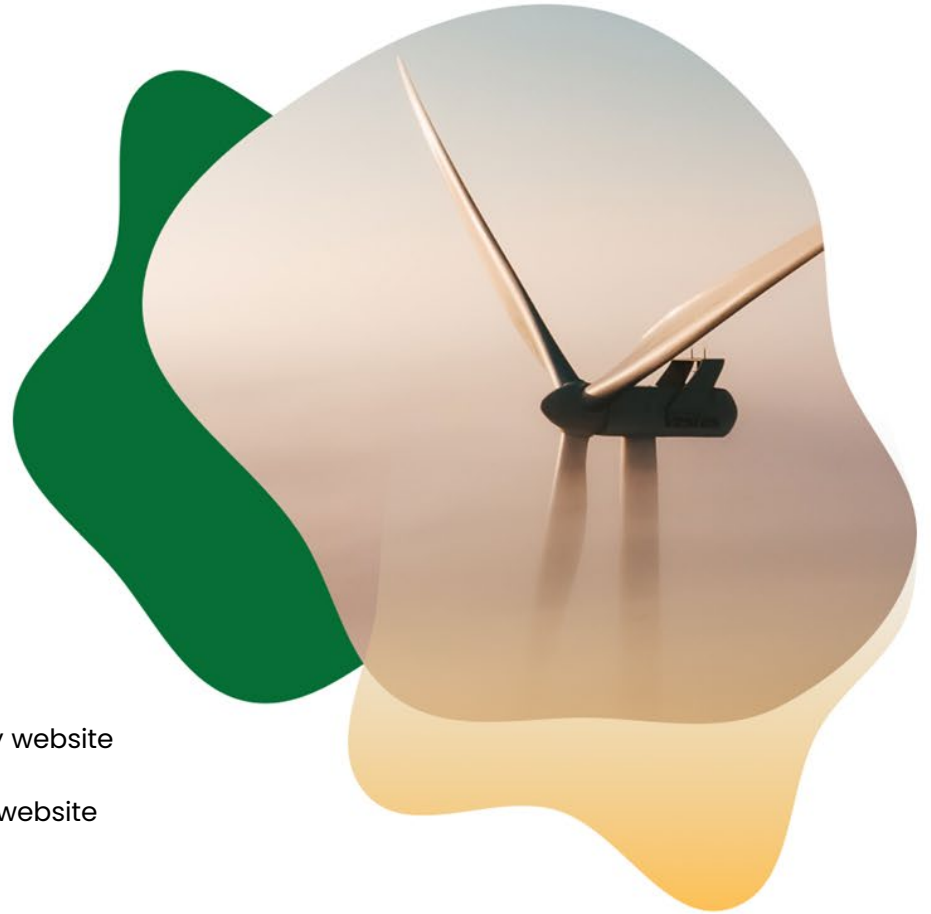




U.S. DEPARTMENT OF **ENERGY**

- **THE PROBLEM:**
Improve the usability of the U.S Department of Energy website
- **THE SOLUTION:**
Conduct a user research and redesign a responsive website
- **MY ROLE:**
UX and UI Designer
- **TOOLS:**
Figma, Miro, Invision



PROTO-PERSONA



Steven Hayes

51 Years Old
Investor

Likes: Moderately tech savvy
Always buys the latest gadgets
Drives a hybrid

Personality: Work is important,
as is moving up in career.
Enjoys the outdoors, golfing.
Occupation: Financial Advisor
Relationship: Married

Goals

- Looking for renewable energy options for his home
- Wants to know if laws/regulations would impact investments
- Tax write-offs for renewable energy

