.
Buy EE consumables (CFLs, LEDs, filters)	Quarterly?	Gateway activity. Advise/drive to links to product info and available rebates from DOE, utility, or manufacturers	Person* who attends community events
Buy Energy Star appliances	Once every 5-15 years	Provide links to product info and make available rebates visible either from DOE, utility, or manufacturers	Homeowner, appliance user* and purchase advisor
Weatherize home	Occasional projects	Encourage energy audits, access to reputable service providers	Homeowners, renters, landlords
Purchase an EV	Once every 2-10 years	Only a few can afford electric vehicles now but entire neighborhood is affected by need for extra transformers, etc.	In the short term, affluent/green car buyers
Add solar, cool roof	15 year cycle	Major investments usually part of a broader green building mindset.	Homeowner, landlords

? **What aren't we focusing solely on DR in the communications umbrella?**

A As the plan itself suggests and the foundational research supports, consumers see electricity as a service without the distinctions insiders understand.

2B. DEMAND RESPONSE (DR) IN CONTEXT

EcoPinion 6: *Green Gap Redux: Green Words Gone Wrong*, EcoAlign, page 6



When DR is positioned as part of the bigger picture, the case for investment in enabling technology platforms becomes more compelling.

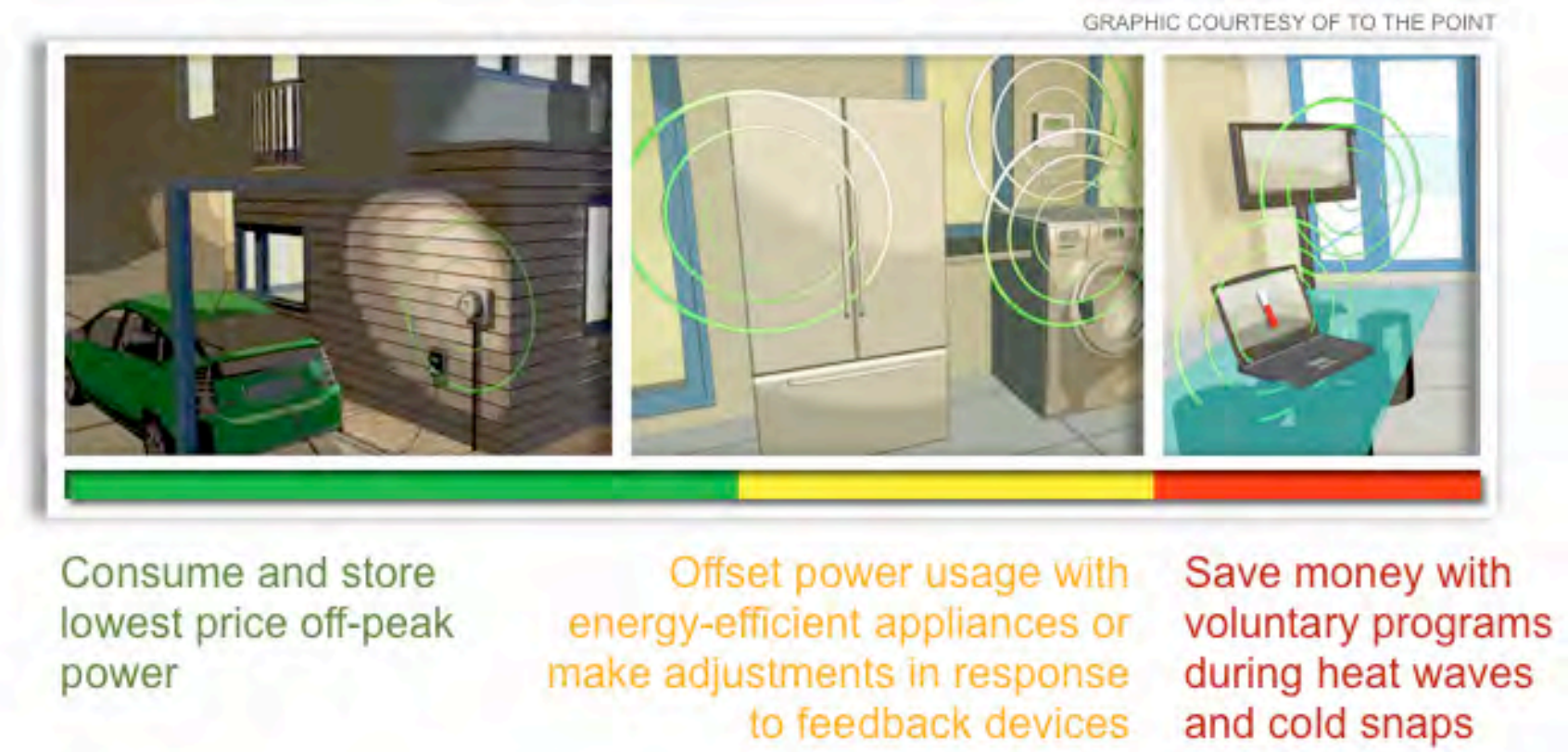
If DR were to be treated as a standalone concept—something not recommended for the purposes of consumer education—then a different name would be needed. As research from EcoAlign illustrates (at left), most people don't have any understanding of what the term means and the associations are negative. We recommend talking about postponing tasks and reducing use of electricity as well as adopting price and other incentives to encourage people to voluntarily make those adjustments. When the request is explained, most people easily grasp that less electrical generation can meet our collective needs and we can reduce the environmental impact of generation and transmission.

