Florida Energy Systems Consortium

Website Redesign: Research and Plan

# Project Purpose (Objectives)

The Florida Energy Systems Consortium (FESC) plays a key role in the development of efficient forms of energy generation, distribution and consumption. The consortium pulls the expertise of Florida’s preeminent state universities. The universities are then working towards a shared vision for the State of Florida with minimal duplication of efforts. Since the consortium and its member universities are publicly funded they need make their findings readily available to fulfill their public promise.

While public lectures, new articles and press releases are one way to disseminate information, in internet age there is usually no better way to communicate with the public than a website. Not all websites are created equal, however. A poorly designed website can be difficult to navigate and in turn obscure the intent of the website and the message its authors are trying to convey. A poorly designed website reflects poorly on the authors of the site which can affect public opinion.

Unfortunately, the FESC website (<http://floridaenergy.ufl.edu/>) does not comply with industry best practices for web design. The design issues with the site will be addressed in more detail in the following sections but in summary the site is not accessible to user with disabilities, it does not scale with the size of the display and it is not easy to navigate. It is imperative that the website undergo a significant overhaul to make it available to a wider audience. As it stands individuals that require screen reader assistance cannot interact with significant portions of the site and visitors on mobile devices will have a difficult time interacting with the site.

Therefore, the purpose of this redesign is to first ensure that the FESC website complies with best practices for accessible and mobile design. This will ensure that all Florida tax payers can view the information and research that their tax dollars helped fund. Second, site navigation will be streamlined to facilitate user access and reduce the time spent looking for information. Load times also need to be reduced on the site. Given the content on the site many of the pages load far too slowly and the website or backend server will need to be upgrade to improve response times during site navigation. Finally, a consistent branding is needed for the website to improve site readability.

# State of the Current Site

* Accessibility (https://achecker.ca/checker/index.php)
  + Checked three pages
    - <http://floridaenergy.ufl.edu>
      * 45 known problems and 238 potential problems
      * No alternate text for images
      * Poor color contrast in nav bars
      * No label text in form inputs
      * Items not clearly separated from background
    - <http://floridaenergy.ufl.edu/florida-energy-facts/>
      * 99 known problems and 219 potential problems
      * No alternate text for images
      * Poor color contrast in nav bars
      * No label text in form inputs
      * Items not clearly separated from background
      * Replace bold elements with em or strong
      * Misused p tags (should be h3-h5)
      * Minimize screen flicker
    - <http://floridaenergy.ufl.edu/fl-energy-industry/>
      * 46 known problems and 255 potential problems
      * No alternate text for images
      * Poor color contrast in nav bars
      * No label text in form inputs
      * Items not clearly separated from background
* Mobile friendliness
  + Checked the same three pages (same problems on all three)
  + Horizontal scroll on tablets and mobile devices
    - Some elements resize but not all
    - Impossible to read text on smaller devices
  + Layout is not consistent at anything other than max size
  + Elements overlap at smaller scales
  + Hard to interact with the site
* Performance
  + Optimize images
  + Move scripts and css to the bottom of the page (render blocking)
    - Minify css and js
  + Server infrastructure (.64 second response time)
  + Leverage browser caching
  + Over 4 seconds to fully load from Orlando text location
    - Images, youtube and js are the main culprits
* Functionality and Ease of Use
  + Download brochure does not work
  + Navigation works as far as I can tell but it is confusing (two different bars)
  + Other links all seem to work
  + Mobile devices will have difficulty navigating the site
  + Poor color contrast
  + Link to twitter is in page navigation
  + LinkedIn goes to a picture
  + Not clear how to sign up for newsletter
  + General poor layout and design (too much to comment on)

# User Research

* Scientists
  + Looking for research papers
  + Peer review and sourcing for papers
  + Different university efforts / collaboration
* Students
  + Research papers
  + Internships?
* Florida Residents
  + Overview of what the group does
  + Quick info
  + How they can get involved
* Policy makers and government officials
  + How the research informs public policy
  + How grant money has been spent

# Device Support

* Mobile and Desktop