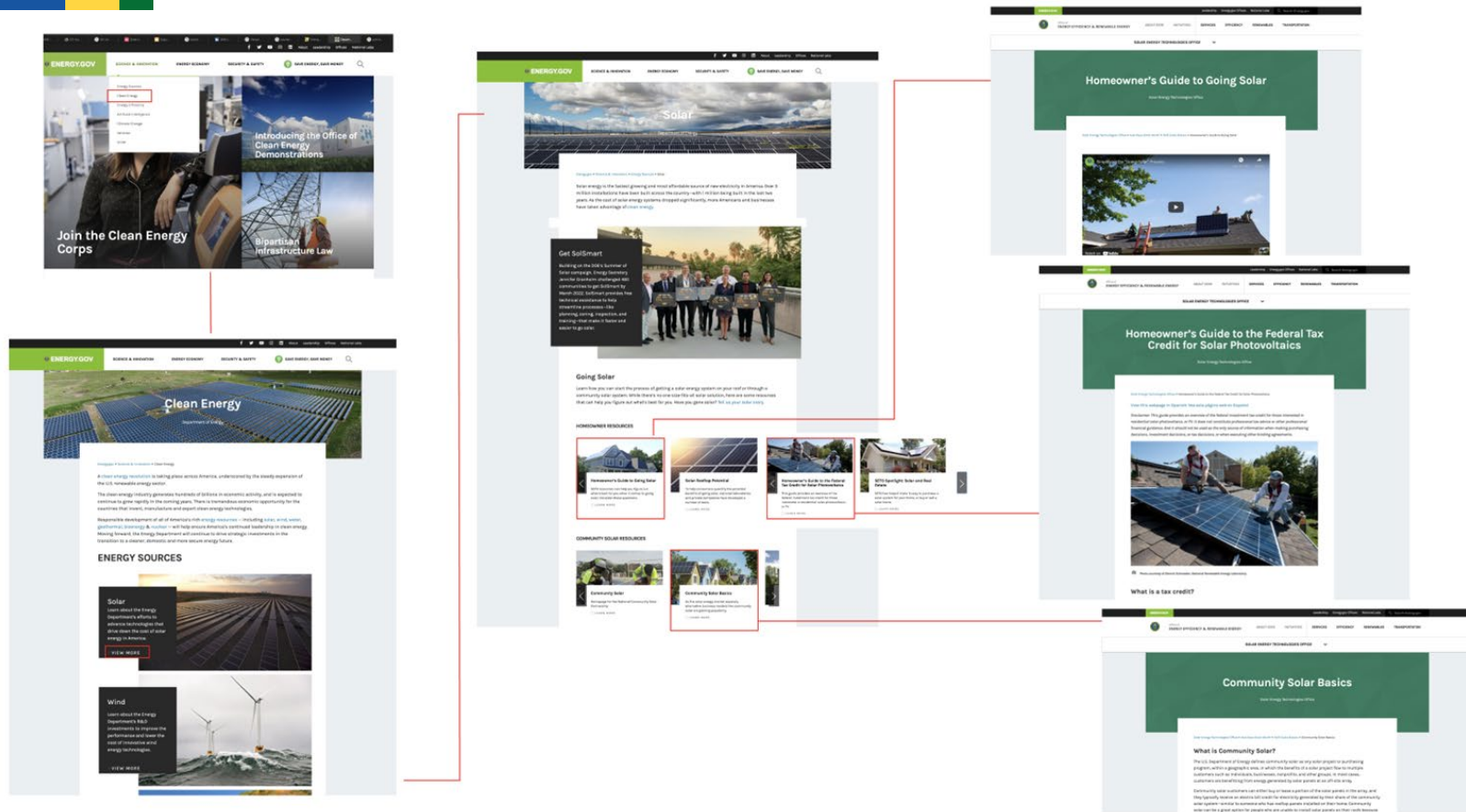
Pain Points

- Doesn't like sifting through a large amount of information to find things
- Resources that are over-complicated

Potential Solutions

- Organization
- Important information highlighted on main page

User Path



User Tests

We continued our research by having 5 individuals test the current Department of Energy's website. They had 3 tasks to complete as defined by our specific user path.

We took notes on the user's pain points as they navigated the site.

User Testing Pain Point Notes

USER 1

Energy Economy
Hard user to
assume he
would find
prices

Thought that user
energy use
money should be
for business
resources

Never
scrolled
down the
home page

Confused why
the 3 main
images are the
main topics

When looking to
see clean, solar
energy - more
about the end
user didn't get
back to home

Confused by
energy saver
terminology

Got stuck in
DEER couldn't
find page for
energy.gov

Term - economy
as user would
be confused
there confusing

Save energy,
save money -
thought this
section was
about money

Did user think
economy had
anything to
do with
energy?