Descriptive copy might include concepts such as: "Smart Meters are not important in themselves, but rather components necessary to achieve the larger societal imperatives. Meters are more like a TV cable box or Internet router and firewall."

Or "we can expand DR with direct load control devices but cannot manage widespread distributed generation of renewables without the digital components of the smart grid, nor can we provide time of use price nudges." Therefore, this argument will carry different weight in different places and with different audiences.

Alternative approaches to grid modernization may be more desirable in regions where integration of renewables and dynamic pricing will not be needed or possible in the foreseeable future. Focusing on increased reliability and faster response in extreme weather or other emergencies will likely be a more compelling justification for investment.

2C. EXPLAINING DR CONCEPTS



While some consumers are familiar with the concept of peak times for other services, the related terms are not universally understood.

"Critical Peak Pricing," "Peak Time Rebates," and "Clip the peak" might be re-phrased as "heat wave pricing," no-risk rebates," and "deferred" use.

Images can be used to illustrate night vs morning vs a scorching afternoon. What are needed are more stories that feel like real life (with kids, dogs and dirty dishes to be washed) rather than portraying a sleek, futuristic world that would only be available to the very wealthy. **Stakeholders are encouraged to consider long-term audience development (school children or church groups) to encourage early adopters at the local level in regions that are slower to embrace smart energy practices.**

? **Why can't we use the same messages for everyone?**

A **One person's compelling reason is another's turn off.**
Keep in mind the goal is to have people either be more conscious and careful in how or when they use energy, or leverage technology they can afford to automate efficient use of resources

2C. MOTIVATIONS & TOP LEVEL MESSAGES

Tech Enthusiasts	Green Altruists	Cost Conscious	Comfort Lovers	Indifferents	Resisters
The latest gadgets will allow you to control your energy use and get the best from dynamic pricing programs	Make a conscious effort for the **cause of saving the environment** by minimizing need for more power plants	You have the **opportunity to save money** on your personal bill by postponing certain tasks to cheaper times of day	An automated smart house is the latest **status** symbol. You won't even notice the minor adjustments to your AC or pool pump	A sustainable energy supply lets you keep your home **secure** and your country energy independent	It's **unfair** if frugal subsidize energy wasters who overuse AC and pool pumps during heat waves.
Are you **game** to compete with your neighbors?	**Cooperate** with your friends and neighbors to reduce demand for energy and offset system-wide cost increases			Why worry about cost and availability of future energy supplies?	You decide who sees your detailed usage data
Smart grid enables the latest personal energy technology like EVs and solar panels	Smart grid enables integration of renewable energy and electric vehicles within your neighborhood	We can't afford to do nothing and let the current system decay. We will be forced to build far more costly power plants.	Smart appliances fit your lifestyle		Smart grid helps you determine acceptable terms with your utility

The research shows that consumers **do see benefits in distribution automation** when framed as providing better service and lower operating costs for everyone. Many utilities have been reluctant to discuss those benefits. Greater transparency around these issues, including profitability benefits for investor-owned utilities will help build trust.

