Consumers Energy

Usability Testing Report

SI 622 Section 2

Group 2: Katrina Lanahan, Michael Grisafe, Robert Wang, Wei Wang, Yu-Ting Lu

April 18th, 2014

Executive Summary

This report addresses a usability test we applied to the Consumers Energy website. We focused on the five key areas which cover the main task-based functions of the website. The five areas include: making a payment, looking up information, enrolling in plans, reporting an outage, and changing account settings. Before and after each test, we asked participants to fill out a preliminary and follow-up survey. These questions allowed us to gather a demographic profile of users and understand their technological skill level in relation to the Consumers Energy website. After each test, the pair who conducted the test debriefed the remaining group members on their findings and observations in an interpretation session. During this interpretation session, our group reached a consensus on key findings and recommendations. Our key findings and recommendations are as follows.

Key Findings
1. Links are not intuitively named and/or grouped.
2. There are visibility problems with important information.
3. The overall organization of information of the Consumers Energy website is not intuitive enough for users.
4. Search and help features are either too hard for users to find, or non-existent when they need them.
5. The "report a power outage" tool on the home screen is easy for users to find.

Recommendations
1. Label links and pages using language users expect, and group common functions on the same page.
2. Eliminate unnecessary images and text and make important links more visible to users.
3. Simplify the number of website pages, grouping related information together.
4. Provide search and FAQ features on every page.
5. Maintain the centrality of outage information on the homepage.

Introduction

Consumers Energy is the primary public utility company in western and northern Michigan, providing energy to more than 6 million of Michigan's nearly 10 million residents (Census, 2010). The Consumers Energy website (www.consumersenergy.com) is the main electronic resource for customers, offering a centralized location for company information, educational resources, bill payment, and power outage reporting. In addition to providing these services, the Consumers Energy website is a critical brand touch point for the company.

Customer complaints related to the website have increased in recent years, with customers voicing discontent over difficult and non-responsive transactions. In response, Consumers Energy has launched a complete website redesign, which began in January 2014 and will continue for approximately 18-24 months (Customer Experience Design, 2013). The first goal for this redesign is to make sure the website is responsive for all devices. Second, Consumers Energy wants to create relevant and meaningful content, guided by personas, user scenarios, and site analytics. Third, the website redesign seeks to keep customers coming back with a memorable and enjoyable experience. Finally, Consumers Energy wants its website to increase the operational efficiencies of the overall organization.

In this report, we conducted a usability test to examine how customers use the Consumers Energy website. We observed how users performed select tasks and noted where they might have difficulty. Based on observed behaviors, we authored a set of recommendations based on these findings. Usability testing is considered by many to be the gold standard for discovering usability problems in products and services.

Our research questions for this analysis are:

1. Which tasks if any are confusing or difficult for the users to complete and why?

2. Which tasks if any are easy for the users to complete and why?

3. Which features of the Consumers Energy website should be removed or be improved?

Methods

1. **Target population:**

The target population for our usability test was current Consumers Energy customers and website users. We focused on current users, rather than potential users because potential users do not have a way to login and access portions of the site necessary for conducting the usability test. Our client contact at Consumers Energy informed us that they do not have dummy accounts to allow non-customers to use the website. Therefore, we restricted our sample population to current users with logins.

Our client contact informed us that Consumers Energy does not have demographic data about its customers; however, reasoned that their customers roughly mirror Michigan's demographic profile. The U.S. Census for Michigan in 2010 indicates that 14.6% of the population is under 18 years of age, 62.5% are 18-64 years of age, and 14.6% are 65 years of age and older (U.S. Census Bureau, 2010). Males and females are approximately evenly split in their distribution. The majority of Michigan's population has a high school education, or higher (88.7%), and about a quarter have a bachelor's degree or higher (25.5%).

Based on this information and our limitation to current users, we decided on the following inclusion criteria for the usability tests:

- · 2 individuals 18-34 years of age
- · 2 individuals 35-64 years of age
- · 1 individual above 65 years of age

Using a pre-screener questionnaire (see Appendix B), we requested that our client contact recruit three users who are comfortable with technology (Likert response of 4 or 5 out of 5) and two users who are less comfortable with technology (1-3) score. We also requested an even number of males and females.