User didn't
notice
search

Didn't want
to read lots
of text

User stated
"I don't
know where
to go"

USER 2

Didn't know
where to
start

Used search
bar

Wasn't clear
that it was
a gov't site

Didn't feel she
could use the
site to input
her information

Clicked
around
often

Confused
by navigation
headers

emblem
too small

wondered
"who is this
information
for"

"I guess this
is where I'd
go"

Took long
to find
pages

Didn't find
the specific
page she was
looking for

USER 3

Found the
"Solar"
Energy
page easily

Found the
"Community
Solar farm"
page easily

Confused
between "Save
energy use
money" and
"economy"

Clicked the
menu for
Energy
Economy

Clicked
"Prices and
Trends"

Went back
to the clean
energy
pages

Didn't scroll
down the
home page

Save energy
save money
looks like a
button

USER 4

Wishes
navigation
bars were
colored to show
the user is

Clicked on
drop down
menu to view
full options

Found
information
relatively
fast

Not entirely
sure where
to begin

Utilized the
back
button

Confused
by the
amount of
information

skipped
over bulked
info

tried to
click home
to search
again

wanted to
use search
bar instead
of nav menu

Used ctrl
+ F to find
key word

confused
by
jargon

unable to
find home
page

USER 5

Typed Solar
Panels in
the search
box

Not satisfied
with the
search
results

Went to
"Science and
Innovation"
and "Energy
Efficiency"

Clicked on
Energy and
Innovation
and found more
information on
solar panels

Found nothing
about economy
solar panels
didn't save
money and
energy

User used
the search
bar for the
second time

Found an
2014
PDF

Went back
to the
Clean
Energy

Old articles
in the
search
results

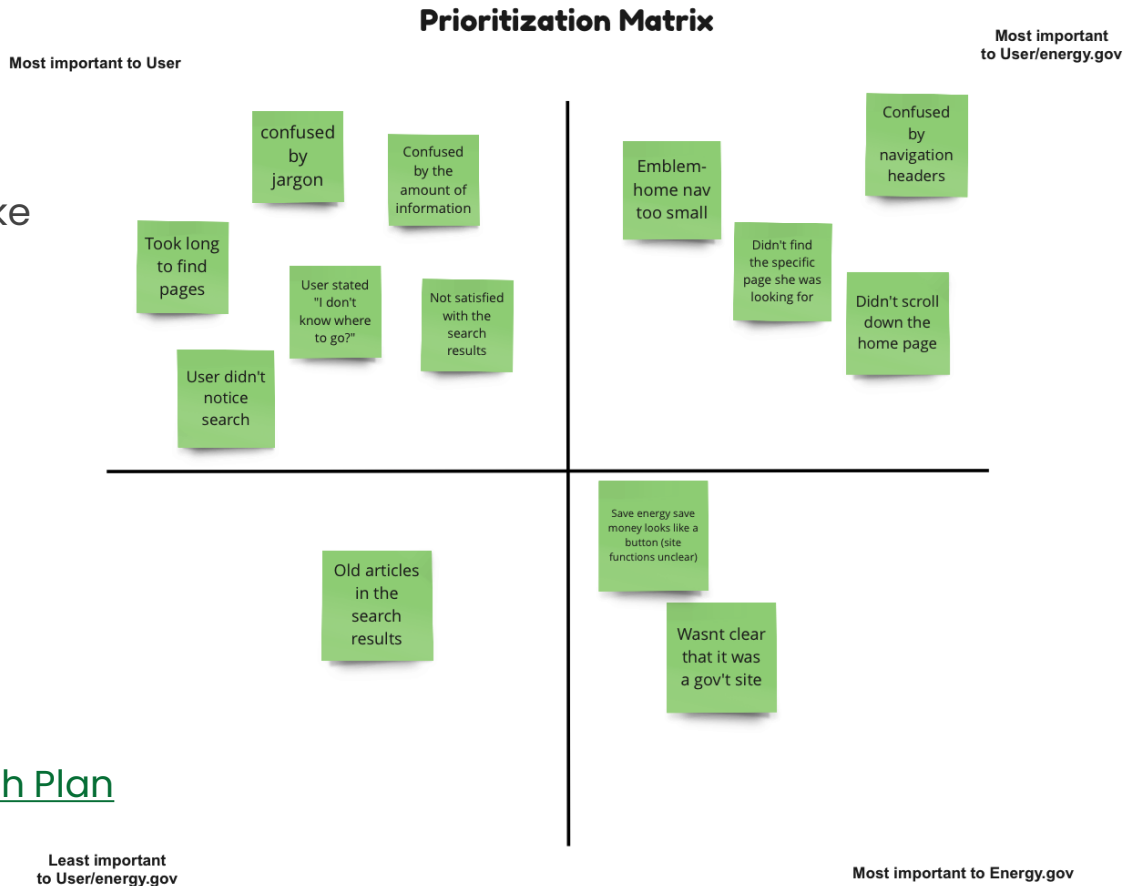
User Tests

After organizing our user's pain points and grouping them into like categories, we organized important points on our prioritization matrix.

