

# Smart Meter Texas Validation Testing

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Summary of Research



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Strategic Findings

Tactical Findings

# Summary of Research

## Background

In an effort to improve the overall User Experience (UX) of the Smart Meter Texas online portal, the Smart Meter Texas Management Committee AEP, CNP, Oncor and TNMP commissioned the UX team through Solutions Cube Group to conduct a round of consumer research to validate implemented changes from the first round of design reviews (November 2013 – February 2014).

## Methodology

The study involved 15 in-depth interviews (IDIs) across two days on May 6<sup>th</sup> and 8<sup>th</sup>, 2014 in Dallas and Houston, respectively. The interviews were conducted with both residential and business customers and prospects, including representative consumers of the Hispanic community.

## Results

The research resulted in consistent strategic and tactical findings across all respondents, and validated that changes made as a result of the Smart Meter Texas Site Evaluation Usability Study are positive and well-received.

# Overall Observations

- The new designs were deemed less overwhelming due to key options being presented as needed, not “all at once”
- The registration process for new customers was described as “simple”, “not too many steps” and “painless”
- The new ‘Usage’ default landing page for authenticated users was well-received, as it was described as “exactly why we are here”
- The revised order in which the authenticated navigation options are presented matched users’ mental model

- Participants stated they were less concerned about security on the Smart Meter Texas Website. The information was not considered critical and it was information that could be “googled” or found elsewhere.
- Several participants were not aware that the website and its data were from Texas Utilities and instead perceived them to be provided from the Texas Retail Electric Providers
- Both customers and prospects, (whether SBOs or residential) mentioned wanting the option to contact SMT through an online channel – whether web form or live chat – if they had questions

## Participant Profiles

- Mix of male (7) and female (8)
- Mix of residential SMT customers (5) and SMT prospects (4)
- Mix of current SMT (2) and prospective SMT small business owners (4)
- Hispanic representatives:
  - Residential SMT customers (2)
  - Prospective SMT residential customers (2)

## Caveat for Recommendations

- Any recommendations in this report are offered to give direction. These are not the only solutions and are not intended to art direct the site
- Finally, key usability changes should continually be tested to ensure they address and do not add to the existing issues

# Validation of Usability Design Changes

- The following slides outline tactical changes agreed upon during the design reviews
- During research, changes were evaluated in the context that a user would typically encounter them while interacting with SMT
- If not addressed or noted by the user during the task flow, the Moderator specifically called out the item and provided explanation where necessary to determine whether or not the change was positive
- **Validated changes** are denoted with a checkmark: ✓
- Changes are considered **open items** if denoted by: ?, which indicates no consensus or additional information / designs were needed to accurately test

# Validation of Usability Design Changes

Status	Topic	Description
✓	<ul style="list-style-type: none"><li>Header UI reconfiguration:<ul style="list-style-type: none"><li>Removal of header tagline: 'A very smart way for Texans to manage electricity'</li><li>Reduced real estate to allow more room for content</li></ul></li></ul>	<ul style="list-style-type: none"><li>When asked, users stated the tagline did not get at <i>how</i> to manage / save, and preferred this space be used for imagery or simply global nav, logo, and login</li></ul>
✓	<ul style="list-style-type: none"><li>Navigation reorganization:<ul style="list-style-type: none"><li>Addition of global header links</li><li>Unauthenticated: Overview, Residential, and Business sections</li><li>Authenticated: Usage, Meters, In-Home Devices, Agreements, Account Profile, Share Testimonial, and Help</li></ul></li></ul>	<ul style="list-style-type: none"><li>Users expected the content and location of the global links to be just as they displayed</li><li>Users unanimously agreed that "less is more" before logging in and appreciated the order in which the navigation displayed on logging in; they felt it was most logical, (aside from Share Testimonial)</li></ul>
✓	<ul style="list-style-type: none"><li>Dedicated space for Broadcast Messaging, (i.e. explanation text, errors, notifications)</li></ul>	<ul style="list-style-type: none"><li>Users became accustomed to looking in this area if they needed clarification of info</li></ul>
✓	<ul style="list-style-type: none"><li>Logo is hyperlinked to the Homepage</li></ul>	<ul style="list-style-type: none"><li>The majority clicked the logo when asked to return to the Homepage</li></ul>

