Expert Insights:
Sarawak: Pioneering the Path – Building the Asia Pacific Green Hydrogen Hub

ASIA PACIFIC GREEN HYDROGEN 2024 CONFERENCE & EXHIBITION

10 - 12 JUNE 2024

BORNEO CONVENTION CENTRE KUCHING, SARAWAK

Tan Sri Datuk Amar (Dr) Haji Abdul Aziz Bin Dato Haji Husain
Chairman
Sarawak Economic Development Corporation (SEDC)

An Event Hosted and Supported by

Ministry of Energy and Environmental Sustainability Sarawak

BUSINESS EVENTS SARAWAK

TRIBE LEGACY SARAWAK CAMPAIGN

SARAWAK More To Discover

Organised by

BORNEO BUSINESS CONNECT

“Sarawak government envisions transforming the state into a sustainable green economy and incorporating environmental sustainability into economic recovery efforts would preserve the environment and at the same time, create opportunities for investment and growth in the green economy ”

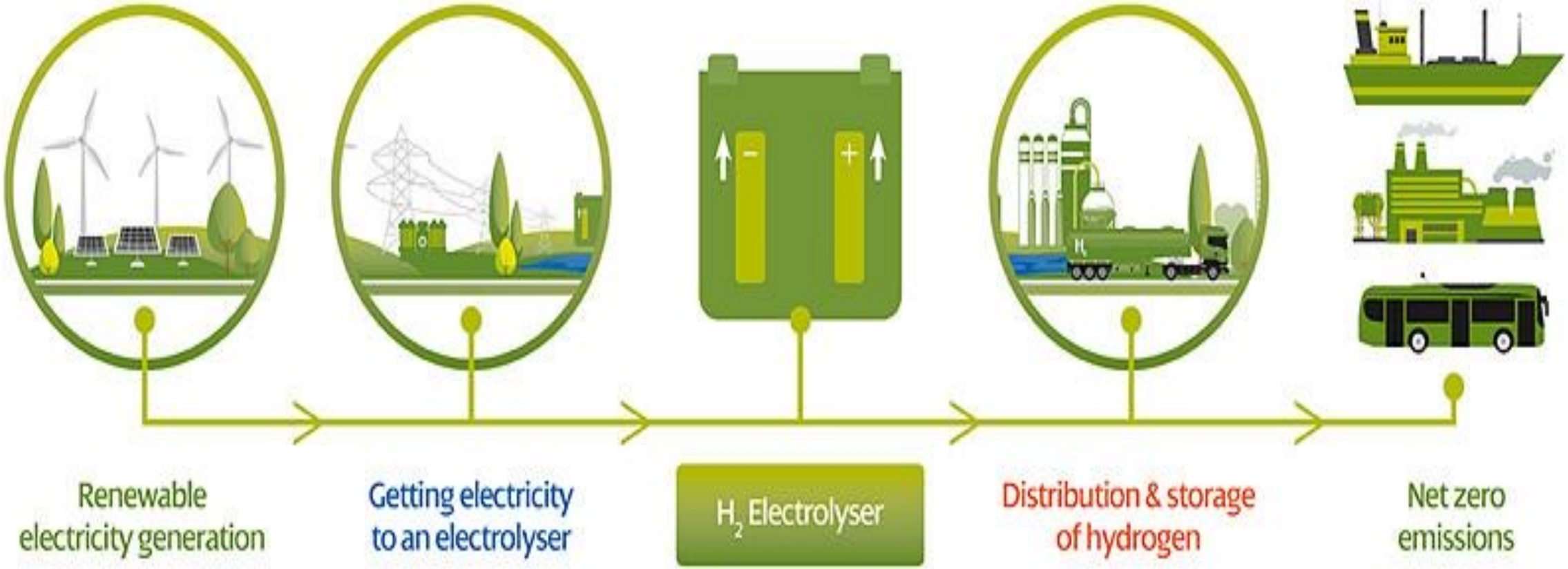
The Right Honourable
Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari bin Tun Datuk Abang Haji Openg

Premier of Sarawak

Post COVID-19 Development Strategy 2030 (PCDS 2030)

- *PCDS 2030 aims to reverse the far-reaching negative impacts of COVID-19 pandemic & transform Sarawak into a competitive and sustainable economy, powered by renewable energy such as hydropower, floating solar and hydrogen.*

What is green hydrogen



Investment Opportunities

- Through strategic partnerships and financial incentives, attracting global investments to develop state-of-the-art hydrogen facilities and infrastructure.