Our client was unable to recruit the population we requested and recruited five users in the 30-39 age range. However, our client stated that this age demographic represents the core user population for the Consumers Energy website and would be suitable for our purposes in usability testing. As described below, all users reported being comfortable (3 out of 5) or very comfortable (4 or 5 out of 5) with technology. Our client recruited two males and three females for usability testing.

2. **Recruiting Methods:**

Our client contact at Consumers Energy recruited extended family members of company employees using the inclusion criteria specified. However, only five individuals 30-39 years of age were available to participate in the tests. Each participant was offered a $100 American Express gift card for completing the usability test.

3. **Summary of Participants Recruited:**

U1: Male: 30-39 years
- Education: Associate's degree
- Experience with computers (1-5): 4-5
- Experience with smartphones/ tablet (1-5): 3
- The user has been a Consumers Energy customer for 3-5 years.

U2: Male: 30-39 years
- Education: Bachelor's degree
- Experience with computers (1-5): 4
- Experience with smartphones/ tablet (1-5): 4
- The user has been a Consumers Energy customer for more than 5 years.

U3: Male: 30-39 years
- Education: Master's degree
- Experience with computers (1-5): 5
- Experience with smartphones/ tablet (1-5): 5
- The user has been a Consumers Energy customer for more than 5 years.

U4: Female: 30-39 years
- Education: Bachelor's degree
- Experience with computers (1-5): 4
- Experience with smartphones/ tablet (1-5): 4
- The user has been a Consumers Energy customer for more than 5 years.

U5: Female: 30-39 years
- Education: Bachelor's degree
- Experience with computers (1-5): 5
- Experience with smartphones/ tablet (1-5): 5
- The user has been a Consumers Energy customer for more than 5 years.

4. **Usability Test Tasks Overview (included in "Appendix A: Usability Test Tasks"):**

Our usability test tasks included the following categories, which cover the main functions of the website:

- Make payments: how to login and go through the process of paying a bill; how to pay part of the balance.
- Look up information: how to view previous bills in a specified period; how to find customer service information.
- Enroll in plans: how to enroll in auto-pay; how to enroll in the green energy plan.
- Report outage: how to report an outage on the website and on a smartphone.
- Change account settings: how to change from paper bill to eBill.

We also included five follow-up questions and a post-test questionnaire following each usability test. These questions helped us learn users' demographic information, technology

comfort and education level, feelings about the website or tasks, and comments or suggestions they wished to share with us.

After designing the tasks, our team did several pilot tests to make sure the usability tasks worked well.

5. Usability test structure and setup:

Interviews were scheduled ahead of time and took place in a closed room, where participants were able to perform the tasks without being disturbed. The participants were asked to perform tasks on a laptop provided by the team and to "think aloud" during the process. Each test lasted between 30-45 minutes and a $100 American Express gift card was offered after each test. Two individuals from the research team were present during the interview: one who sat next to the participants and primarily read the instructions and the other who primarily took notes during the tests.

The equipment for each test included:
- Two copies of usability test instructions (one for the interviewer and one for the notes taker);
- One copy of post-test questionnaire
- A note book
- A timer
- A laptop