As creative teams work with this matrix, they should suggest specific language and imagery based on the regional priorities and the goals and brand identity of the utilities or organizations that are the clients.

? **Is it better to simply avoid the hot button issues?**

A No. Making sure concerns of consumer advocates are addressed is fundamental to protecting vulnerable populations and moving the discussion forward.

2E. ADDRESSING CONSUMER CONCERNS

Concerns expressed	Communication implications
Maintain existing consumer protections	Much of the turmoil centers around a reasonable fear that protections that exist today will be eliminated with the deployment of AMI. As part of introductory materials and meetings, utilities would do well to confirm that their existing policies (including disconnection criteria) will remain in effect or new ones added if necessary.
Dangers of remote disconnect	The **benefits of remote connection** should be emphasized as positive features in all communication materials so the public can be reassured. Switching account responsibility immediately when one moves and not having to wait to get the power turned on in the new location is especially positive for renters. Restrictions on shutting off people's power at night, on weekends, or in the dead of winter should reflect common sense.
Impact of dynamic pricing on low-income residents	Even though there is significant empirical evidence that dynamic pricing favors low-income consumers who typically have flatter load profiles and no empirical evidence that these rates hurt them, this issue remains a key sticking point. Examples in Part 2 of the Action Guide will show how low-income participants in pilots have taken positive advantage of dynamic pricing and utility subsidy/discount programs.
Protecting vulnerable populations	Utilities can promote positive ways to protect medically vulnerable residents who are dependent on special equipment. Develop advance emergency alert systems for residents and their off-premise guardians. Making proactive emergency/storm outage response and rapid recovery a key part of utility operations and the story is a positive way to overcome objections and collaborate with consumer advocates.
Smart meter accuracy	This is important to all types of consumers. In rollout preparation one should demonstrate and communicate how the utility is testing and verifying the new equipment is accurate. While it does not have to be the top message, credible 3rd party validation should be readily accessible on the website, at community meetings, and in the hands of people who are visiting customer premises or answering phones.
Proactive, interactive consumer education	Energy literacy is needed to create engaged consumers and is especially effective with green altruists and low-income communities who are most likely to become energy advocates themselves. All the research shows the more opportunities for interaction with knowledgeable people, the smoother the introduction of new technologies, and the more likely people will form positive relationships with the utility. Community-based organizations are great partners and are proving more effective than expensive, mass media campaigns.

Individual control and choice	Being able to offer consumers a true choice of programs and solutions that match their needs and budgets will involve collaboration among the regulators, utilities, and consumer advocates. Choices should be clear and simple so consumers are not overwhelmed. Language must be backed up by actual, desirable options. Hype and overselling will fall flat and only reinforce distrust.
Shared risk and cost	If consumers are being asked to be partners and change behaviors to help utilities deliver what is a commodity that is taken for granted, they are going to need more transparency and visibility into the financials. While not everyone will want this information, utilities (especially IOUs) will need to adopt a different approach here than has been standard practice if they want public support.
Value proposition of AMI and cost benefits	Even if a utility wants to discuss DR in isolation, experience shows that the other issues will come to the front of the discussion. One reason for recommending DR be placed in the broader context is that it is the only way the numbers make sense. The isolated metric of individual households' saving as much on their personal bill through DR response programs to pay for the cost of the meter will not pencil out for everyone, nor should it.
Smart meters (AMI) vs direct load control	If there is not community support for integration of renewables or dynamic pricing in a given jurisdiction and they are not anticipated for the coming decade, then AMI may be difficult to justify in absence of some larger societal goals. However, if this functionality is needed, then AMI is required for safe deployment.
Big Brother or criminal hackers	Concerns around privacy are of greatest concern to resisters and those who generally distrust their local utility. Align with policy and architecture decisions by the regulators and utilities. If utilities only gather the aggregated household usage and allow the detailed usage data to remain on the premises, with the consumer determining who has access to view that data, much of the problem is solved. This structure will also make it easier to address matters of cybersecurity. The communications strategy should reflect actual implementation. With respect to direct load control, indifferents and resisters are likely to respond negatively even if cash incentives are offered. Allowing consumers to self-select their options based on their own priorities can avoid these potential triggers for distrust and dissatisfaction.
Health concerns over Radio Frequency emissions	The science supports that smart meters are not a danger and emit less than mobile phones, baby monitors, and microwave ovens. Links to 3rd party studies, especially those conducted by health professionals, confirming findings should be made available on utility websites. For customers who remain unconvinced, the utilities would do well to provide alternatives such as relocation of the meter or "organic" meters without radio transmitters. As these are likely to be a few customers with big voices, from a communications' perspective, it is better to recognize the fear is real and let them opt-out. Encourage groups focused on environmental justice to write to local media and express their support for integration of renewables enabled by smart grid.
Prepay	Rather than using prepay as punishment for delinquent customers, position it as a one offering in a portfolio of options to intelligently manage costs with minimal cash flow. For low-income groups, offer prepay combined with energy literacy training, LIHEAP and fuel subsidies, weatherization, saver programs, etc.

