

Florida Energy Systems Consortium: Redesign proposal

1. Objectives/purpose of the redesign:

The site is outdated and in need of modernization to improve user experience, increase site visits, comply with accessibility standards, promote FESC contributions, and elevate user impression of FESC integrity. At a minimum, the following areas should be addressed:

- Implement responsiveness features to increase mobile-friendliness and to support use of multiple devices and browsers
- Reduce loading times for pages, images, videos, and hyperlinks by optimizing images and correct coding errors in HTML, CSS, and JavaScript pages and use of linking styles and script to external pages
- Add accessibility elements to comply with IT accessibility laws and policies of US Section 508 and related laws
- Modernize user interface to eliminate information overwhelm and confusing navigation, and promote intuitive browsing
- Eliminate redundancies by consolidating pages and summarizing extensive text
- Optimize key terms and create linking partnerships with consortium members to boost search engine results
- Routinely ensure site information is current and links and redirects remain viable

2 . State of the current site

2a. Accessibility audit

Home page accessibility test run through a 508 checker (tenon.io), results here:

<https://tenon.io/testNow.php?url=http://floridaenergy.ufl.edu>

to quick test for accessibility concerns. Thirty high priority errors were located on one page alone, such as images missing an 'alt' attribute or links pointing to images, 'heading' and other elements left blank, links missing text, and other code language flaws which are a detriment to screen readers and those with limited dexterity or disabilities.

Additionally, fonts and colors do not comply with accessibility standards. Nor, does menu navigation. Hyperlinks in annual report section are not underlined (titles are which is confusing to users and raises accessibility concerns) and not all documents are in PDF format.

More information regarding standards can be found here:

<https://www.section508.gov/manage/laws-and-policies>

2b. Mobile friendliness

The site is unresponsive to adjustments on standard computers and current design is not friendly or aesthetic on mobile devices. It is difficult to navigate on smaller screens, especially without aid of a mouse. Modernizing responsiveness and design is imperative to improve user

experience and retain visitors. The use of tools such as Bootstrap templates will address these deficiencies.

Eliminating site redundancies, optimizing images, reducing text, and improving performance will add to mobile-friendliness of the site. Simplifying navigation and site mapping, and ensuring navigation is designed with mobile users in mind will improve the experience.

2c. Performance

Home page performance test run (webpagetest.org), results here:

https://www.webpagetest.org/result/180714_T3_b32b7ae662282a5ec486ae9973016742/

Results includes an analysis of 25 page images which scored between “A” and “D” with the average of “B” (“good”) noting negative results were identified primarily in header and logo images.

Performance review also indicates significant “failed” and “warning” results for compress images, progressive JPEGs, leverage browser caching of static assets, and effective use a CDN for all static assets. The site scored well for keep-alive enabled and compress transfer. Addressing coding shortfalls, image shortcomings, and accessibility concerns will improve performance.

2d. Functionality (does it work?)

Some links (e.g. LinkedIn and email) do not work, some images are distorted and inconsistent in size, tone, and style, and some hyperlinked pages are out of date (e.g. Facebook and Twitter are old news, and conference information on home page is stale.)

The low accessibility and mobile-friendliness scores limit functionality for some users as indicated above. Site links are not intuitive as they are not underlined or in traditional ‘hyperlink blue’.

The home page code was filtered through validator.w3.org for html and Jigsaw.w3.org for css. HTML errors numbered 34 and there were 15 CSS warnings on just one page which is indicative of the need to revamp code throughout the site to correct numerous invalidations.

2e. Ease of use (is it pleasant to use?)

The dated site shows its age in overall design and responsiveness, and accessibility and mobile-friendliness shortcomings. The site is dense with information and can overwhelm users. The navigation is not intuitive and site mapping overly complex.

Adding interactive elements to the site, such as Google maps and directions, videos, and consolidating consortium partnership information and reference materials along with updating images or using a carousel will aid in simplifying the site.

Nonfunctional links, clumsy navigation, lengthy text, dated news, and nonstandard images will prompt users to abandon site. Correcting these deficiencies will retain visitors and aid in promoting the integrity of FESC.

3. Device support necessary

- Desktops and laptops with standard and large sized screens
- Mobile devices such as phones and tablets
- Various browsers such as Chrome, Edge, Firefox, Safari, and other common/popular browsers
- Various operating systems, such as Windows, iOS
- Design considerations for mobile users to minimize paid data network usage

4. Recommendations for improvement (in no particular order)

- Correct deficiencies identified in performance and accessibility audits
- Meet minimum Section 508 standards
- Modernize site to accommodate various browsers and devices
- Optimize discoverability by search engines
- Implement front-end design framework
- Separate styles and JavaScript by linking from HTML to external files
- Correct invalid code throughout
- Optimize images and ensure consistency in format
- Correct hyperlinks
- Keep news and resources current/up-to-date/fresh and consolidate/organize older resources
- Update user interface to a minimalist aesthetic
- Edit text down to pithy page summaries, eliminate redundancies and circular navigation
- Re-evaluate stakeholders, user stories, and deliverables to establish an overall theme and tone for the site
- Identify the “brand” or “personality” the site should convey and how this transfers into its presence in other media, such as Facebook, Twitter, YouTube, etc.
- Develop style guide for colors, fonts, page design/format, and language/editing to ensure consistency throughout site
- Document page analytics to determine popular hits by page and users to better serve/appeal
- Proofread/edit site text for grammatical, spelling, formatting, and other errors and inconsistencies