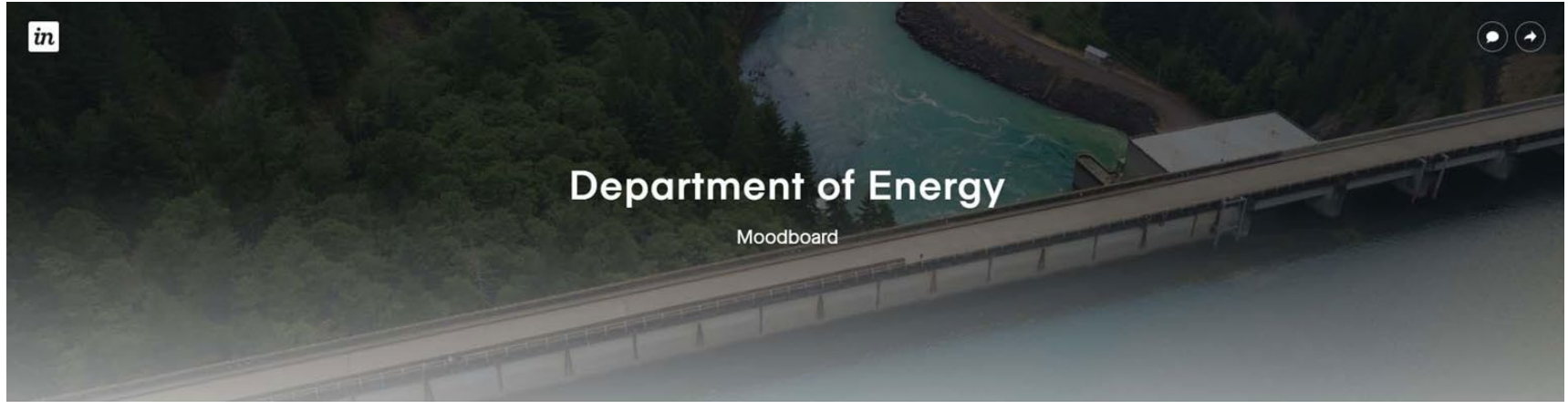
We decided that improving the pain points that were most important to both the Dept. of Energy and our users would end up improving most of the points on the prioritization matrix.

Link to: [Energy.gov-User Research Plan](#)

Link to User [Test records](#)



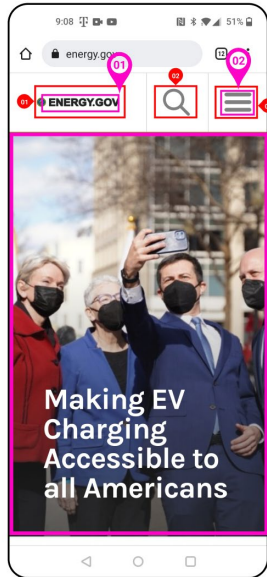
Moodboard



[Moodboard Link](#)

Redline and Annotation of the Navigation

Mobile Homepage



Redline Annotations

01 Logo/Home Button

In mobile form, it is easier to tell that this is a button to bring you to the homepage. However, just like the desktop version, it could be a little clearer that it is a home button. For instance, we would consider changing the wording from "Energy.gov" to just "Home" for clarity.

02 Hamburger Menu

Making the main navigation accessible through a hamburger menu is necessary to make sure what page the user is on is as clear as possible. However, making the design a bit more colorful to fit the color scheme of Energy.gov makes sense. We might find the way that the information is consistent and accessible across all platforms.

03 Image Hierarchy

With both the desktop and the mobile version the eye is immediately drawn to the large images that take up the most content of the page. The energy user may not be the logic understanding and decrease the image size of the entire page about the risk, the user doesn't always know they can scroll down for more (and sometimes more interesting) information. We would change which items have hierarchy to be more engaging for the user.

01 LOGO/HOME BUTTON

LOGO WAS WHITE ON GREEN BACKGROUND (DESKTOP)

