Redesign proposal of The Florida Energy Systems Consortium website @ http://floridaenergy.ufl.edu/

Objectives/purpose of redesign

The purpose of the redesign is to update the current design of the website into a modern, user friendly, content based, easily accessible responsive and mobile website.

Some things that may be taken into consideration are : company overview, target market, competition (?) and functionality.

Current Site

Accessibility Audit

Tools used: Google Chrome Accessibility Tool

In checking the homepage using the Google Chrome Accessibility tool and checking against the three conformance levels defined in the Web Content Accessibility Guidelines (WGAG) 2.) the homepage produced the following "grades".

Level A Conformance = 11
Level A AA Conformance = 14
Level A AA AAA Conformance = 17

Some of the issues are:
Home Page : http://floridaenergy.ufl.edu/

Instances of images with no attribute (5)
Presentational attributes are used instead of CSS (18)

HTML5 and WAI-ARIA landmarks are used but not all content is used(6)
Contract is not sufficient (9)
Images containing text (24)

http://floridaenergy.ufl.edu/energy-research/
Images links to do not have al text (3)

http://floridaenergy.ufl.edu/contact-us/
Non-distinguishable links (165)

Mobile Friendliness

Tools used: Google Chrome Developer Tool - Devices

Looking at the site overall, one can see that the site is not responsive for the most part. Pages do not resize, images are all the same size, some even smaller and in most pages, the font is way too small to make content readable. In some cases, content is even cut off.

Some examples:

Galaxy S5 (360x640) - text too small to read.
Portrait - text too small to read
Landscape - text not as small, seems easier to read.

Pixel 2 (411x731)
Portrait - font too small to read, footer cut off.
Landscape - font too small.

Pixel 2XL (823x411), iPhone 6/7/8 Plus (414x736)
Font too small, pages do not scroll all the way down.

iPhone X (812x375)
Portrait - font too small, pages do not scroll all the way down,.

Landscape - right side margin too wide, font a tad larger thus more readable.

<u>Performance (how quickly does it load?)</u>

Tools used: Google Chrome Developer Tools

In analyzing runtime performance on the home page (<u>http://floridaenergy.ufl.edu/</u>) we see:
Range :883ms-3.18s
Loading: 140.8ms
Scripting: 1589.9ms
Render: 57.0ms
Paint: 23.8
Other: 255.3
Idle: 234.1

The results for the web page performance test using <u>https://www.webpagetest.org/</u> for Chrome with Cable in Orlando, FL are:

First Byte Time F
Keep-Alive enabled A
Compress Transfer A
Compress Images C
Cache Static Content F
Effective Use of CDN X

Load time: 4.184 s
First Byte: 0.853s
Start render: 1.533s
Speed Index: 237

<u>Document Complete</u>
Time: 4.184s
Requests: 60
Bytes In: 1,255kb

<u>Fully Loaded:</u>
Time: 4.264s
Requests: 61
Bytes In: 1,256kb
Cost : $$

Functionality (does it work?)

<u>Top Navigation</u>
- <u>Home Page</u>
    - Facebook link works but not updated since 2016
    - Twitter link works but not updated since 2016.
    - LinkedIn link does not work but redirect to a .png image of the logo.
- Sitemap Page — the page is blank
- Footer Links - all work
- Broken links either user gets an error or pages are not updated.
- Map link positioned on the bottom of the page and in small font.

Overall the site does not feel as one cohesive site. Nor does it feel like it was made by a designer and that the layout of the site was not really thought through in terms of margins and padding . I feel it is a site designed by someone like me and by that I mean someone with minimal skills or just enough skills to produce a website.

Ease of use (is it pleasant to use?)

Not a very friendly user website overall. I feel that if the colors were more standardized and consistent the user might have a better feel on how to navigate the site. The side nav seems to be loaded with information on some pages and the to-nag bar feels empty on not used to its full potential. On some pages, there is a feeling of information overload and the content feels disorganized.

User research (who are expected users? What do they want to accomplish?)

