Fuel Data Dashboard Analysis

RON95 Quarterly Average Trend (Line Chart)

- X-Axis (Time): Marks each quarter from Q1 2019 through Q2 2025.
- Y-Axis (Price in RM/L): Shows the average retail price of RON95 per litre, plotted to two decimal places.
- Shaded Area & Dots: Each dot is the computed quarterly average; the shaded fill highlights the trend between points.

Key Features & What They Mean

1. Flat Period (Q1 2019–Q1 2020): Prices hover around RM 2.00–2.05 /L, indicating a stable market before major disruptions.
2. Sharp Dip (Q2 2020): A plunge to roughly RM 1.40 /L corresponds with global lockdowns and collapsed demand, showing RON95's sensitivity to international crude-price swings.
3. Recovery Phase (Q3 2020–Q4 2021): Gradual rebound back toward RM 2.00/L as mobility resumed—demonstrating the market's return to pre-pandemic conditions.
4. Post-Recovery Stability (Q1 2022–Q2 2025): A relatively narrow band (~RM 2.00–2.10 /L) suggests that, despite ongoing global volatility, domestic RON95 pricing was managed to remain predictable over this period.

RON97 Quarterly Average Trend

1. Axes & Controls

- **X-Axis (Time):** Marks each quarter from **Q1 2019** through **Q2 2025**.
- **Y-Axis (Price in RM/L):** Plots the average retail price per litre of RON97.
- **Chart Type Toggle:** You can switch between this **Line** view (with shaded area) and a **Bar** view of the same data.

2. Key Phases & What They Indicate

- **Stable Pre-Pandemic (Q1 2019–Q1 2020):**
    - Prices hover between **RM 2.40** and **RM 2.60** per litre.

    - Reflects normal market adjustments under Malaysia's managed-price regime.

- **Pandemic Demand Shock (Q2 2020):**
    - A sharp dip to around **RM 1.50**/L in Q2 2020 tracks global lockdowns and collapsing fuel demand.
    - RON97 is more sensitive to crude-price swings, so the drop here is deeper than for subsidized diesel.
- **Rapid Recovery & Surge (Q3 2020–Q3 2022):**
    - Rebound begins in Q3 2020, returning above **RM 2.00**/L by Q4 2020.
    - Prices then accelerate, peaking around **RM 4.30–4.40**/L in **Q2–Q3 2022**—driven by global supply constraints (e.g., OPEC+ cuts, post-pandemic demand recovery, and the Ukraine conflict).
- **Moderation & New Equilibrium (Q4 2022–Q2 2025):**
    - After the mid-2022 peak, RON97 falls back to approximately **RM 3.30–3.40**/L by Q1 2023.
    - From 2023 onward, the series settles into a narrower band (~RM 3.30–3.50), reflecting both Malaysia's managed-price interventions and broader market stabilization.

3. Why This Matters

- **Volatility Profiling:** RON97's larger swings (vs. diesel) highlight its exposure to global oil-price volatility—an important signal for policymakers considering future subsidy or price-management measures.
- **Policy Timing Signals:** The timing of the surge (mid-2021 through mid-2022) aligns with major international events (post-COVID rebound, supply shocks), indicating that domestic price-control mechanisms partially buffer but cannot fully insulate consumers from global trends.
- **Budget & Subsidy Implications:** Understanding RON97's trajectory helps the government calibrate any potential petrol-subsidy adjustments (e.g., extending targeted models from diesel to RON95/RON97 in late 2024).

Diesel Quarterly Average Trend (Q1 2019–Q2 2025)

Axes & Controls

- **X-Axis (Time):** Each quarter from Q1 2019 through Q2 2025.
- **Y-Axis (Price in RM/L):** The average retail price per litre of diesel in Peninsular Malaysia, plotted to two decimal places.
- **Dropdowns:**
    - **Year:** “All Years” shows every quarter.
    - **Fuel Type:** “Diesel” isolates the grey diesel series.
- **Chart Type Toggle:** Switch between this **Line** view (with shaded area) and a **Bar** view.

1. Pre-Pandemic Stability (Q1 2019–Q1 2020)

- **Price Range:** Approximately **RM 2.15–2.17/L**.
- **Meaning:** Reflects Malaysia’s blanket diesel subsidy, keeping prices flat despite modest global oil-price swings.

2. COVID-19 Demand Shock (Q2 2020)

- **Sharp Dip to ~RM 1.45/L:** Diesel prices fall by ~33%.
- **Cause:** National lockdowns and collapsed transport demand led the government to pass through lower wholesale costs to consumers even under subsidy .
- **Implication:** Indicates that extreme market shocks can penetrate subsidy shields, prompting temporary price passthroughs.