02 SEARCH BUTTON

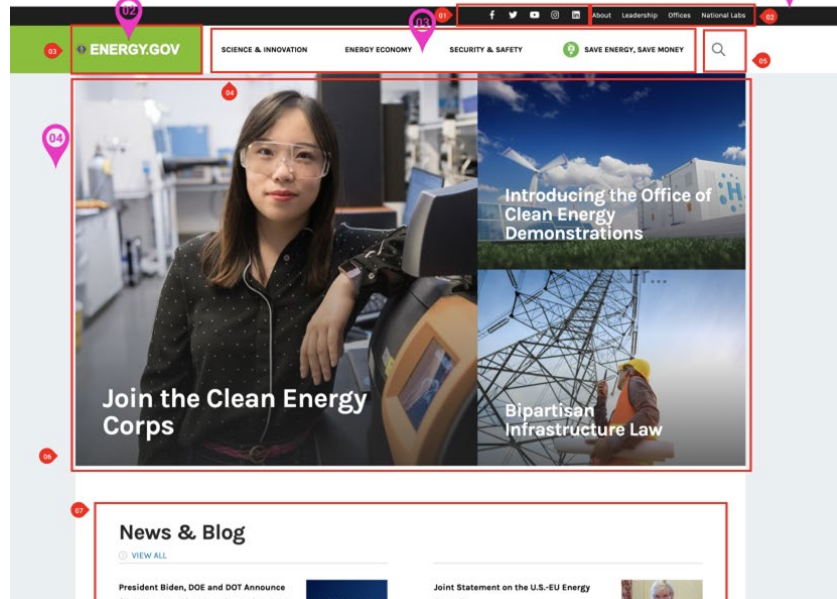
The magnifying glass icon is more prominent in the mobile version of the website.

03 HAMBURGER MENU

A clear way to represent the main navigation. It is also a good idea to add icons with the user to make what page they are viewing.

© 2021 The Energy Service. A U.S. Inc. All Rights Reserved.

Desktop-Heuristics-Homepage



Redline Annotations

01 Social Media & Supplemental Nav

These are often overlooked because of placement, they could move to footer. Social media icons don't need to be featured, keep these only in footer.

02 Energy.gov Homepage

Make it more obvious this is the main page! Drop Logo. Prioritized update.

03 Main Navigation

Categories are confusing to users, remove & reorganize. Prioritized update.

04 Website card - main images

3 main images take up the whole screen, users are not aware there is more to scroll and see on the page. Why are there the 3 most important articles? Prioritized update.

01 Social Media

Social media icons can also be found in the footer. These are placed above energy.gov, but in the right of the screen, as they are often overlooked or forgotten.

02 Supplemental Navigation

About energy.gov. Links to heads of National Heads of offices. List of offices and national labs.

User Tests on Navigation

We then did a new round of testing on 3 individuals specifically geared towards discovering the pain points they experience with the navigation on the website.

We had two individuals test the desktop navigation and 1 test the navigation on the mobile phone.

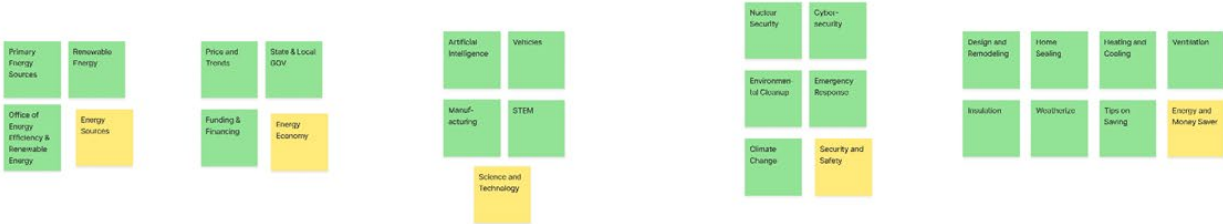
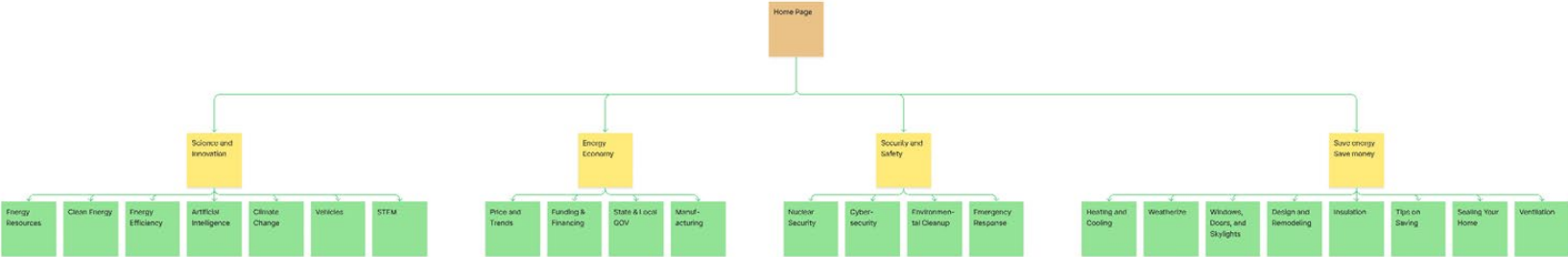
Both provided ample need for improvement in the user experience.