- To establish Sarawak as a leading exporter of green hydrogen, thereby contributing significantly to the global energy market and boosting our local economy.

Hydrogen Value Chain

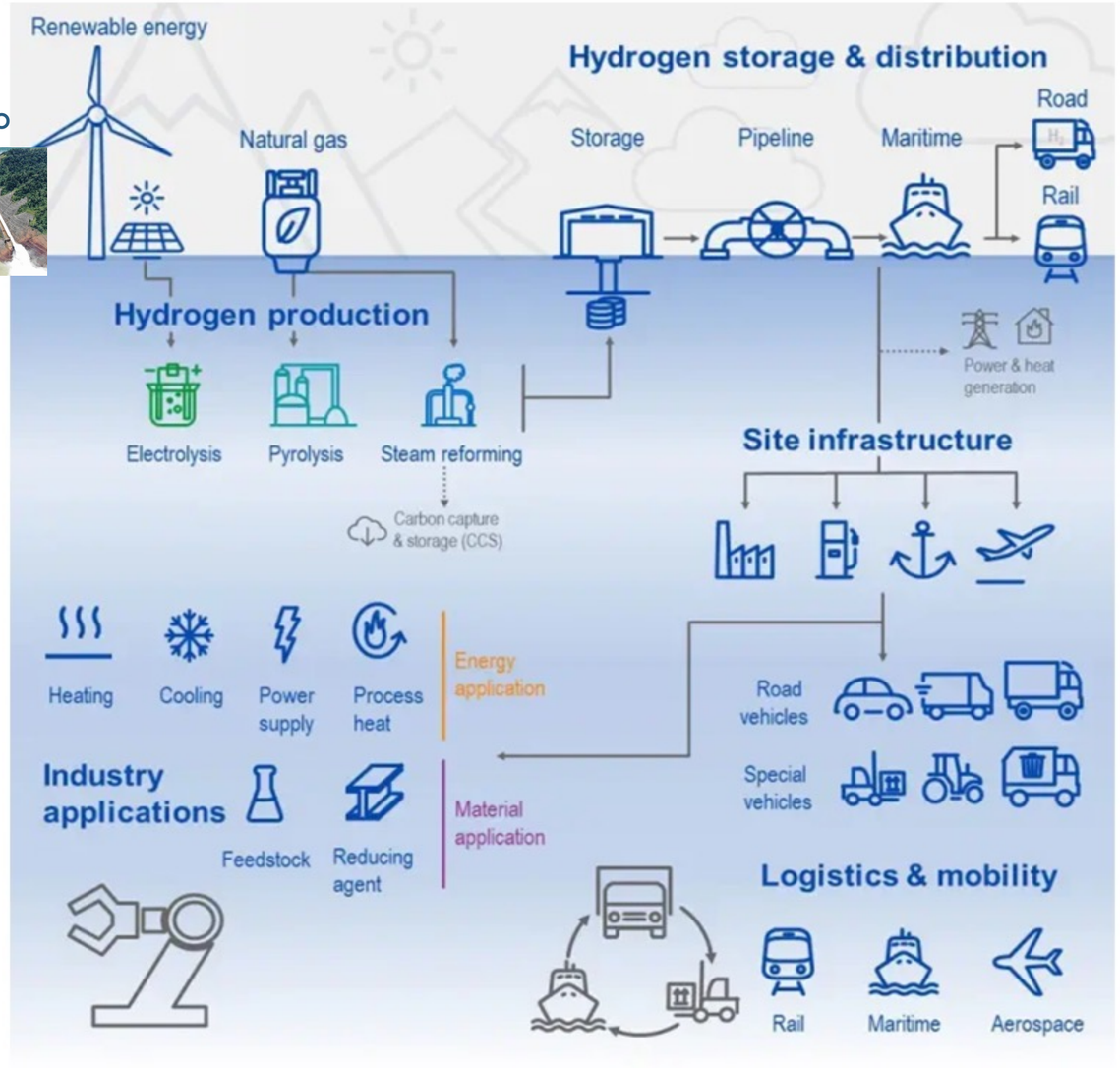
Sarawak Energy

Hydro

<u>Sarawak Hydrogen Hub</u>

- **Rembus**
- **H2ornbill**
- **H2biscus**

Decarbonizing local industrial players



SEDC Energy (SEDCE)