The test setup is represented below:
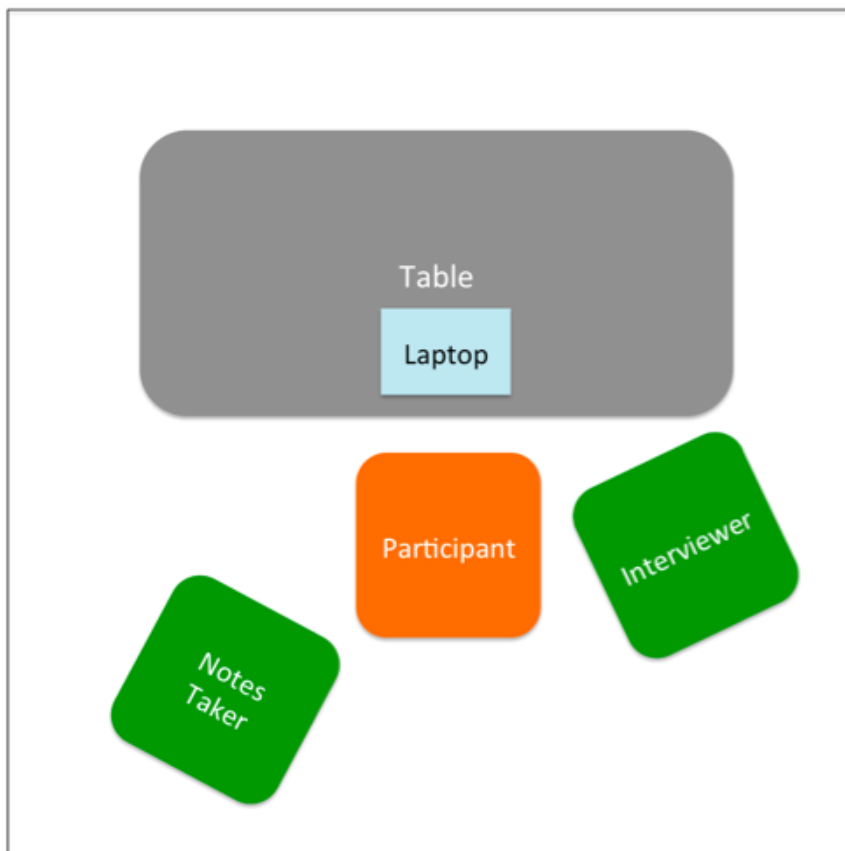
6. **Usability test analysis:**

Immediately after each test, the research pair conducting the test uploaded and shared their consolidated notes with the team. The consolidated notes included details about how the participants performed each tasks and whether they looked confused or confident in each tasks. The participants' answers to the follow-up questions and post-test questionnaires were also shared.

When all of the tests were finished, we held an interpretation session in which participants' behavior patterns, performances, and common problems were discussed. After the discussion, we agreed upon the findings and recommendations based on the information we collected from the tests.

Findings and Recommendations

Summary Results

Based on our usability testing, we found that users frequently had difficulty navigating the Consumers Energy website because the links are not intuitively named and organized, important information or links are often hidden from users, and the organization of information is not intuitive or user-friendly. We also found that users experienced difficulty in locating the search and help features. However, all users were able to easily find and use the centrally located power outage information.

Key Findings

Finding 1: Links are not intuitively named or grouped.

Evidence:

Example A: Users had difficulty finding common billing transactions which frequently go in sequence. For instance, after User 4 completed the task of paying her bill, we asked her to find the autopay feature. She first attempted to find this option under the "Enroll in Payment Plan" button. Failing to find what she was looking for in this section, she returned to the previous screen. She then chose the "Create Payment Arrangement" button but was similarly confounded (Figure 1-1). It was only after she went back to the eServices home screen that she found and clicked on the auto-pay option.
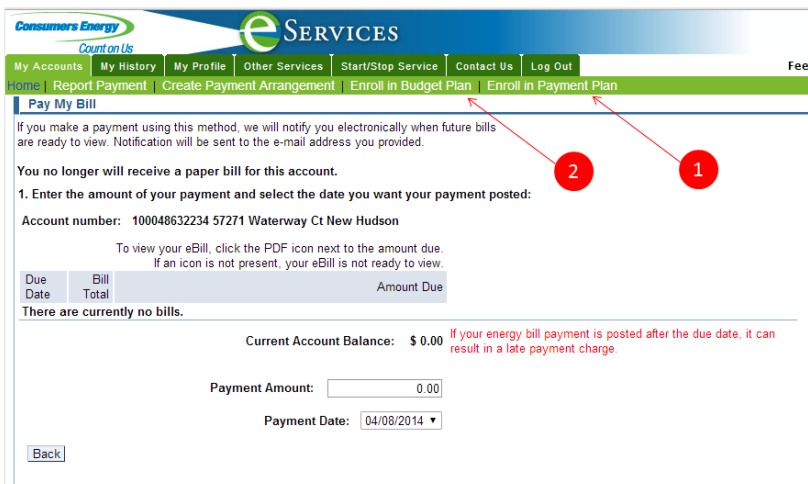
Figure 1-1. The user's first and second attempts to find autopay.