3. Recovery & Re-establishment of Subsidy (Q3 2020–Q4 2023)

- **Rebound to ~RM 2.15/L by Q1 2021:** As mobility resumed, prices returned to the pre-COVID subsidy level.
- **Extended Plateau:** From Q1 2021 through Q4 2023, diesel remains tightly bounded around RM 2.15/L.
- **Meaning:** The government re-imposed full subsidy control once market conditions normalized, prioritizing price stability.

4. Subsidy Reform “Step” (Q2 2024)

- **Initial Rise to ~RM 2.50/L, then ~RM 3.20/L (Q3 2024):** Marks the transition to a **targeted-subsidy model** (MADANI portal) on 10 June 2024 ; prices for non-beneficiaries realign closer to market levels.

- **Implication:** The pronounced vertical “step” visually encodes the policy shift, making clear that blanket subsidies ended for most users.

5. Post-Reform Regulation (Q4 2024–Q2 2025)

- **Moderation to RM 2.95–3.05/L:** After the spike, diesel prices settle into a narrower band.

- **Meaning:** Minor quarterly tweaks reflect distribution-cost updates, but the elevated price floor remains, indicating the permanence of targeted support.

Why It Matters

- **Policy Impact Visualization:** The clear “flat → dip → flat → step → plateau” sequence communicates both subsidy design and reform effects at a glance.

- **Budgetary & Behavioural Signals:** The reform step signals to users and businesses that diesel will no longer be fully subsidized—encouraging fuel-efficient practices and helping curb smuggling incentives.

- **Comparative Context:** When juxtaposed with RON95/RON97 trends, this chart reveals how subsidized versus market-priced fuels respond differently to global shocks and domestic policy changes.

Diesel East Quarterly Average Trend

Axes & Controls

- **X-Axis (Time):** Quarterly points from Q1 2019 to Q2 2025.

- **Y-Axis (Price in RM/L):** The average retail price of diesel in East Malaysia (Sabah & Sarawak).

- **Dropdowns:**

    - **Year:** “All Years” displays every quarter.

    - **Fuel Type:** “Diesel East” isolates the dark-blue series.

- **Chart Toggle:** Switch between **Line** and **Bar** views of the same data.

1. Pre-Pandemic Equilibrium (Q1 2019–Q1 2020)

- **Price Range:** Steady around **RM 2.16–2.18/L**.

- **Meaning:** Reflects the longstanding East-Malaysia subsidy top-up above the Peninsular rate, covering higher distribution costs and logistical challenges in these regions.

2. COVID-19 Demand Shock (Q2 2020)

- **Dip to ~RM 1.55/L:** Prices fall by roughly 30 percent in Q2 2020.

- **Cause:** Nationwide lockdowns and drastically reduced transport demand prompted the government to pass through lower wholesale costs even under subsidy arrangements.

- **Implication:** Shows that extreme external shocks can temporarily override even regionally adjusted subsidy buffers.

3. Recovery & Return to Subsidy Support (Q3 2020–Q4 2023)

- **Rebound to ~RM 1.80/L by Q3 2020:** As economic activity resumed, prices climbed back.

- **Full Restoration (~RM 2.18/L) by Q1 2021:** The subsidy top-up was fully re-imposed, returning East-Malaysia diesel to its premium above the Peninsular baseline.

- **Extended Plateau:** From Q1 2021 through Q4 2023, the series remains almost flat at ~RM 2.18/L.

- **Meaning:** The government re-established full support, maintaining the higher East-Malaysia rate consistently.

4. Post-Reform Period (Q2 2024–Q2 2025)

- **No Step Increase:** Unlike Peninsular diesel, the Diesel East series shows **no significant jump** in Q2 2024. It remains at ~RM 2.18/L throughout 2024–2025.

- **Implication:** The targeted-subsidy reform of June 2024 did **not** alter East-Malaysia diesel prices—confirming that these regions retained their existing subsidy level as a deliberate equity measure.

- **Minor Oscillations:** Virtually flat, with only millesimal quarterly adjustments reflecting routine cost updates.

Why It Matters

- **Equity Across Regions:** By preserving the East-Malaysia rate, the reform acknowledges higher logistical costs and socioeconomic needs in Sabah & Sarawak.

- **Policy Clarity:** The absence of a “step” in this series contrasts with the Peninsular jump, visually confirming that only Peninsular consumers lost blanket subsidy.

- **Fiscal Targeting:** Maintaining East-Malaysia support while withdrawing universal relief on the peninsula reflects a nuanced, regionally calibrated approach to subsidy rationalization.

Regional Diesel Price Comparison (Bar Chart)

- **X-Axis (Regions):** Lists Peninsular Malaysia, Sabah & Sarawak, Singapore, Indonesia, and Thailand.

- **Y-Axis (Price in RM/L):** Gives the average diesel price per litre immediately after the June 2024 subsidy reform.

- **Bar Heights:** Represent the implied price in each jurisdiction.