Multifuel Station

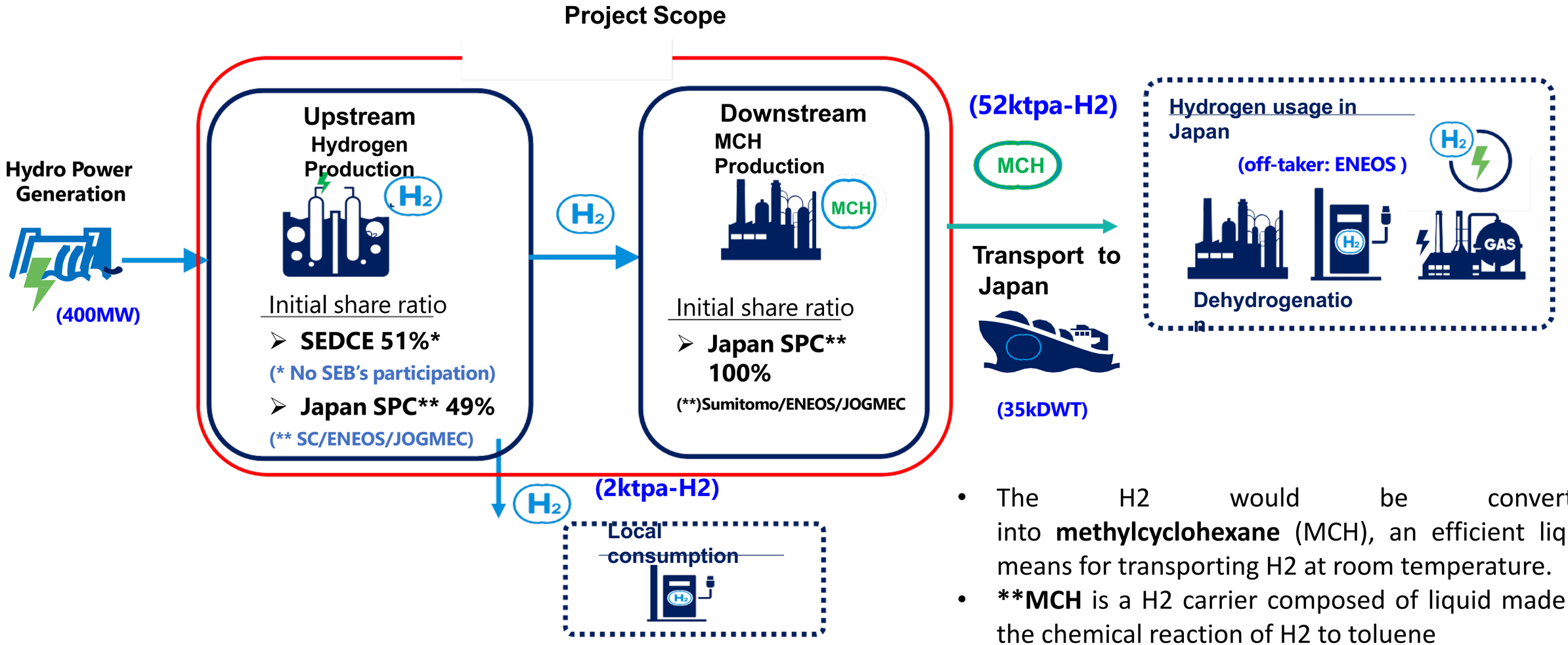
Sarawak Metro - (KUTS)

Large Scale Hydrogen Production
Project H2ornbill (Japan) & Project H2biscus (South Korea)

SEDC enters tripartite MoU with Sumitomo Corp & ENEOS for development of Bintulu Hydrogen Plant (October 2020)

FEED Contract Signing Ceremony between SEDC Energy, Samsung Engineering, Lotte Chemical (October 2023)

Hydrogen production capacity : 52 ktpa-H2 (Approx. 400MW equivalent) for 2 ktpa for local consumption & 50ktpa-H2 for export.



