**The Philippines**

## **Energy Policy Context and Recent Developments**

1. **Paris Agreement**

The Philippines submitted its first NDC[[1]](#footnote-2) in 2021, in which the economy pledged to reduce its GHG emissions by 75% relative to its BAU levels in 2030. Much of this reduction (72.29%) would be achieved with international support (conditional), while the remaining (2.71%) would be via domestic measures (unconditional).

The commitment is referenced against a projected business-as-usual cumulative economy-wide emission of 3,340.3 MtCO2e for the same period.

In terms of GHG emissions, the Philippines emitted an average of 1.98 metric tons of carbon dioxide equivalent per capita in 2020.

A graph of energy consumption

Description automatically generated with medium confidence

**Biofuels blending**

* 1. REF – maintain biodiesel at 2% and bioethanol at 10%
  2. TGT – maintain bioethanol at 10% and increase biodiesel blend to 5% by 2025

Manufacturing of EVs, including 2-, 3-, and 4-wheelers, with a focus on commercial vehicles

Manufacturing of EV strategic parts and components such as automotive electronics, batteries, and charging stations

1. **Transport**

**Electric Vehicle Industry Development Act (EVIDA)**

EVIDA[[2]](#footnote-3) was passed into law in April 2022. The Act establishes the Comprehensive Roadmap for the Electric Vehicle Industry (CREVI) – a development plan to accelerate the EV industry in the Philippines.

**CREVI Targets[[3]](#footnote-4)**

**Business As Usual Scenario (10% EV Fleet Share by 2040)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Short Term**  **(2023-2028)** | **Medium Term**  **(2029-2034)** | **Long Term**  **(2035-2040)** |
| **Electric Vehicle** | **803,133** | **983,034** | **955,592** |
| 4W – HEV | 209,970 | 108,175 | 36,989 |
| 4W – PHEV | 35,001 | 38,840 | 36,989 |
| 4W – BEV | 35,001 | 163,712 | 221,931 |
| Tricycle – BEV | 96,672 | 107,224 | 102,065 |
| Motorcycle – BEV | 424,847 | 563,262 | 555,883 |
| Bus – BEV | 1,642 | 1,821 | 1,735 |
| **EV Charging Stations** | **7,300** | **14,000** | **20,400** |

**Clean Energy Scenario (50% EV Fleet Share by 2040)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Short Term**  **(2023-2028)** | **Medium Term**  **(2029-2034)** | **Long Term**  **(2035-2040)** |
| **Electric Vehicle** | **4,595,959** | **4,215,337** | **4,411,244** |
| 4W – HEV | 932,063 | 528,817 | 216,756 |
| 4W – PHEV | 155,346 | 181,691 | 216,756 |
| 4W – BEV | 155,346 | 742,997 | 1,300,517 |
| Tricycle – BEV | 706,280 | 562,448 | 501,456 |
| Motorcycle – BEV | 2,641,224 | 2,195,347 | 2,172,297 |
| Bus – BEV | 5,700 | 4,037 | 3,462 |
| **EV Charging Stations** | **66,500** | **41,800** | **39,800** |

In terms of Philippine Development Plan targets, the government has set a goal of increasing the capacity of the country’s airports, seaports, and train stations and improving their connectivity to other transport modes. The plan also aims to increase the share of public transport in the country’s overall transport mix and to reduce the number of private vehicles on the roads.

Build-Better-More Program – The flagship projects cover investments in the areas of physical connectivity, water resources, agriculture, health, digital connectivity, and energy. Physical connectivity infrastructure – such as roads, bridges, seaports, airports, and mass transport – accounts for 83% of this program.

1. **Refining**

**Notes**

1. There is only one (1) refinery in the Philippines (Petron Bataan) with a capacity of 180,000 barrels per day.

## **Scenarios Description**

### **The Reference scenario**

REF is to be aligned with the Reference Scenario of the Philippines Energy Plan.

On the supply side, gas is mainly sourced via LNG imports. Domestic gas will no longer be available from the Malampaya field from 2027 onwards due to depleted reserves. However continuous geopolitical uncertainties may see a limited volume of LNG on board the Philippines (and not maximizing its import capacity). In addition, coal and oil imports continue but at a slower rate due to the existing moratorium, fuel switching, and preference towards cleaner fuels.

In the power sector, gas becomes the major fossil fuel source with coal becoming less significant. Renewables are also expanding to reach the intended target of 50% in 2040 and assumed to increase further towards 2060. Large-scale solar PVs and offshore wind become prominent for renewables, while hydropower and geothermal may play a marginal role due to limited capacity.

On the demand side, electricity and oil remain the most significant fuels. The transport sector, particularly in public transport, has begun adopting EVs at a faster rate, in line with the enforcement of EVIDA. The services sector continues to become one of the main drivers of the Philippine economy, and as a result, electricity demand will increase rapidly. Similarly, the industry sector expands at a fast rate, while adopting energy efficiency measures and fuel switching.

Based on the above measures, the Philippines may (or may not?) reach the desired unconditional emissions reduction by 2030.

### **The Target scenario**

The TGT sees the Philippines assuming to increase their climate ambitions even without a net-zero emissions goal. Increased adoption of technologies, fuel switching, and enhanced energy efficiency measures across all sectors are vital to achieving such ambitions.

On the supply side, gas remains pivotal in providing baseload electricity generation. Hence, LNG import is assumed to remain strong in TGT. On the other hand, the supply of coal is expected to decline more rapidly than it does in the REF, in line with the existing moratorium and other enhanced policy measures.

In the power sector, while gas remains pivotal in providing baseload electricity generation, renewables are assumed to accelerate at a faster pace with solar and offshore wind contributing majorly, supported by the adoption of battery storage that is assumed to be commercially available in TGT. Nuclear power is also assumed to be commissioned. Existing coal power plants are assumed to be repurposed for co-firing.

On the demand side, enhanced energy efficiency measures are applied across all sectors and hence energy demand is expected to be lower than in REF. Electrification is substantial in buildings, transport, and agriculture sectors, resulting in less demand for oil products.

CCS is assumed to be adopted in both power and industry sectors as it is available commercially. CCS retrofitting for gas-fired power plants will become available in 2030.

The availability of CCS and maximizing the use of domestic renewable resources may see the Philippines producing hydrogen (green and blue), which will be for the demand sectors.

1. <https://unfccc.int/sites/default/files/NDC/2022-06/Philippines%20-%20NDC.pdf> [↑](#footnote-ref-2)
2. <https://www.doe.gov.ph/sites/default/files/pdf/announcements/DOE%20DOTR%20IRR%20EVIDA%2008212022.pdf?withshield=2> [↑](#footnote-ref-3)
3. https://www.doe.gov.ph/sites/default/files/pdf/energy\_efficiency/CREVI%20as%20of%2005-04-2023.pdf [↑](#footnote-ref-4)