Figure 1-2. The user finds the "autopay" option on the third try.

It is important to note that the user could only access this option from the home screen and that our task required her to know this to complete the transaction (Figure 1-2). This lack of easy accessibility of commonly used features was a problem for many users.

Example B: Buttons and links are often not labeled in the way that users expected. For example, when we asked users to find the page for enrolling in a green energy plan, users stated that they were looking for a link or button labeled "Enroll in a Green Energy Plan," "Our Environment," or "Energy Saving Solutions." In reality, this information was under "Green Generation." Because of the lack of congruence between user expectations of appropriate labels and actual link labels, three out of our five users were not able to complete this task.

Recommendation: Clearly label transactions using language that users expect, and group common functions on the same page.

This will help users to find the information they need while making them feel more at ease with the site's navigation. Consumers Energy should also centralize the commonly used transactional features of bill pay into a single screen of links.

Finding 2. There are visibility problems with important information and links.

Evidence:

Example A: Several key transactional features of the billing page are located along the right side of the eServices home screen in a series of links. However, users frequently stated that they expected to find them located centrally (Figure 2-1).
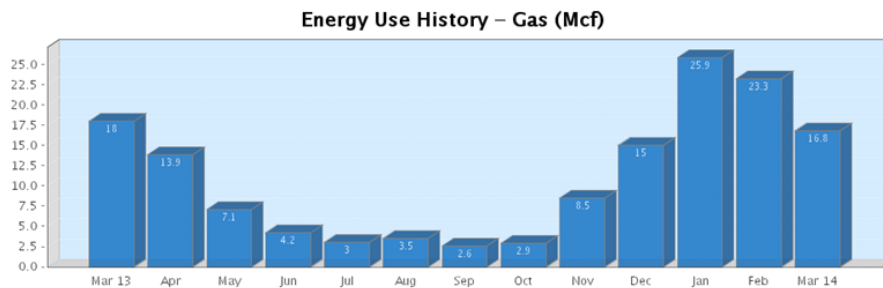

Figure 2-1. Critical links located on the right side of the screen.

Example B: Four out of our five users had difficulty locating a company phone number on the contact page. The quantity of numbers and emails listed on the page seemed to confuse users, slowing them down as they searched for the number that they wanted (Figure 2-2).

In addition, users stated that the website was too "cluttered" and "cramped" and that it "had too little white space" and "needs simplification."

Figure 2-2. The Consumers Energy "Contact Us" page.

Recommendation: Use location, size, and color to make important links more visible to users and reduce unnecessary images and text.

In the billing section, we recommend placing key billing features in the center of the home screen that users see when they enter the page. On the contact page, Consumers Energy should provide only one or two important emails to reduce confusion for visitors. When possible, Consumers Energy should reduce the number of pictures and text on each screen and only include essential information necessary for transactions.

Finding 3. The overall organization of the site is not intuitive and frequently confounds user expectations.

Evidence:
Example A: Throughout our usability testing, users had difficulty locating options on different pages as they progressed from one task to the next. For example, after users entered the transactional bill payment section of the Consumers Energy website, they found it difficult to

11

navigate back to "Green Energy Generation," located on the home screen. This was true even among users who knew that the information was on the home screen because the "Home" button on the eServices page only took them to the main page of the eServices section. To navigate to the home screen, users needed to know to click on the Consumers Energy logo, which was unintuitive for many of them.

Figure 3-3. It was difficult for users to identify that the Consumers Energy logo was the button for the main homepage.

 Example B: When users clicked the link labeled "Enroll in eBill," they often expected to be enrolled in the electronic billing option. Instead, they were taken to a page that included a number of unrelated options that obscured the eBilling option located at the bottom of the page. This confused users and interfered with their task completion.

Figure 3-5. After users click on the "Enroll in eBill" link (left), they are taken to a screen with many options unrelated to switching to eBilling (right). The eBilling option is hidden at the bottom of the screen.