- The H2 would be converted into **methylcyclohexane** (MCH), an efficient liquid means for transporting H2 at room temperature.
- ****MCH** is a H2 carrier composed of liquid made by the chemical reaction of H2 to toluene

Project H2ornbill Overview

Project H2biscus

Location: Bintulu

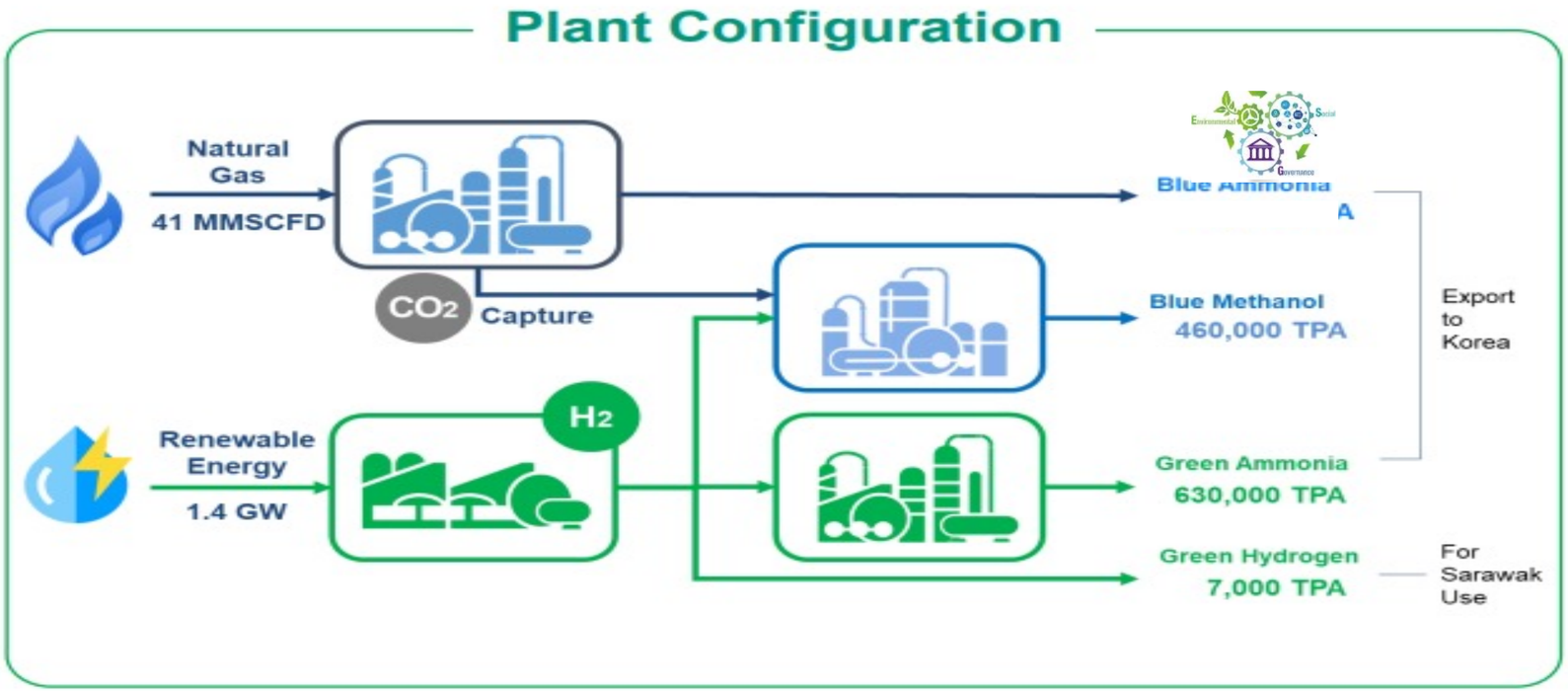
Partners: Samsung Engineering, Korea National Oil Corporation (KNOC), Lotte Chemical

Estimated Timeline: 2027/28

Key components:

Exporting Hydrogen as Ammonia (NH3) to Korea

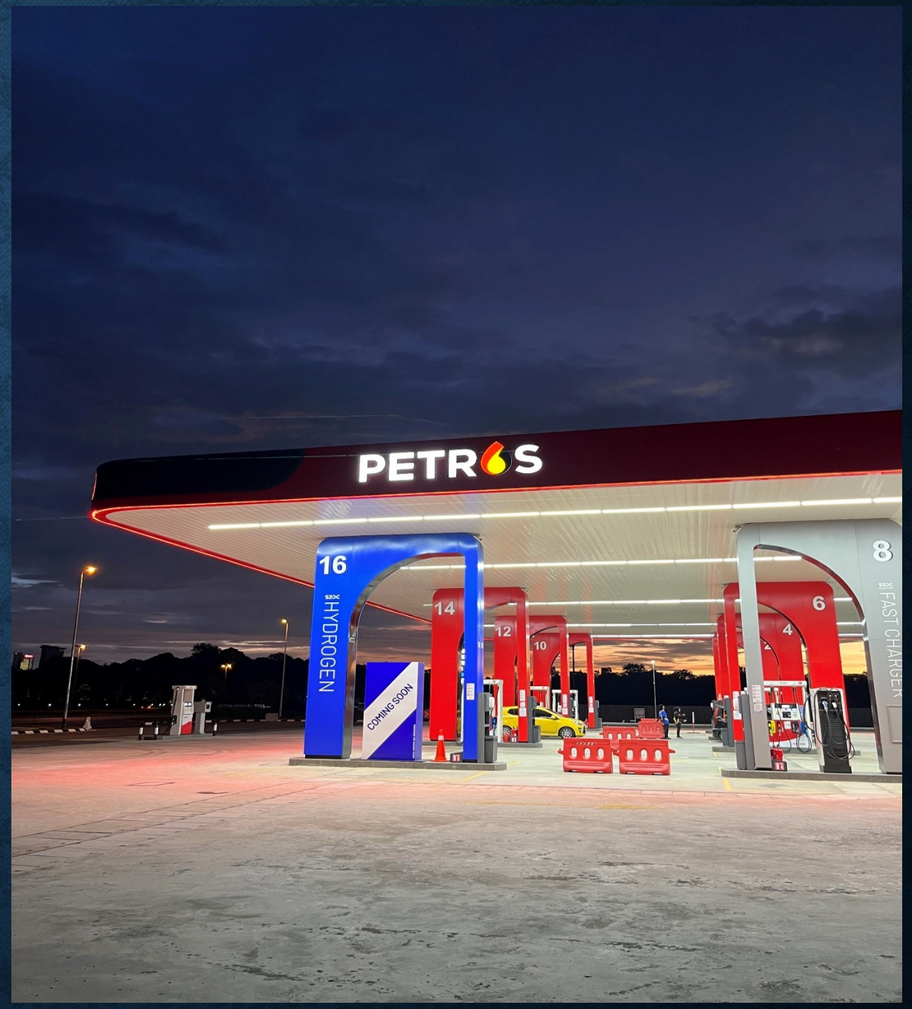
- Total Production Capacity: **150kTPA**
- Green Hydrogen **7kTPA** for Domestic use
- Green Ammonia **850kTPA** for Export



CREATION OF INFRASTRUCTURE FOR HYDROGEN MOBILITY

- Six flagship Petros stations planned across Sarawak.
- Smaller stations will be equipped with EV charging & conventional fuels

Official launching of the first DODO Station at Daro by YAB Premier (March 2023)



First Petros multifuel station officially launched in April 2022

Use of Hydrogen in Public Transportation System

- **Kuching Urban Transportation System (KUTS)** implemented by Sarawak Metro Sdn Bhd
- **Autonomous Rapid Transit (ART)**
  - Powered by hydrogen fuel cells
  - Guided by virtual tracks
  - Runs on rubber tyres
  - Operates on dedicated lanes
- Hydrogen-powered feeder buses for KUTS will provide “First-Mile & Last-Mile” connectivity for commuters