Who - Mostly adults ages 25 and up
Employment - Either students, professionals or young professionals
Location - most likely in the southern part of the United State but national and international as well.
Background -
Education - BA/MA/PHD Degrees
Language - English but may have some non native speakers of the English language
Gender - a larger percentage of males over females (60% vs 30%)
Why use site - either to gather information, learn of industry updates, attend conferences, future employment, interest in the industry for current student
Computer Skill Level - computer literate but not computer experts
Devices used - laptops, desktops, mobile devices, tablets
Connection used - Cable, DSL, Wi-Fi,

Device support necessary (Mobile Accessibility)

Devices (no more than 5 years old)
Mobile phones - iOS , Android
Laptops - Mac, Windows
Desktops - Mac, Windows
Tablets - iOS , Android

Browsers
Safari
Mozilla Firefox
Internet Explorer
Opera
Chrome
Edge

Recommendations:

Responsiveness - the site must be made more responsive for all devices. A decision needs to be made on how this is done, choices might be using flexbox, Boostrap or Css Floats. Maybe we need to visually show how the site responds to different sizes by presenting the different break points.

Content

First we need to decide what **content** needs to be on the site and in what format and create a wireframe. Also, we need to agree on new **colors** of the site and see how the **logo** fits into that. Is there an option to change the colors of the logo? Is that a corporate decision? Once we have that we can decide on a site map and how many pages the site will have.

Another thing we need to decide on is the over abundance of **links.** Are they all necessary and if not which ones are needed to navigate the site itself?

Design -
The **font size** on headings and key points on the site need to be made larger so they can be found easier. A **new color scheme** or palette must be used to create a more cohesive site also as well as for the foreground and background colors. Also, stylistically once content hierarchy is decided some styles may be applied to make some information easier to find or stand out.

Nav

A new navigation system needs to be created. It should be quick and easy to read and users should be able to guess what they might find there, possible using single descriptive words. The primary navigation should deal with content and sections of the site and it should be

distinct from other pages on the site and consistent. Another option would be to introduce a second navigation.

Images

Images need be made all the same size and be able to be rendered in different sizes depending how the page is viewed (different size devices). Another option is to create an image gallery so as it take up less space on the site itself and make the site lighter.

Misc Items
Alt tags, links, (internal, external, etc)
Search box needs to be moved into the site.
More modern icons, make them larger as well.

DATA —- UPDATED

Two graphs will be used to show data for renewable energy production and the total electricity consumption in Florida from 190-present.

The first graph will be a curved graph and the second graph is a bar graph.

The above graph types were chosen as they both illustrate trends over time clearly and normally this is done by measuring the long term progression of an empirical statistic important to an organization such as FESC.

— UPDATE —- 6/10/2018

The graphs have been updated to reflect sourced from US Energy Information Administration web API instead of static data.

<u>Hosting and Servers</u>
Maybe it is time to think about having our own server and domain and have more control of the site instead of Wordpress and also find a team who will maintain the site should problems arise.

<u>Deliverables- each with description & acceptance terms)</u>

Week 1 Wireframe of the site with new colors applied and possible redesign of new logo

Week 2 Site map, with number of pages. Produce a suggested site map so as to decide what needs to be on the site and how many pages the site will contain. That way, it can be broken up later in pieces so at to tackle one by one.

Week 3 Font type, font size, icons. - Choose type, size colors icons. Also produce a new navigation for the site with a possible second one.

Week 4. Resize images, label and add alt tags. Also create images for various sizes (Srcset), also look at all links, make sure they are labeled properly and function.

Week 5, 6, 7, 8, 9 - Start placing content into place, once who does what pages is decided.

Week 10 - Once content is placed, present current site and test its responsiveness and await for feedback. Depending on feedback we moved ahead or backtrack or fix what was not accepted.

<u>Conclusion</u>

As one can see the site needs to be completely redesigned. There is a lot of work to be done but mainly decisions must be made for now and for the future in terms of maintaining the site.