

## Technical Report

- **Domain Name**

[Energenius.me](https://Energenius.me)

- **Motivation**

The energy decision for each resident is critical to the environment, economics and even security for the whole society. Nowadays with relatively abundant energy resource, the public rarely realizes the impact of excessive use of specific energy might have on the future.

Our website aims to provide clean data to help each person to make a better decision on their energy consumptions. We will quantify the environmental impact of most new and traditional energies, and advise the public on using and saving energy for different purposes. With the educational mission, the website will provide insights into the development of future energy to inspire more civic engagement and achieve energy reform.

The future quality of life is dependent on today's energy use. Improving public awareness of energy reform is essential for building a better future. We hope to increase people's concepts of power by developing this web application to impact our world in a good way.

- **RESTful API**

Energy General Info:

<https://openei.org/services/>

Educational Video:

<https://developers.google.com/youtube/v3/docs/>

Emission Data:

<https://www.programmableweb.com/api/nrel-emissions>

EIA's Pricing Data:

<https://www.eia.gov/opensdata/>

Scientific Information:

[https://en.wikipedia.org/api/rest\\_v1/](https://en.wikipedia.org/api/rest_v1/)

Energy Consumption of the US:

<https://data.worldbank.org/indicator/EG.USE.ELEC.KH.PC>

Image Data:

<https://developers.google.com/image-search/v1/jsondevguide>

- **Models**

1. **Energy Category:** type, safety, environmental impact, development history, geo-distribution
2. **Production and Usage:** type of use, price, production technique, technical limits, undergoing research, public advice
3. **Country of Consumption:** country, major consumption, undergoing reform, history progression, policy

- **Tools**

**Front End:** Bootstrap

**Back End:** Google Platform App Engine

**Restful API:** Postman

**Cloud Service:** Google Cloud Platform (GCP) - App engine

- **Hosting**

The domain name “energenius.me” was registered on February 26th, 2019 through namecheap.com. The website is using the Google Cloud Platform service. More specifically, the PaaS, app-engine is our main service on GCP. After we create the project, we customize the domain main to the “energenius.me” by adding the record file in the DNS setting. The SSL certificate is managed by Google when we finish customizing the domain name. Lastly, we install the Google Cloud SDK to handle our project locally and deployment. After we initialize the configuration of the project, the only thing to develop the front-end web page and deploy.

- **User Stories**

Our group is the customer of the website: [perfectfitfor.me](https://perfectfitfor.me). After careful reviewing of their purpose and social engagement factors, we created five user stories as follows:

**1. The Job Model Description**

In each job page, there is only a few information such as location, update time and job type. As a customer, I hope to see some more information to describe this job. Also, if you could make one more instance, the company will make more sense. So how many companies in this city. The transportation between companies or something like that.

**2. Mobile Version has not been compatible yet**

Images are presented in strange size. The menu and dropdown list on the mobile failed to load in the correct format. As a mobile user, I would like to have the mobile version of the website working so that I can access the data more flexible.

**3. Ununified Block Sizes in About Page**

The block such as "about our site," "about our data," and the toolbox block are in different sizes. The uniform block size on the same page will be visually pleasing to the users. As a user, I would like to see a simple and straightforward website so that I can obtain as much information from the page.

**4. The transportation page formatting**

The transportation page should have a better image format. As a customer, I want to make it in excellent order and organized so that I can proudly recommend this website to other groups.

**5. Dropdown button leads to error**

As a user, I would like to see more options on your home page. Maybe implement this dropdown feature to each of the three model buttons. And the dropdown could display some attributes?

Our website received several suggestions from group 15. We have solved all the issues at this time. The suggested user stories and our comments are as follows:

**1. Search button doesn't work yet**

**Developer Comment:** We will implement the search function as soon as we are transparent with our data managing. We estimate the search will take about two days to be implemented.

**2. Some pages on mobile require side scrolling to view**

For example, the residential page has a pie chart that can be more easily viewed if compressed to proper screen size.

**Developer Comment:** We will probably replace the static pie chart with a dynamic pie chart that will update according to the fetched data. We also haven't adjusted our website for the mobile browser; as our development progressing, the website will be more refined and compatible.

**3. Images in the Auto-scrolling use some auto-scrolling**

Since the images in the home page are only for aesthetics, there is no particular need for a user to click through. Auto scrolling the images would look nice.

**Developer Comment:** I believe our website is using auto-scrolling. The issue is the auto-scrolling process is taking too long. We will decrement the time to auto-scroll the images in our front-end.

**4. Tab name "Production and Usage" is switched in sublinks: "Usage and Production"**

For example, <https://www.energenius.me/country/china.html>

The top bar says "Production and Usage", but the sidebar says "Usage and Production," though they are meant (I assume) to refer to the same category.

**Developer Comment:** The inconsistency in our category bar is annoying. We have already fixed the difference along with some typos and grammar issues. Thank you for the advice.

**5. Home button leads to a 404**

**Developer Comment:** We have noticed this issue and have already fixed this bug from our backend side. Thank you for letting us know.

- **Group Member**

**Yige Wang, Pengdi Xia, Shijing Zhong, Wenyuan Wu, Yaoyang Liu**

(Contents above has been checked by Grammarly)