Transit Map

KUTS

PHASE 1

Blue Line

- REMBUS TO HIKMAH EXCHANGE
- 15 STATIONS (INCLUDE 1 INTERCHANGE STATION) (1 PROV.)
- 27.6KM

Red Line

- KUCHING SENTRAL TO PENDING
- 7 STATIONS
- 12.3KM

Green Line

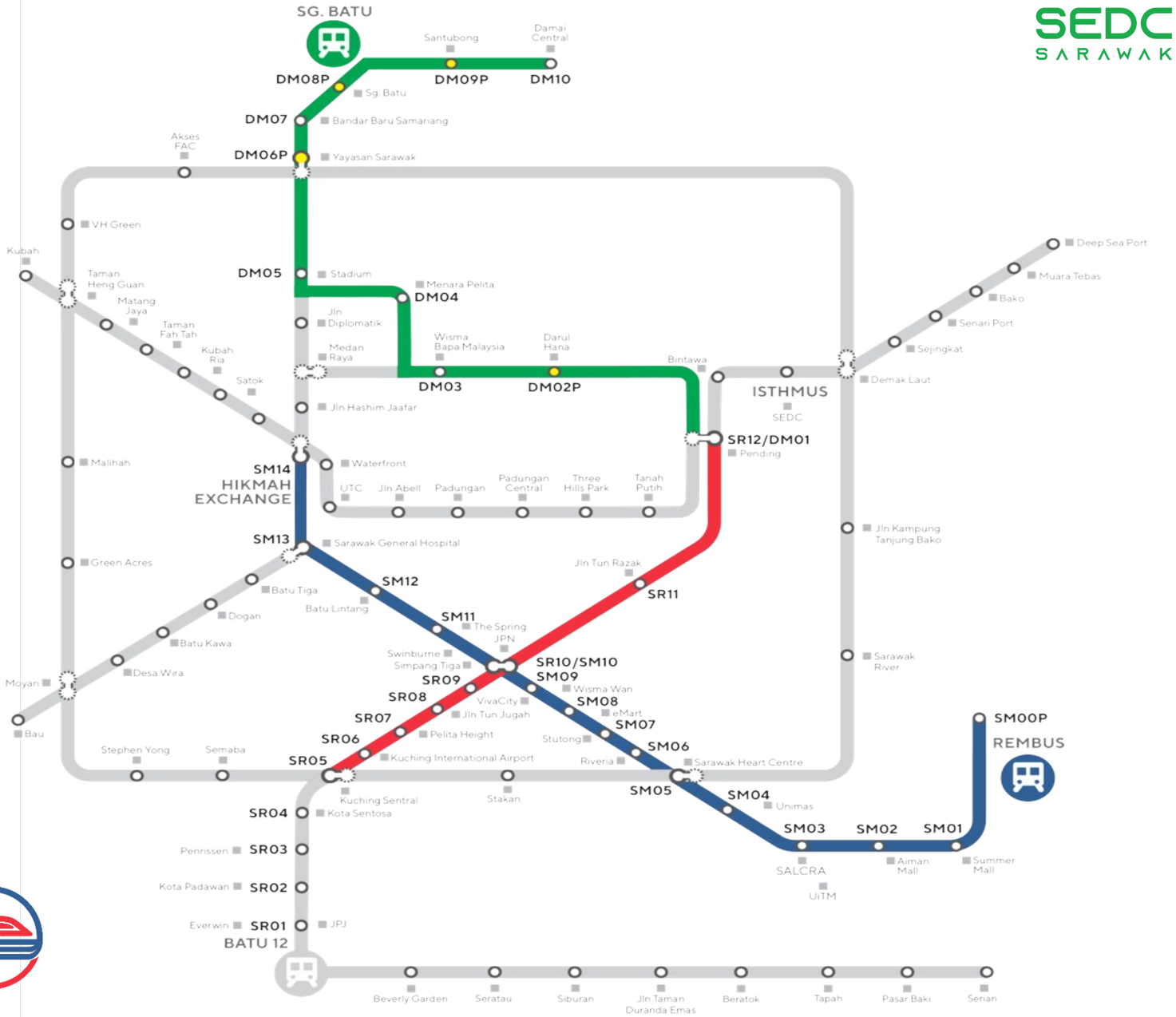
- PENDING TO DAMAI CENTRAL
- 9 STATIONS (4 PROV.)
- 30KM

Total Length : 69.9km
Total Station : 31 (5 Prov.)
The alignment is mostly at-grade

BLUE LINE
BLUE LINE (PROV. STATION)
RED LINE
GREEN LINE
GREEN LINE (PROV. STATION)
FUTURE LINE
INTERCHANGE STATION
FUTURE INTERCHANGE STATION
DEPOT
LANDMARK

Operated by :

SARAWAK METRO



Hydrogen Powered Vehicles

Official handing over of Toyota Mirai to Deputy Premiers (March 2023)

Summary

- Imperative that Sarawak adapt and transform herself just to fit into this new era of Green Economy to achieve **economic prosperity, social inclusivity and sustainable environment.**