Recommendation: Simplify the number of website pages, grouping related information together. Buttons with a call to action (e.g., "Sign up for eBilling") should either complete the action when clicked or link users to a page that solely addresses that concern.

Consumers Energy should also provide a clear "home page" button that links the users back to the home page from the billing page. A navigation bar on the left side of the eServices screen that provides the same options as the main page would also help users with navigation by maintaining consistency.

For links and with distinct calls to action, the action should ideally be completed by clicking the link, or it should take the user to a page that specifically addresses this concern. For instance, when users click on "Enroll in eBill," they should either directly be enrolled in eBilling or taken to a page that exclusively has content on this topic.

Finding 4. Search and help features are either hard for users to find or non-existent when they need them.

Evidence:
Example A: When one user was trying to pay part of the balance for his bill, he clicked the FAQs button from the Payment Options page, stating that he hoped it would provide relevant information about payment options. Finding none, he went back to the eServices home screen to look for other avenues to complete the task.

Example B: Users could not locate a search feature from the eServices section of the site. As one user was trying to sign up for a green energy plan, she commented that she was looking for a search feature because she had exhausted all of the pages within eServices where she thought the plan sign-up might be. Other users frequently looked lost in eServices, so a search feature might have served them well, too.

Example C: The site lacks relevant information to help users log in. In one case, a user could not remember his password and was confused as to whether he should enter a username or email in order to retrieve his password. In another similar case, the user could not retrieve her login information.

Example D: Users want to be able to get in touch with someone quickly. One user commented that she expected a main contact or emergency phone number to be located on the home page. Not finding that, she said, "I can't find the phone number for service. It really should be prominent. It should be on the front screen."
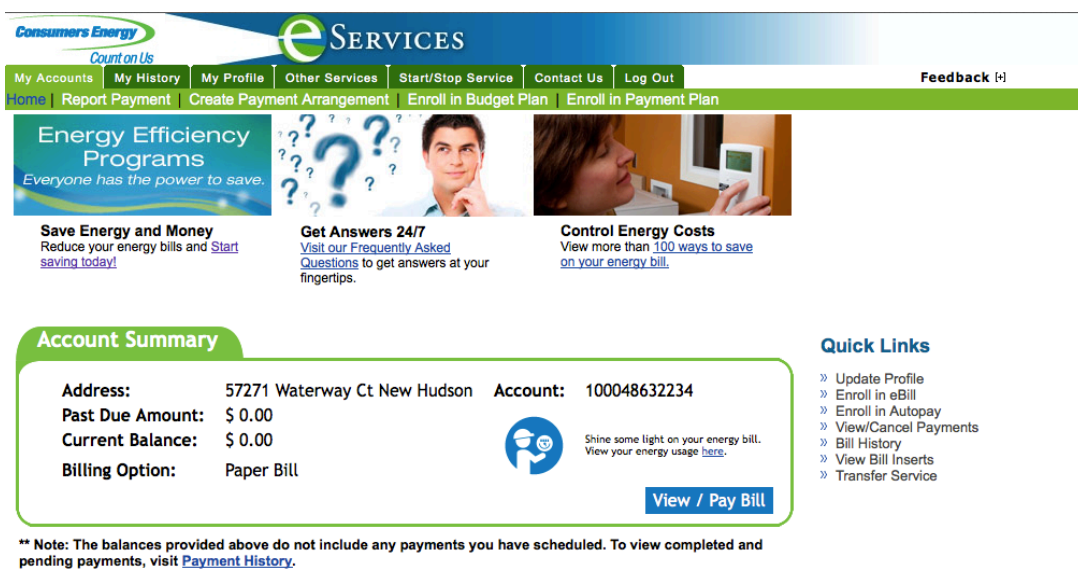
Figure 4.1 The eServices section of the site lacks a search feature or clear FAQ help.

Recommendations: Provide search and FAQ features on every page

Provide a site search feature in the top right portion of the header on each page as well as an FAQ link. The FAQ page should be tailored based on the page the user is coming from—e.g., if they click FAQ from a transactional page, the FAQ content should be about paying bills.