See our prioritization notes [here](#)

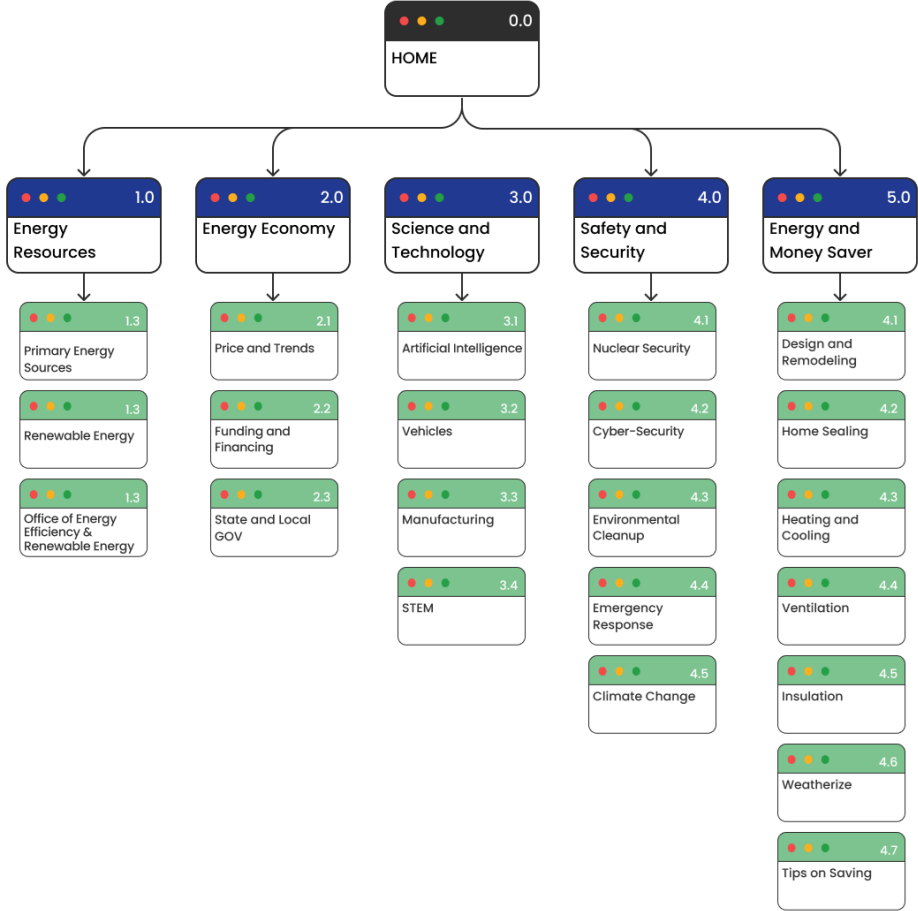
User Navigation Testing Pain Point Notes

USER 1 - Desktop	USER 2 - Desktop	USER 3 - Mobile
confused by main nav wording	Checked each section for topic	clicked hamburger menu often in mobile
ignored black top nav	Navigated from left to right	frustrated by mobile main nav
searched for topic by hovering over main nav options	Found environmental cleanup secondary nav	drop down options in main nav hard to find on mobile
only saw what was above the fold at first	Selected the first article labeled clean up sites	clicking main nav topic takes you to different place than arrow
didn't know to click on "view more"	Selected energy.gov when navigating to home page	nav headings do not make sense
couldn't open the article by clicking the picture	Hovered over first drop down and found topic	photos with headings do not make sense
didn't understand jargon used	Scrolled through articles and found correct topic	home button not very clear
didn't see an easy way to return to home because button not clear	User thought clean energy sources would be under energy economy or security & safety	inconsistent "subtopics" near the bottom of each page
didn't think the headings were logical	Thought science and innovation would include new science not current science	

Card Sorting



Improved Sitemap



[Link](#)

New Header/Footer Navigation

LOGO

[Energy Sources](#)[Energy Economy](#)[Science & Technology](#)[Security & Safety](#)[Energy & Money Saver](#)

Search

LOGO

[Energy Sources](#)[Energy Economy](#)[Science & Technology](#)[Security & Safety](#)[Energy & Money Saver](#)