? **What if consumers could choose their pricing program?**

A This is an invitation for innovation and creation of next practices on a policy as well as communication level. It can be validated in upcoming pilots and rollouts.

2F. SELF-SELECTION AND CHOICE

Despite the virtue of consumer choice being touted as one of the main benefits of Smart Grid, most of the pilot programs to date have assigned participants on a random basis. Self-selection based on voluntary participation in pilots has been used to criticize and question the validity of pilots.

Given the nature of long-term technology adoption and the clear pattern of disparate energy worldviews, perhaps random selection is not the best way to truly measure the potential power of consumer engagement?

Another opportunity exists by linking subsidies with energy literacy and saver programs. Low-income consumers can become respected energy leaders and champions in their communities.

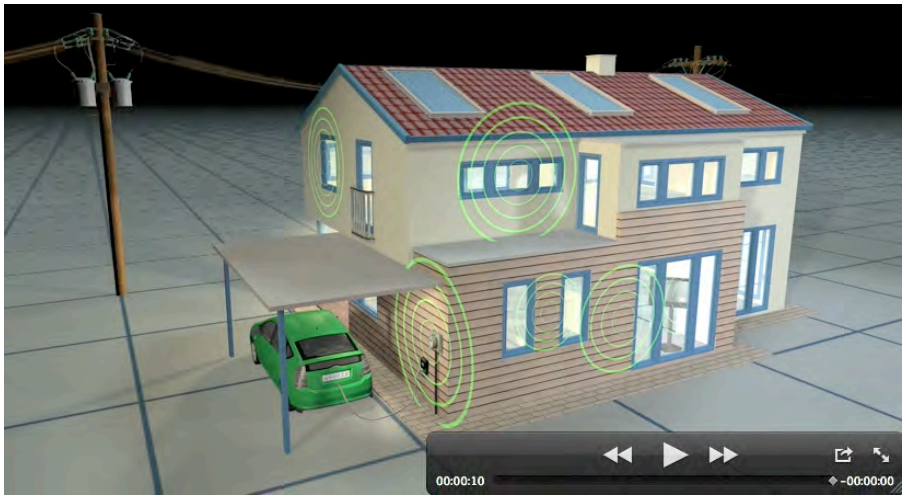
Think of this program design challenge in terms of buying a car. If the car dealership were to assign you to a given automobile at a set price based on their perception of you, you wouldn't be very happy unless they happened to match you up with the right car at the right price. The car industry has come a long way from black Model-A Fords with a global market with different vehicles, at different price points and features, with marketing messages and positioning targeting appropriate audiences.

If consumers are to be active participants rather than a captive audience, the same principles apply here. If consumers can choose the energy plan that matches their worldview and financial considerations, then they are far more likely to make it work for their household. To allow this shift in practice will clearly require the **cooperation and collaboration of regulators, consumer advocates, and utilities as well as the service and technology providers** that are part of the energy ecosystem.