Another helpful measure would be to include info buttons on pages where users get stuck. On the login screen, an info button next to the username field would give users more context for what their login is. On transactional pages, the info button or screen text would help users navigate different payment options.

Finding 5. Users can easily find the "Report a Power Outage" option located on the home screen.

Evidence:

Example A: All users were able to complete this task on the site without issue. Users seemed familiar with the link and knew how to report outage information. More than one user said that an outage link is part of what they expect to see on the home screen. Several users mentioned that the red button was helpful, as it enabled them to find information quickly.

Example B: When looking up outage information on their smartphones, most users found the outage map. For users who were able to access the Internet, most easily navigated to the Consumers Energy mobile site and found the information they were looking for. One user, however, looked up Consumers Energy contact information and was disappointed that she couldn't click on the number to dial it directly.
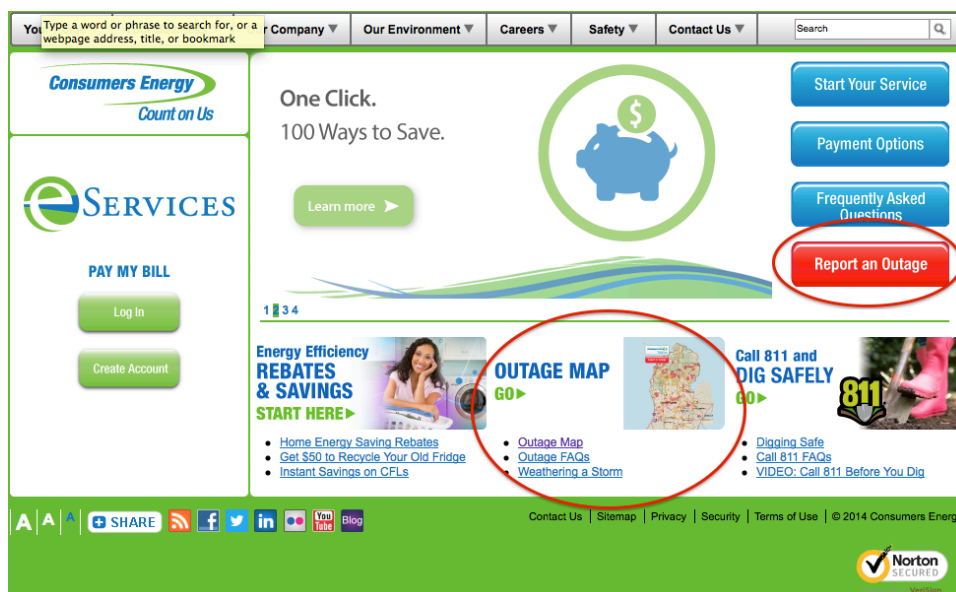
Figure 5.1 The homepage clearly shows options to report outage information.

Recommendation: Maintain the centrality of outage information on the homepage
During the redesign of the website, make sure that the outage feature maintains its location and centrality on the home screen. Users are familiar with where to go to report an outage or look up detailed information about the outage, such as via the outage map. It's important that as the new site is designed, this feature remains central to the homepage because this is where users expect to find it.

For the mobile version of the site, enable users to click to dial phone numbers. Currently, users have to remember or write down the phone number in order to call it from their cell phones.

Discussion

Limitation #1: Sample Size:

Consumers Energy provides natural gas and electricity to more than 6 million of Michigan's 10 million residents. Because we only had 5 participants, and all of them are in the 30-39 years old age range, their behaviors and opinions are not likely to accurately represent the opinions of the larger population.

Limitation #2: Sample Selection:

All of the recruited participants were the extended family members of Consumers Energy employees. This sample does not reflect random selection and is thus biased. In order to obtain a representative sample, we would have needed to recruit Consumers Energy customers with stratified ages ranges, geographic locations, technology skill level, and education level.

Limitation #3: Path Dependence:

In the tests, the participants started a new task from the page of the previous task. However, in the real world, users may start from different pages, which makes the start page of performing these tasks different. If this is the case, the users in the real world may not experience the difficulties the participants had experienced in the process.