Search

LOGO

Search

Energy Sources

Energy Economy

Science & Technology

Security & Safety

Energy & Money Saver

U.S. DEPARTMENT OF ENERGY

1000 Independence Ave. SW
Washington DC 20585
202-586-5000

ABOUT DOE

WEBSITE RESOURCES

OFFICES

Follow us

f

t

in

y

LOGO

1000 Independence Ave. SW
Washington DC 20585
202-586-5000

ABOUT DOE

History
Careers
Contact

WEBSITE RESOURCES

Inspector General
Privacy Program
Small Business
Staff & Contractor
Resources

OFFICES

Science
Nuclear Energy
Loan Programs Office
Legacy Management

Follow us

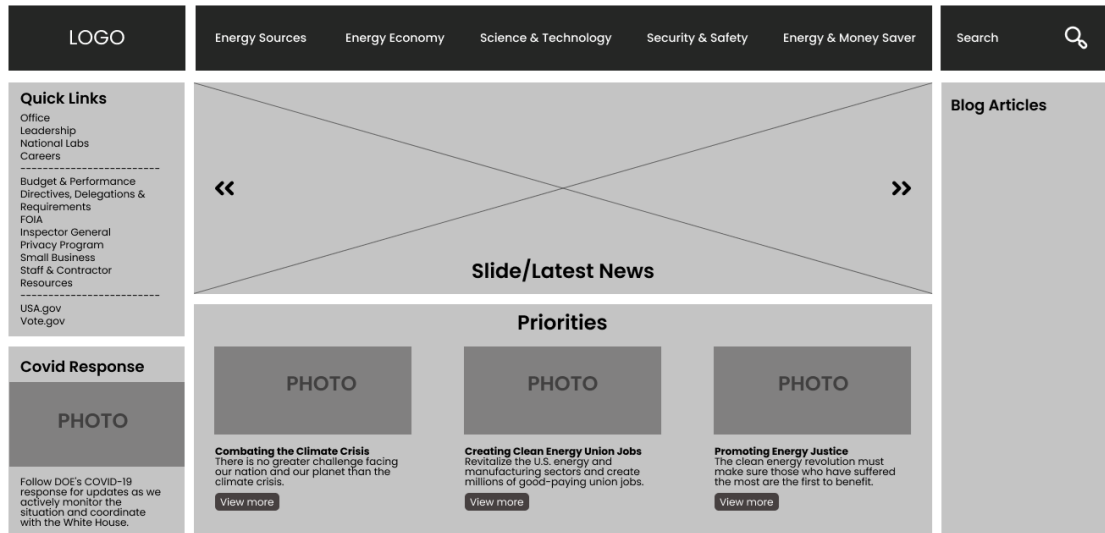
f

t

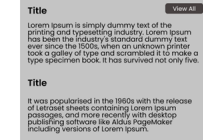
in

y

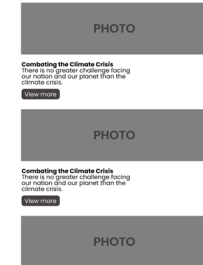
Wireframes



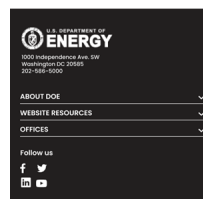
News & Blog



Priorities



Covid Response

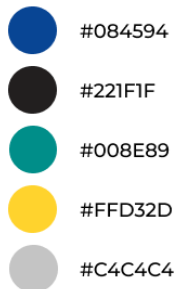


UI Tile

LOGO



COLORS



TYPOGRAPHY

Aa Poppins

Aa Poppins

Paragraph

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged.

ICONOGRAPHY



IMAGES



BUTTONS



Figma Prototype



[Desktop](#)

[Mobile](#)





U.S. DEPARTMENT
OF ENERGY

Energy Resources

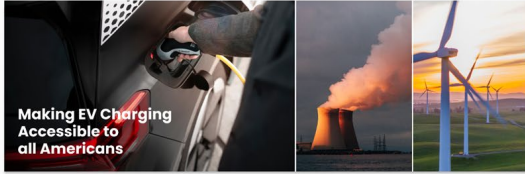
Energy Economy

Science & Technology

Safety & Security

Energy & Money Saver

Search our website



**Making EV Charging
Accessible to
all Americans**

Priorities



Combating the Climate Crisis

There is no greater challenge facing our nation and our planet than the climate crisis.

[Learn more](#)



Creating Clean Energy Union Jobs

Investigate the U.S. energy and manufacturing sectors and create millions of good-paying union jobs.

