Outline

1. Objective
2. Background
3. Roadmap

Objective

• The purpose of this presentation is to share PETRONAS’ CCS/CCUS efforts in Malaysia
Background

Our Sustainability Milestones

- **PETRONAS was established**
- **Corporate Sustainability Framework**
- **Corporate Enhancement Programme**
- **E&P Flaring and Venting Framework**
- **HIV and AIDS Policy**
- **Anti-Bribery and Corruption Policy and Guidelines**
- **Human Rights Commitment**
- **Climate Change Framework**
- **Contractors Code of Conduct on Human Rights**
- **Enhanced Carbon Commitments**

Since the introduction of the PETRONAS Carbon Commitments in 2012, a cumulative 12 million tCO₂e GHG emissions reduction has been achieved.

Established and implemented in 2018, PETRONAS Carbon Commitments Guidelines will enhance our implementation moving forward.
## PETRONAS Carbon Commitments

### PLANNING AND PROJECTS
- Zero continuous flaring and venting of hydrocarbon shall be incorporated in the design of new Upstream and Downstream facilities and projects.
- Malaysia Petroleum Management (MPM) shall apply a country level CO2 emission allowance in the planning process for high CO2 field development.
- High CO2 field development in Upstream shall incorporate Carbon Capture, Utilisation and Storage (CCUS) technologies at design stage.
- Carbon price shall be considered in project decision-making together with the option of carbon offsets where economically feasible.

### OPERATIONS
- Zero continuous venting of hydrocarbon for all existing Upstream and Downstream facilities.
- Reduce continuous flaring of hydrocarbon for all existing Upstream and Downstream facilities where operationally and economically feasible.
- Downstream and LNG operating assets shall meet and sustain top quartile energy performance.

### RENEWABLE ENERGY
- Renewable Energy technologies shall be considered in all facilities and projects where operationally and economically feasible.

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**By 2030**

**PARIS AGREEMENT**
- Paris Agreement signed by 197 parties to combat climate change and maintain temperature rise to within 2°C

**MALAYSIA NDC**
- Malaysia committed a Nationally Determined Contribution (NDC) to the Paris Agreement
  - 65 million tCO2e (Measures as below the Sku in 2030 at 0.15 (2050) to 0.20 (2050) 30% reduction in CO2e)

**PETRONAS GHG Emissions Reduction Target 7 million tCO2e**

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The ROADMAP

1. CO₂ Sequestration Area Development Plan
2. Regional Basin Mapping Study for CO₂
3. Storage Development Plan for Sarawak Region

2020

1. Joint-study with Petroleum Arrangement Contractors for high CO₂ fields development (>70% CO₂)
2. Maturing technology solution for sequestration
3. Establish Technology partnership model

2021

1. Final Investment Decision for PETRONAS’ first offshore sequestration project in Sarawak
2. Block promotion & negotiation CO₂ fields (40-70%) in Peninsular Malaysia

2022

1. Petroleum Sharing Contract award for High CO₂ fields in Peninsular Malaysia
2. Solutions for commercial monetization for high CO₂ fields

> 2025

1st CO₂ offshore sequestration in PETRONAS

2030

Compliance towards PETRONAS Carbon Commitment at below 7 Mil tCO₂e GHG emission
Thank you for your passion!