Limitation #4: Task-based Cues:

Participants may not have known that certain features of the Consumers Energy website existed without our task prompts. For instance, many users stated that they had no idea that there was a "green energy" section. Without our prompt, which specifically asked them to find this page, they may not have thought to have looked for it.

Limitation #5:

In the tests, we used a timer to record the time participants used to finish each task. However, because the participants were required to "think aloud," the time they spent on these tasks might not accurately reflect how quickly users in the real would be able to do them. The time the participants used to complete the tasks is not comparable among the participants since some users were more vocal than others.

Limitation #6: Comfort Level with Technologies:

All participants in our tests were comfortable with using computers, smartphones, and tablets, which may not be representative of the population as a whole. For those customers who have less experience with using these technologies, they may have different behaviors and opinions than our participants.

Limitation #7: Test Anxiety:

In the testing room, there was an interviewer and notetaker. Because there were two people looking over the participant's shoulder, that may have affected the participants' performance. Participants may perform these tasks more easily when not under test conditions.

Conclusion

We conducted a usability test with five participants, who are in the age range of 30-39 years old, who are experienced with computers, and who are customers of Consumers Energy for at least the last 3 years. After an analysis of the five individual usability tests, we arrived at five key findings.

1. Links are not intuitively named and/or grouped.
2. There are visibility problems with important information.
3. The overall organization of information of the Consumers Energy website is not intuitive enough for users.
4. Search and help features are either too hard for users to find, or non-existent when they need them.
5. The "report a power outage" tool on the home screen is easy for users to find.

Based on these findings, we recommended that Consumers Energy make improvements to its links, labels, search, and information pages. In the future, we suggest that Consumers Energy consider our recommendations to make their website more user friendly.

References

Customer Experience Design. (2013). The digital state of Consumers Energy. Jackson.

U.S. Census Bureau. (2010). State & County QuickFacts: Michigan. Retrieved from
http://quickfacts.census.gov/qfd/states/26000.html

Appendices

A. Usability test transcript

Interview Protocol

My name is _____, I will be walking you through this usability test today to get some information about the Consumers Energy website. We're doing this testing in order to help Consumers Energy redesign the website to better suit customers like you.
We are testing the website, we are not testing you. And you can quit at any time. You aren't going to hurt our feelings even if you really dislike something or think it's not working. In fact, telling us those things is really helpful! Please be as critical as possible because we want to find as many problems as we can.

I am going to give you a scenario and ask you to do some tasks on the website. As you are completing each task I want you to "think out loud" as you decide which button to push and where to go. Think of it like a "play-by-play" description of what you're doing and why you're doing it. I'll watch and take notes, but you should ignore me. Just focus on describing what you're doing and when you're finished with a task, please say "I'm done."

If you have any questions as we go along, just ask them. I may not be able to answer your questions until after testing is over since we're interested in what you're able to do with the site. Do you have any questions before we get started?

Check in with participant to discuss any concerns or answer any questions

Preliminary Questions
Ok. Before we look at the prototype I'd like to ask you a few questions.

1. How experienced would you say you are with computers, on a scale of 1-5?

2. How experienced would you say you are with smartphones and tablet, on a scale of 1-5?

Task 1. What would you expect to see on the Consumers Energy site? *User should describe site features they'd want to see/use.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 2. You've told us that you'd expect to see [a, b, c]. Please tell us where you find those things on the site currently. *User should identify features on site.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 3. We'd like to get your overall impressions of the site. Describe what you see on this page. *User should review home page.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 4.   You know that Consumers Energy has different ways to pay your bill, but you're not sure what exactly those are or how they work. Find information on the site that describes all of the payment options available to pay your bill. *User should click Your Home, Paying Your Bill, Payment Options.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

For the next part, we're going to ask you to do things related to your bill. You might be familiar with some of these tasks already and others may be new to you.

Task 5. Please login to the site using your regular username and password. *User should login.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

If user has does not have unpaid bill, skip to Task 7.