[Learn more](#)



Promoting Energy Justice

Resilient energy resiliability must make sure those who have suffered the most are the first to benefit.

[Learn more](#)

Coronavirus Response

Follow DOE's **COVID-19 response** for updates as we actively monitor the situation and coordinate with the White House.



News & Blog



DOE Awards \$36 Million to Reduce Waste from Advanced Nuclear Reactors

March 16, 2022



Statement by Secretary Granholm On President Biden's Nomination Of Dr. Evelyn Wang

March 9, 2022



U.S. Secretary of Energy Jennifer M. Granholm Holds The First Net-Zero Producers Forum Ministerial in Houston

March 9, 2022



DOE Projects Zero Emissions Medium- and Heavy-Duty Electric Trucks Will Be Cheaper Than Diesel Trucks by 2032

March 7, 2022

[View All](#)



Energy Resources

Energy Economy

Science & Technology

Safety & Security

Energy & Money Saver

Search our website



Image by Thomas & Innovation

Solar energy is the fastest growing and most affordable source of new electricity in America. Over 3 million installations have been built across the country—with 1 million being built in the last two years. As the cost of solar energy systems dropped significantly, more Americans and businesses have taken advantage of clean energy.

Get SolSmart

Building on the DOE's Summer of Solar campaign, Energy Secretary Jennifer Granholm challenged 450 communities to get SolSmart by March 2022. SolSmart provides free technical assistance to help stream the process—the planning, zoning, inspection, and training—that make it faster and easier to go solar.



Going Solar

Learn how you can start the process of getting a solar energy system on your roof or through a community solar system. While there's no one-size-fits-all solar solution, here are some resources that can help you figure out what's best for you. Have you gone solar? Tell us your solar story.

Community Solar Resources



Homeowner's Guide to the Federal Tax Credit for Solar Photovoltaics

ETO resources can help you figure out which best for you when it comes to going solar.

[Learn more](#)



Solar Rooftop potential

To help consumers quantify the potential benefits of going solar, national laboratories and private companies have developed a number of tools.

[Learn more](#)



Homeowner's Guide to the Federal Tax Credit for Solar Photovoltaics

This guide provides an overview of the federal investment tax credit for those interested in residential solar photovoltaics or PV.

[Learn more](#)



ABOUT DOE

History
Contact

WEBSITE RESOURCES

Product Program
Small Business
State & Community
Resources

OFFICES

Science
Business Energy
Loan Programs Office
Regional Management

Follow us

f t y



Energy Resources

Energy Economy

Science & Technology

Safety & Security

Energy & Money Saver

Search our website



Image by Thomas & Innovation

A clean energy revolution is taking place across America, underscored by the steady expansion of the U.S. renewable energy sector.

The clean energy industry generates hundreds of billions in economic activity, and is expected to continue to grow rapidly in the coming years. There is tremendous economic opportunity for the countries that invest, manufacture and export clean energy technologies.

Responsible development of all of America's rich energy resources—including solar, wind, water, geothermal, biomass, and nuclear—will help ensure America's continued leadership in clean energy. Moving forward, the Energy Department will continue to drive storage investments in the transition to a cleaner, domestic, and more secure energy future.



Solar

Learn about the Energy Department's efforts to advance technologies that drive down the cost of solar energy in America.

[Learn more](#)



Wind

Learn about the Energy Department's commitment to research, develop, and deploy advanced wind energy technologies.

[Learn more](#)



Water

Learn about the Energy Department's commitment to research, develop, and deploy advanced water energy technologies.

[Learn more](#)



Geothermal

Geothermal energy is heat energy in the earth. Learn about the Energy Department's efforts to research, develop, and deploy advanced geothermal resources into domestic markets.

[Learn more](#)



Bioenergy

Learn how the Energy Department is working to research, develop, and deploy advanced bioenergy resources into domestic markets.

[Learn more](#)



Nuclear

Fuel cells offer a highly efficient means to generate electricity. They clean produce power and heat with low or zero emissions.

[Learn more](#)

Related Link

ENERGY
Office of
Energy Efficiency
& Renewable Energy

LPO
Loan Programs Office

arpa-e
Advanced Research
Project Agency



ABOUT DOE

History
Contact

WEBSITE RESOURCES

Product Program
Small Business
State & Community
Resources

OFFICES

Science
Business Energy
Loan Programs Office
Regional Management

Follow us

f t y

Prototype

Figma File

Hi-Fi Design (Mobile)

Figma File

Prototype