# Validation of Usability Design Changes

Status	Topic	Description
✓	<ul style="list-style-type: none"><li>• Removal of separate registration page + consolidating links into a 'New User Register' dropdown within the login box: Residential, Friends, New Business, Existing Business</li></ul>	<ul style="list-style-type: none"><li>• Unprompted, users presumed they would select this button and be provided with the appropriate account type registration</li></ul>
✓	<ul style="list-style-type: none"><li>• Nomenclature changes:<ul style="list-style-type: none"><li>• 'Create' to 'Create New'</li><li>• 'My Smart Meters' to 'My Meters'</li><li>• 'HAN' to 'In-Home Devices'</li><li>• 'Export in CSV / XML' to 'Export to Excel'</li></ul></li></ul>	<ul style="list-style-type: none"><li>• The nomenclature changes reduced any confusion as to what each referred, (e.g. HAN, CSV, XML) and users had no question as to what was indicated by the new terms</li></ul>
✓	<ul style="list-style-type: none"><li>• Button UI changed to display inactive (gray) until necessary inputs / actions provided by user</li></ul>	<ul style="list-style-type: none"><li>• It was observed that users did not mistakenly try clicking any inactive buttons; this prompted them to ensure any info had been entered</li></ul>
✓	<ul style="list-style-type: none"><li>• Background UI treatment within left-hand navigation modified to remove image and remain solid</li></ul>	<ul style="list-style-type: none"><li>• Initially users who saw proposed UI first, liked the addition of color, but when comparing the two, ultimately preferred the simplicity of the proposed design</li></ul>



# Validation of Usability Design Changes

Status	Topic	Description
✓	<ul style="list-style-type: none"><li>Terms and Conditions changed to display in expanded format vs within an embedded scrolling window</li></ul>	<ul style="list-style-type: none"><li>Users preferred to scroll down the page than the concept of a limited view and smaller scroll space</li></ul>
?	<ul style="list-style-type: none"><li>Modified and more streamlined email invitation</li></ul>	<ul style="list-style-type: none"><li>Out of context, users agreed that the email was thorough and made sense; however additional testing is recommended to evaluate the end-to-end process users would typically encounter</li></ul>
?	<ul style="list-style-type: none"><li>'Start' and 'End' date field parameters are maintained when selecting a different report type</li></ul>	<ul style="list-style-type: none"><li>While not a hindrance, additional testing with HTML prototype or working code is recommended for data entry processes</li></ul>

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# Existing Behaviors and Perceptions

- **Factors that are top of mind when selecting a provider**

- Both customers and prospects named price, reputation, and customer service as key factors when determining a retail electric provider, (REP)
- Small business owners (SBOs) were particularly receptive to REPs who are proactive in reaching out to help them understand their bill, usage, and provide a user-friendly format for both

- **Contributing factors to changing of providers**

- Consumers are watching their bills for spikes in prices; a significant spike in as little as one billing cycle will cause them to seek other options
- Word of mouth is key; if they learn that a REP helped a trusted individual save, they switch
- If the price increases and / or customer service is lacking, they will often return to a previous provider or search again; they are not shy to switch

- **Resources used when researching providers**

- Word of mouth goes a long way, particularly among small business owners
- Powertochoose.org and REP websites are also referenced frequently when researching

# Existing Behaviors and Perceptions

“I pay attention. When you’re running a business, you want to cut costs any way you can; this is another tool to help me, right?”

- Drivers for tracking energy usage

- Current customers like the ability to track daily usage and determine the increments; for a couple it becomes a “game” of how they can continue to save based on where their energy usage is most / least efficient
- Prospective customers like to keep track over time to determine cost / benefit of current provider

- Opportunities for motivating energy usage tracking

- Both current and prospective customers mentioned that incentives from REPs would motivate them to track their usage more frequently
- Both current and prospective customers commented that connecting their data / personal info between their REP and SMT would be ideal and give them more confidence in the data output – rather than feeling the need to compare their bill to their SMT data

“If I was able to prove that this helped me cut costs, and I got others to try it, would there be any incentive from SMT?”

# Current Customers

## • Awareness

- Many current customers were unable to recall how they first learned about SMT
- Those who did recall were notified by the individual sent to change their meters to digital and one SBO recalled he was approached by a 3<sup>rd</sup> party

## • Perceived benefits

- While users generally understood that tracking could lead to savings, they wanted to understand more on *how* their tracking could lead them to saving money

## • Frequency of use

- Residential customers were more inclined to log into SMT daily, much like they check email
- SBO customers logged in anywhere from once or twice a week to a couple times per month
- Both customer types mentioned they keep an eye out for unusual spikes and will log in more frequently to determine whether or not it is a recurring issue that needs to be addressed

“I want to understand if I’m using it to the extent I can. How are others using it? That might be good to know.”