Task 6. Go through the normal process of paying your bill. *User should pay bill or explain process.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 7. Please view your previous bill history for all forms of payment for the past 30 days. *User should click on Payment History, select parameters and click Find.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 8. If you wanted to pay part of your balance, but not the whole thing, how would you set that up? *User should click on My Accounts, Enroll in Payment Plan, Create Payment Arrangement.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 9. How would you enroll in the auto-pay option with a credit card? *User should click on My Profile, Enroll in Auto-pay with credit/debit card, Agree to terms and continue, enter credit card information.*

☐ Completed task
☐ Looked confused

☐ Had trouble with task (hesitated,
   problem-solved)

Task 10. You'd like to switch from using a paper bill to an eBill *[or eBill to a paper bill, depending on user's set up]*. How would you do that? *User should click on My Profile, scroll to bottom, click Edit my Mailing Options.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated,
   problem-solved)

Task 11. Consumers Energy allows customers to source their energy from green, renewable energy sources. Show me how you'd enroll in their green energy plan. *User should click on Your Home, Green Generation and fill out the form or describe the information they'd put in.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 12. Imagine that the power's out. Your computer won't work. How would you find out how big the power outage is? *User should use smartphone to go to consumersenergy.com and click on Outage Map and use the Locate function.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 13. Now the power is back on at your house, but it's still off across the street. Your neighbor has asked you to report the outage to Consumers Energy. How would you do that? *User should use computer and click on Safety, Outage Center, Report Outage OR from home page click on red button Report an Outage.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

Task 14. You'd like to contact Consumers Energy about enrolling in a direct payment plan. How would you do that? *User should click back, Contact Us, find email/fax for Direct Payment Plan.*

☐ Completed task
☐ Looked confused
☐ Had trouble with task (hesitated, problem-solved)

1. What tasks, if any, did you enjoy or find easy to complete?

2. What tasks, if any, were particularly confusing or difficult to complete?

3. Were there points when you thought that the website should be showing something different than what you actually saw while you were doing a task?

4. Are there any features absent that you would particularly find useful?

5. Do you have any more questions for me, now that we're done?

B. Pre-screening questionnaire

Eligibility Information

1. Are you a Consumers Energy Customer?

   - Yes
   - No
   - I don't know

2. Do you have a Consumers Energy online account?

   - Yes
   - No
   - I don't know

3. How comfortable are you using the Internet?
   - 1: Not at all comfortable
   - 2
   - 3
   - 4
   - 5: Very comfortable

4. Do you have a smartphone?

   - Yes
   - No
   - I don't know

5. What is your gender?

   a. Male
   b. Female
   c. Prefer not to answer

6.. Which category below includes your age?

   - 19 or younger
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60 or older

● Prefer not to answer

7. What is the highest level of education you have completed?
   ● Less than high school
   ● Some college
   ● Associate's degree
   ● Bachelor's degree
   ● Master's degree (e.g. MA, MS, MBA, MPH)
   ● Professional degree (e.g. MD, DDS, JD)
   ● Doctorate degree (e.g. PhD, EdD)
   ● Prefer not to answer

C. Usability test post questions

1. How long have you been a Consumers Energy customer?
    - < 6 months
    - 6 months - 1 year
    - 1 - 2 years
    - 2 - 3 years
    - 3 - 5 years
    - 5 years or more

2. What do you use the Consumers Energy website for? Please mark all that apply.
    - Making payments
    - Viewing or managing my account
    - Starting or stopping service
    - Finding or reporting outage information
    - Researching products or services
    - Contacting Consumers Energy
    - Other (please specify) <An empty fill-in box follows this section>

3. What is your gender?
    - Male
    - Female
    - Prefer not to answer

4. Which category below includes your age?
    - 19 or younger
    - 20-29
    - 30-39
    - 40-49
    - 50-59
    - 60 or older
    - Prefer not to answer

5. What is the highest level of education you have completed?
    - Less than high school
    - Some college
    - Associate's degree
    - Bachelor's degree
    - Master's degree (e.g. MA, MS, MBA, MPH)
    - Professional degree (e.g. MD, DDS, JD)
    - Doctorate degree (e.g. PhD, EdD)
    - Prefer not to answer