📄 Insights Summary

Project Title: *Iraq CO_2 Emissions and Energy Usage Analysis (1960–2024)*
Tools Used: SQL (PostgreSQL), Power BI, DAX
Data Sources: World Bank & WHO (via CSV exports)
Total Questions Answered: 18
Dashboard Pages: 2

📌 CO_2 Emissions Insights (1960–2024)

Q1. What is the trend of CO_2 emissions per capita in Iraq?
→ CO_2 emissions per capita steadily increased from 1960, peaked in the late 1990s, and showed fluctuation afterward.

Q2. What is the decade-wise average of CO_2 emissions per capita?
→ Emissions rose with each decade, especially in the 1990s and 2000s.

Q3. Which decade had the highest total CO_2 emissions per capita?
→ The 2010s saw the highest cumulative emissions per capita.

Q4. What year saw the biggest Year-over-Year (YoY) CO_2 change?
→ 1993 had the largest YoY increase in emissions.

Q5. What year had the biggest drop in CO_2 per capita?
→ 1998 marked the largest single-year decline.

Q6. How many years were above or below the national average?
→ 34 years were **above average**, 31 were **below average**.

Q7. What was the longest continuous rise in CO_2 emissions per capita?
→ Iraq experienced **6 consecutive years** of increases.

Q8. How many years had stagnant emissions (no change)?
→ 0 years had stagnant emissions — there was always fluctuation.

Q9. What was the largest single-year drop and when?
→ Again confirmed as **1998**, the steepest drop year.

📌 Energy Indicators Insights (1970–2024)

Q1. What is the trend of energy indicators over time?
→ Electricity access and energy use per capita increased. Hydroelectric usage decreased as fossil fuel usage increased.

Q2. Which indicator had the highest single-year value?
→ *Electricity access (%)* reached **100%** in several years.

Q3. What is the average value of each energy indicator (all years)?
→ Fossil fuel use: ~90%, Electricity access: ~90%, Energy use per capita: ~1,170 kg, Hydro share: ~1.5%.

Q4. Which indicator had the lowest average over time?
→ *Hydroelectric share (%)* had the lowest average.

Q5. [Skipped by user]

Q6. What is the average value of each indicator by decade?
→ Energy use and access improved by decade. Hydro declined.

Q7. How many years had missing (null) values per indicator?
→ Hydroelectric: 19 nulls, Fossil fuels: 2, Energy use: 4.

Q8. What is the trend of total energy use per capita?
→ Overall rising trend, but with fluctuation in recent years.

Q9. What is the Year-over-Year (YoY) change in energy use?
→ Sharp increases in 2004–2005; some declines in 2007 and 2020.

🔍 Key Takeaways

- Iraq's CO_2 emissions per capita rose significantly in the 1990s–2010s, with notable volatility.
- Energy use per capita and electricity access improved steadily, while hydroelectric reliance dropped.
- The country saw 6 consecutive years of emissions rise, with 1993 and 1998 marking major turning points.
- Some energy indicators contain missing values, especially for hydroelectric data, affecting long-term trend clarity.

✅ Project Assets

- **SQL Queries:** 18 questions across two datasets
- **CSV Exports:** Cleaned per-question files
- **Power BI Report:** 2-page interactive dashboard with slicers, YoY logic, Top N filters, DAX measures, and storytelling layout
- **Visual Tools:** Cards, line charts, bar charts, matrix, clustered visuals

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✅ *This is a real portfolio project built from raw data using SQL, DAX, and Power BI — ideal for job applications, freelance profiles, and GitHub.*