CANVA LINK (PROPOSAL):
https://www.canva.com/design/DAGz9__Va_w/nOhpowKZWf547EYI-2DZIg/edit?utm_content=DAGz9__Va_w&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton

WAREHOUSE IDEA 1: *Philippine Energy Mix & Weather*

- Renewable Electricity Data World Bank
    - Excel, CSV, or 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-0ysb-xami-n8lhi22vxaxb
- Observed Climatology of Average Mean Surface Air Temperature
    - XLS 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. 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 and/or month
    - **VISUALIZATION:** Scatter or Line plot
    - **INSIGHT:** Identify correlations between weather and energy for more efficient use.
    - **DATASETS used:** Philippine Energy Mix and Observed Climatology of 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 and/or month 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