Key Comparisons & Insights

1. **Peninsular Malaysia (~RM 3.35/L):** Reflects the new post-reform diesel rate for the peninsula—more than 50% higher than its pre-June 2024 RM 2.15/L level.

2. **Sabah & Sarawak (~RM 2.15/L):** Diesel price remains at the old subsidized rate, illustrating a deliberate intra-federal subsidy carve-out.

3. **Singapore (~RM 8.80/L):** Shows Singapore’s heavily taxed, market-driven diesel price—over double Peninsular Malaysia’s—highlighting the large regional premium.

4. **Indonesia (~RM 4.24/L) & Thailand (~RM 4.43/L):** Benchmark neighbours whose unsubsidized prices sat roughly 25–30% above post-reform Peninsular rates.

Why It Matters

- The **bar chart** makes evident the post-reform recalibration: Peninsular users now pay substantially more, while East Malaysians retain lower rates.

- Comparing with **neighbouring countries** underscores how Malaysia's market-aligned price still subsidizes domestic consumers relative to broader ASEAN levels, balancing fiscal restraint with social support.

Vehicle Types Distribution (2021–2025) – Bar Chart

What's plotted:

- **X-Axis (Fuel/Powertrain Type):** Categories of vehicles registered from 2021 to 2025: Diesel, Electric, Green Diesel (biodiesel blends), Hybrid Diesel, Hybrid Petrol, and Petrol.

- **Y-Axis (Number of Registered Vehicles):** Total registrations across the five-year span, in absolute counts.

Key Takeaways:

1. **Petrol Dominance (~2.7 million vehicles):**

    - Petrol-powered vehicles overwhelmingly lead the market, with roughly **2.5–3.0 million** registrations.

    - *Implication:* Despite subsidy changes on diesel, consumer preference remains heavily petrol-centric, reflecting infrastructure, price stability, and vehicle-availability factors.

2. **Modest "Green Diesel" Uptake (~200,000 vehicles):**

    - Biodiesel-compatible vehicles constitute the second-largest non-petrol segment.

    - *Implication:* Some fleet operators and private buyers are adopting biodiesel blends—possibly driven by corporate sustainability policies or incentives under Malaysia's B10/B20 mandate.

3. **Hybrid Petrol & Diesel (tens of thousands):**

    - **Hybrid Petrol** registrations (~50,000) exceed **Hybrid Diesel** (~10,000).

    - *Implication:* Hybridization in passenger cars is gaining ground, though more so in petrol platforms than diesel, likely due to lower upfront costs and broader model availability.

4. **Electric Vehicles (<20,000) & Pure Diesel (~negligible):**

- Fully electric vehicles remain nascent, with **EVs under 20,000** registrations since 2021.

- Standalone pure-diesel vehicle registrations (excluding hybrids or green-diesel models) are minimal in comparison, indicating the diesel fleet is dominated by commercial/industrial registrations captured separately.

Total Registered Diesel Vehicles (2021–2025) – Line Chart

What's plotted:

- **X-Axis (Year):** from **2021** through **2025**.
- **Y-Axis (Number of Vehicles):** Total count of diesel-fuelled vehicles registered each year.

Observed Trend:

1. **Growth Phase (2021 → 2022):**
    - Registrations climb from **~48,000** in 2021 to **~65,000** in 2022—a **35% increase**.
    - *Drivers:* Possible fleet expansions in logistics, agriculture, and commercial transport before subsidy reform.
2. **Plateau & Early Decline (2022 → 2024):**
    - A slight dip to **~62,000** in 2023 and further to **~55,000** in 2024.
    - *Interpretation:* Beginning of rollover effects as businesses anticipate higher diesel costs post-reform (June 2024), tempering new registrations.
3. **Sharp Drop (2024 → 2025):**
    - An abrupt fall to **~5,000** registrations in 2025—over a **90% decrease** year-over-year.
    - *Implication:* The June 2024 subsidy reform, which removed universal diesel relief for non-eligible users, caused a near-complete collapse in new diesel-vehicle uptake by mid-2024. This suggests that private and commercial purchasers deferred or cancelled diesel-vehicle purchases in the face of higher operating costs.

Why These Graphs Matter

- The **Vehicle Types** bar chart reveals that while petrol remains dominant, there is measurable interest in biodiesel blends and hybrids—signals for policymakers and industry to bolster infrastructure and incentives for lower-carbon transport.

- The **Diesel Registrations** line chart starkly illustrates policy impact: by drastically reducing the financial attractiveness of new diesel vehicles, the targeted subsidy removal achieved its behavioral objective, curbing diesel-fleet growth and, by extension, downstream fuel consumption and fiscal burden.

Data Source: data.gov.my, 2017-2025
URL: https://data.gov.my/data-catalogue/fuelprice