

**CANVA LINK (PROPOSAL):**

[https://www.canva.com/design/DAGz9\\_Vaw/n0hpowKZWf547EYI-2DZlq/edit?utm\\_content=DAGz9\\_Vaw&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAGz9_Vaw/n0hpowKZWf547EYI-2DZlq/edit?utm_content=DAGz9_Vaw&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

**WAREHOUSE IDEA 1: Philippine Energy Mix & Weather**

- Renewable Electricity Data World Bank
  - XML format
  - Data from 1990 - 2021
  - The possibility to compare with other countries as well
  - <https://data.worldbank.org/indicator/EG.ELC.RNEW.ZS>
- Power Generation by Fuel Source
  - CSV format
  - Data from 1990 - 2020
  - Describes Generation in GWh
  - <https://data.gov.ph/index/public/resource/power-generation-by-fuel-source,-1990-2020/power-generation-by-fuel-source,-1990-2020/0okfrshp-s8xr-0usb-xami-n8lhi22vxaxb>
- Average Mean Surface Air Temperature
  - CSV format
  - Data from 1991 - 2020
  - Air Temperature + Precipitation
  - <https://climateknowledgeportal.worldbank.org/country/philippines/era5-historical>

## **REPORTS & VISUALIZATIONS:**

1. Energy Mix Comparison with Other Countries
  - **WHY:** Compare the Philippines' sustainable energy mix with that of neighboring countries over time
  - **HOW:** Group By Country and Year
  - **VISUALIZATION:** Line Chart
  - **INSIGHT:** Identify if the Philippines is progressing faster/slower compared to neighboring countries
  - **DATASET used:** Renewable Electricity World Bank
2. Green Energy Generation vs Weather (could be for each type of green energy, e.g. Water, Wind)
  - **WHY:** Identify if there is a relationship between the weather and energy generation in the Philippines
  - **HOW:** JOIN on year
  - **VISUALIZATION:** Scatter or Line plot
  - **INSIGHT:** Identify correlations between weather and energy for more efficient use.
  - **DATASETS used:** Philippine Energy Mix and Average Mean Surface Air Temperature
3. Seasonal Energy Patterns
  - **WHY:** Identify patterns in energy generation and how they vary between wet and dry seasons
  - **HOW:** JOIN on year GROUP by fuel type
  - **VISUALIZATION:** Heat map (?)
  - **INSIGHT:** Identify the relationship between seasons and energy generation, allowing for new insights in balancing grids
  - **DATASET used:** Average Mean Surface Air Temperature
4. Trends in Renewable vs Non-Renewable Energy Sources in the Philippines (2000 - 2020)
  - **WHY:** To evaluate the evolution of the Philippines' Energy Mix. It also highlights the country's changing reliance on various energy sources over a decade of development.

- **HOW:** Categorize the energy sources. Utilize Group By and Aggregate for the values.
- **VISUALIZATION:** Stacked Line Chart (line for each energy source)
- **INSIGHT:** Observe key trends about the country's energy strategy and usage. Identify which type of energy the country utilize over the years.
- **DATASET used:** Philippine Energy Mix

## 5. Philippines' Total Energy Generation and Mix Composition

- **WHY:** Provides a comprehensive view of the total energy generated in the country and reveals the changing contribution of each energy source.
- **HOW:** Group by Year and Aggregate the values
- **VISUALIZATION:** Stacked Bar Chart (bar for each year)
- **INSIGHT:** Identifies the total energy growth, shifting energy mix, and dominant sources.
- **DATASET used:** Philippine Energy Mix

## **SUMMARY OF REPORTS:**

1. Energy Mix Comparison with Other Countries
  - a. Compares the Philippines' sustainable energy mix with that of neighboring countries over time.
2. Energy Generation vs. Weather
  - a. Identifies the relationship between weather and energy generation in the Philippines.
3. Seasonal Energy Patterns
  - a. Identifies patterns in energy generation and their variation between wet and dry seasons.
4. Trends in Renewable vs. Non-Renewable Energy Sources in the Philippines (2000 - 2020)
  - a. Compares the renewable energy and non-renewable energy sources and evaluates the evolution of the Philippines' energy mix.
5. Philippines' Total Energy Generation and Mix Composition
  - a. Reveals the total energy generated and the contribution of each energy source over time.

**FEEDBACK:**

- Make sure na yung ETL will automatically update the data warehouse once an update from the source is released (REQUIRED)
  - Even if the source is outdated and won't be updated anymore