# Prospective Customers

“Why isn’t this something my provider is already doing? If there is something available that wants to help me save money, I’m checking it out.”

- **Awareness**

- While they had some familiarity with the concept of a smart meter, none of the prospective customers were familiar with the SMT portal

- **Perceived benefits**

- When the SMT concept was explained, the main question users had was why REPs were not providing a similar service to their customers
- Some questioned whether they would be incented for participating with SMT
- Others were interested in the ability to track their usage on a frequent basis with the understanding that it could have the long term benefits of saving them money

- **Likelihood of using SMT portal**

- While they were initially unclear of how the SMT portal could help them save, the majority concluded the session stating that they would be visiting SMT the future to learn more

# Considerations for Hispanic Consumers

- As with the majority of participants, they are loyal to their provider, but willing to make a switch when price or customer service becomes an issue
- Unexpected high electric bills motivate them to begin tracking their usage to identify and prevent causes and cost impact of high energy usage
- Common uses for tracking usage include:
  - Manually checking the meter monthly
  - Ensuring their bill shows accurate amount of kilowatts
  - Using excel or notebook to keep running record of monthly charges
- Websites offering Spanish translation are generally more credible to the Hispanic community
  - it shows they are aware and considerate of their audience
  - **It is important that the translation be reviewed by native Spanish speakers, as they were thrown by nuances and “poorly translated terms and phrases” throughout the site**
- As with the majority of participants, they would be hesitant to register through an email invitation – particularly due to a high incidence of scams affecting their community

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# New SMT Portal Design

*\*Unless specifically noted, findings pertain to all user profiles*



## Findings by Severity

- **High Severity** – element received negative reactions or prevented the majority from locating desired information or presented a barrier to completing the intended task with ease and efficiency
- **Medium severity** – element received mixed reactions or prevented some from locating desired information / completing the task with ease and efficiency
- **Low severity** – element does not prevent locating desired information and completing intended tasks; intended tasks happened with ease and efficiency

# Overall Performance: Findings by Severity




Item		Issue
<b><u>Unauthenticated</u></b> <b>Overview landing</b>		<p>Users appreciated the layout, organization, and content included on the Overview landing page; specifically, they liked that an explanation of smart meter was included. Only after reviewing 'About Us' did some state that perhaps links to the participating utilities would be helpful to include upfront.</p> <p>Both current and prospective customers appreciated the Broadcast Message area; some expected it to display on each page if it was deemed critical and would dynamically update.</p>
<b><u>Unauthenticated</u></b> <b>Residential landing &amp; Business landing</b>		<p>While the concept of the portal became more clear, particularly for prospects, as they navigated from Overview to Residential or Business, users felt the upfront pages could be enhanced by the following:</p> <ul style="list-style-type: none"> <li>• Inclusion of relevant images of meters, in-home devices, or both;</li> <li>• Scenarios or testimonials specifically describing how tracking usage leads to savings in energy and ultimately cost.</li> </ul>
<b>Global Navigation</b>		<p>The content and location of the global navigation was unanimously accepted and even expected by users.</p> <p>About Us – users agreed this is the type of content they would expect, though some wanted additional information about the utilities. As previously mentioned, consider hyperlinking to each utility's website.</p> <p>Contact Us - users particularly liked the distinction between the topics they contact SMT about versus what they should contact their REP to address.</p> <p>FAQs – many commented that the breakout by topic was particularly helpful within FAQs.</p> <p>Security – some questioned why an entire page was needed for this information and why Terms and Conditions required an additional click. Consider expanding Terms and Conditions to reduce clicking.</p>

# Overall Performance: Findings by Severity



Item		Issue
<b><u>Registration</u></b> <b>Steps within SMT</b>		<p>Users were pleasantly surprised at the minimal steps required to register with SMT; additionally, they likened it to other registration processes, stating that it met their expectations.</p> <p>The third bullet point on the 'Registration Submission' screen was confusing because users are unclear as to what '3<sup>rd</sup> Party' refers. The majority of users required Moderator assistance in understanding the concept of a 3<sup>rd</sup> Party.</p> <p>Provide help / explanation text within any screen that mentions '3<sup>rd</sup> Party', especially if unauthenticated.</p>
<b><u>Registration</u></b> <b>Email invitation</b>		<p>While users felt the email invitation was thorough and clear, they preferred registering through the website. They cited the website as more credible and "safer" than email.</p>