From a communications perspective, if a consumer visiting a website, reading a brochure, or talking to a customer service rep is allowed to **self-identify and choose the plan that makes sense to them**; the utility doesn't have to guess what that household would want. The consumer weighs the features and descriptions of the different programs and then makes a voluntary selection.

Program labels don't need to be clever and unique enough for trademark protection as much as they need to be obvious to the people doing the choosing.

SECTION 3: NARRATIVES & STORIES



NARRATIVES & STORIES: COMING IN PART 2

A. Video narratives	Video is a particularly good medium for telling the story of the smart grid, especially when used in the context of an interactive session where people can ask questions and engage in conversation after a piece is shown.
B. Images that tell stories	Evocative imagery can give viewers a different perspective on the beauty of the transmission system or the sense of pride that comes from a child, family, or community contributing to the solution. The field personnel who work in the utility industry and the advocacy groups often come from their local communities and their commitment is beyond basic employment—there is authenticity and heroism in their dedication.
C. Consumer stories	The best voices to reassure skeptics that consumers value opportunities presented by smart energy technologies and practices are the voices of real people. Most people can instinctively hear the difference between promotional creations and actual human beings expressing their true opinions.
D. Memorable vision statements	These examples will show how to present the big picture in an integrated way that supports local modification.
E. Information architectures	The way that audiences are allowed to self-select and drill down to more detail has a big impact on how readily information is understood and absorbed.
F. Creative briefs	Examples that can be modified for use with local creative teams or agencies.
G. Provide a frame	As part of community events, organizers can provide a frame for a discussion topic and allow residents and leaders to paint pictures of implementation paths.

Appendix

Author's Bio

Judith Schwartz is an entrepreneur, marketing strategist, and communications professional on the forefront of sustainability issues, the Smart Grid, alternative energy, and the digital home. She is a Strategic Consultant to the National Action Plan Coalition. Her Silicon Valley-based firm, To the Point, designs human-centered strategies, conducts research and meta-analysis, creates narratives and messaging, facilitates cross-stakeholder conversations, and develops communications and outreach prototypes.
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Acknowledgements

The author would like to thank the members of the NAP Coalition Steering Committee and Communications Workgroup for their ideas, critiques, and comments, in particular Dan Delurey and Jenny Cross Senff of ADS, Susan Covino of PJM, Mary Ann Ralls and Tracy Warren of NRECA, Eric Ackerman of EEI; Tobias Seller, Diane Moody, and Joe Nipper of APPA; Joe Miller of Horizon Energy Group; Elliot Boardman of PLMA; Barry Hasser of Open ADR; and Patti Betz. Other contributors of insights and wisdom are Chris King of eMeter, Peter Honebein of Customer Performance Group, Ahmad Faruqui of the Brattle Group, Lisa Wood of IEE, Cheri Warren of National Grid, David Cooperrider of Carnegie Mellon University; Susan Norris of PG&E, Sharon Talbott, Jamie Wimberley of EcoAlign, Geoffrey Moore, Anto Budiardjo of Clasma Events, Ward Camp of Landis & Gyr, Rick Morgan of DCPSC, Laurence Daniels of OPC, Herbert Harris Jr. of CUB, John Holt of IBEW; Charles Dickerson, Karen Parham, and Steve Sunderhauf of Pepco. Chris Noonan of the Institute for Energy and Sustainability provided the metaphor for "frames and painting the picture." The International Confederation of Energy Regulators (ICER) introduced us to the term "next practices." Dan Griffin and Charles Birdie of To the Point have collaborated on the many interviews of consumers and business owners across North America whose voices and concerns have provided the basis for many of the ideas discussed here.

Bibliography

We encourage readers to look at the IDEO Human Centered Design Toolkit. http://www.ideo.com/work/human-centered-design-toolkit/
While this toolkit is focused on NGOs and not on the smart grid, it's an excellent resource for describing this type of innovative approach.

In the same vein, we encourage readers to learn more about the Appreciative Inquiry Process where human-centered design principles are being applied to cross-stakeholder initiatives linking sustainability practices with economic development. http://appreciativeinquiry.case.edu/
The methodology is being applied to the design of a smart grid pilot with National Grid and the City of Worcester to be held in September 2011.
http://www.green2growth.com

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