

Preliminary Usability Test Results Presentation

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Team 3 - PG&E Reducer
Course- HCI CS-5760

Application Description



The PG&E Energy Reducer is a web application for PG&E customers that allows them to visualize their heat and electric consumption through easily readable and understandable graphical representations. The app also shows trends and recurring energy spikes and gives the customer advice to help reduce their energy consumption as well as their energy costs.

Usability Test Process

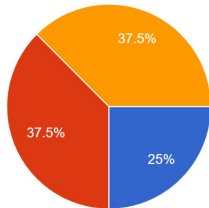
The process for my usability testing generally was as follows:

- Welcome the participant, followed by an Introduction of myself and developers
- Explain the application and gather consent of participant
- Pre-test questionnaire
- Describe a scenario
- Upon completion of a scenario, ask general questions.
- Post-test questionnaire
- Thank participant and conclude session

Pre-Test Questionnaire Results

How interested are you in using an application like this?

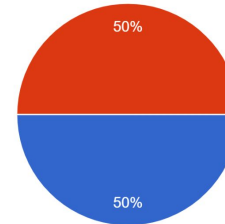
8 responses



- Very Interested
- Interested
- Neutral
- Disinterested
- Strongly Disinterested

I believe myself to be proficient at using a computer.

8 responses

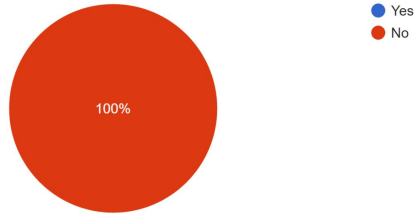


- Strong Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

Pre-Test Questionnaire Results

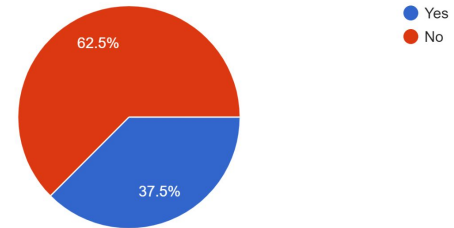
Have you ever used a similar application in the past?*

8 responses



Have you ever participated in Usability Testing?*

8 responses



Test Scenario-1

In this scenario, the participant logs in using the provided credentials and records the readings for Electricity Usage for a period of **one day**.

Measures :

- User was able to get the necessary information
- Assistance Needed
- Bugs Identified

Test Scenario-2

In this scenario, the participant logs in using the provided credentials and records the readings for Electricity Usage and Gas Usage for a period of **one month**.

Measures :

- User was able to get the necessary information
- Assistance Needed
- Bugs Identified

Test Scenario-3

In this scenario, the participant logs in using the provided credentials and records the readings for Electricity Usage and Gas Usage for a period of **one year**.

Measures :

- User was able to get the necessary information
- Assistance Needed
- Bugs Identified



Test Scenario-4

Accurately use the **threshold slider**.

Measures :

- Assistance Needed
- Results of moving the slider
- Difficulties faced
- Bugs identified

Test Scenario-5

Performing tasks using **dark mode**

Measures :

- User was able to get the necessary information
- Assistance Needed
- Bugs Identified



Test Scenario-6

Downloading the graphs in Light mode and Dark mode.

Measures :

- User was able to get the necessary information
- Assistance Needed
- Bugs Identified

Bug-1: The "Help" button on the web page was not easily noticeable

- **Problem :** (Priority : **Urgent**)

It seems that the user was navigating randomly or asking me for my assistance with using the application until I informed them about the help button.

- **Suggestion :**

To include a prominent help page or button which will be easily noticeable. Help page could be included at the beginning of the application or in a noticeable location.

This would make it easier for users to find help resources and potentially reduce the need for individual assistance

Bug-2: Symbol redirecting to different page

- **Problem** : (Priority : Not **Urgent**)

When clicking on the **environmental impact/ energy tips** symbol, the page is redirecting to a different page.

- **Suggestions**

To prevent confusion for users, it would be beneficial to provide a pop-up or notification indicating that the user will be redirected to a different page when clicking on the symbol

This will help ensure that users are aware of the redirection and can make an informed decision about whether to proceed or not

Bug-3: Downloading the graph

- **Problem** (Priority : Not Urgent)

After saving the image the **threshold bar is still visible**.

If you download in light mode background is still getting generated in dark mode.

- **Suggestions**

When the user is downloading the graph there should be option to download as pdf option or button

Bug Report

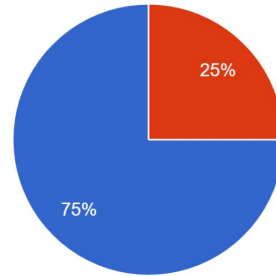
Bug Number	Bug Name	Bug Description
1	Help Button Unnoticeable	The "Help" button on the web page was not easily noticeable
2	Symbol redirecting to different page	The page is redirecting to a different page when the user clicks on the environmental impact/energy tips symbol.
3	Downloading the graph	<ul style="list-style-type: none">• A PDF download option should be provided when downloading graphs, and the threshold bar should not be visible after saving the image.• Additionally, downloading in light mode should not generate a dark mode background.

Usability Recommendations

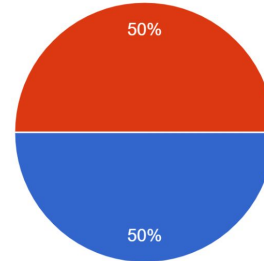
- Some suggestions on how to reduce the energy consumption at the threshold you move the bar to.
- In night mode the x axis, y axis, and axis labels can be difficult to read. It's a lot of information to take in at once, but once understood its easy to navigate and comprehend.
- Set household members/size in my profile/settings so that space can be used for more information display.
- Maybe have multiple colors for multiple weeks so they can sit right on top of each other?
- Also the info buttons, I would recommend a pop up or some sort of indicator before opening a new tab on the right side
- I would also like to see the amount I spend monthly on gas and electricity.

Post-Test Questionnaire Results

Overall performance of the application is good
8 responses



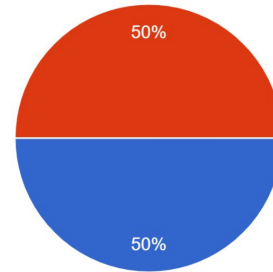
I am satisfied with the performance of the app
8 responses



Post-Test Questionnaire Results

Overall, User Interface of Application is simple and easy to use

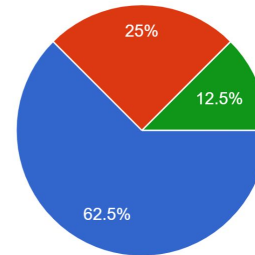
8 responses



- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

The navigation across different pages is available and easy

8 responses



- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

PG&E Energy Reducer

Credits

Scientist: Sachin Fernandes

Developers: Peter LaMantia, Patrick Seidel, Nate Allsop, Zayne Pepin,
Jack Snowden, Jack Hayes, Wes Alberg

Special thanks to PGE for providing the data.

Thank You.
Question ?