# Overall Performance: Findings by Severity

Item		Issue
<b><u>Authenticated</u></b>  <b>Usage</b>		<p>Users, especially current customers, were extremely pleased with 'Usage' being the default landing page upon logging in. Many stated that this is why they register / log-in to begin with and exactly the information for which they are looking. When asked, there were mixed opinions as to which data view they preferred, graphical or table view. It is recommended that both data views remain available to them within the 'Usage' page.</p> <p>Residential customers questioned the value of viewing their friends' usage and were very resistant to the concept. The only perceived value for users, especially those within the Hispanic community, would be to track their family's data, (e.g. an elderly relative).</p> <p>If the the 'friends usage' concept remains, rename to 'Friends and Family' or 'Share with Family' and ensure the value is communicated in both authenticated and unauthenticated screens.</p>
		<p>Users had no issues with the layout / organization of the 'Meters' landing page. As well, the search criteria required for searching if more than one meter is on the account also met their expectations.</p> <p>It was within these screens that users began to notice the inclusion of the breadcrumb trail and were receptive to the concept. It was observed, however, that many did not notice until pointed out by the Moderator. Reduce the font size of the breadcrumb trail so it is less likely to blend with the content of the page.</p>
<b><u>Authenticated</u></b>  <b>In-Home Devices</b>		<p>While the layout and organization was well-received, many were unclear as to what an in-home device consisted of, and required Moderator assistance to understand the concept as well as the relationship between the devices and smart meters. Additionally, current customers preferred 'in-home devices' to the current 'HAN' term.</p> <p>As mentioned previously, providing an explanation and showing consumers <i>how</i> smart meters, and therefore SMT, are intended to help consumers will provide clarification needed to participate more actively.</p>

# Overall Performance: Findings by Severity

Item		Issue
<b><u>Authenticated</u></b> <b>Agreements</b>		<p>When asked what they expected from 'Agreements', prior to reviewing this section, many associated the term with either contracts or terms and conditions. While they expected 3<sup>rd</sup> Party documentation, they were unclear as to why they would need an agreement between friends / family.</p> <p>As previously mentioned, the concept of both 3<sup>rd</sup> Party and friends' usage was unclear; as SMT works to clarify and communicate the relationship between, the intent of and value of each, the need for an agreement will likely become more apparent as part of the protocol.</p>
<b><u>Authenticated</u></b> <b>Account Profile</b>		<p>This section met users' expectations, and they appreciated that editable fields were offered to them inline, as opposed to navigating them away from the task at hand to make any changes.</p>



# Overall Performance: Findings by Severity

Item	Issue
<p><b><u>Authenticated</u></b></p> <p><b>Share Testimonial</b></p>	<p>The majority of users were unclear on the value of this section, as well as why it was offered as a prominent navigation option. When asked, they were more likely to view others, rather than share their own testimonial. Furthermore, they thought reading testimonials would be more valuable before they became registered customers as a way to clarify / sell the value of using SMT.</p> <p>In general, users are skeptical of product / service testimonials offered directly from the site, as the assumption is they will only see positive reviews. Aggregate third party sites are more credible resources.</p> <p>Reassess the intent of the testimonials. As users were looking for more clarity around how SMT could help them save money, position any testimonials going forward toward this theme in the form of a story / scenario.</p>
<p><b><u>Authenticated</u></b></p> <p><b>Help</b></p>	<p>This section provided more than users expected; they appreciated that any additional information related to SMT was accessible in a “one stop” location.</p> <p>Many questioned why a guide was needed to navigate the site and said they would question the integrity of the site if it required a guide to navigate. Ensure this remains available, but not prominent.</p>
<p><b>Comparison to Current SMT Portal</b></p>	<p>While the order in which the current and proposed design was rotated between users, and those who saw the proposed design first initially preferred the current visual layout, they stated the following:</p> <ul style="list-style-type: none"> <li>• The use of visuals / colors was lacking in the new design and the current site had more visual appeal;</li> <li>• Functionally, they preferred the new design, after understanding the organization of the navigation.</li> </ul> <p>As discussed during design reviews, the use of relevant visuals will enhance the visual appeal to users.</p>



High severity



Medium severity



Low severity



# Thank You

**Questions or Comments?**

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