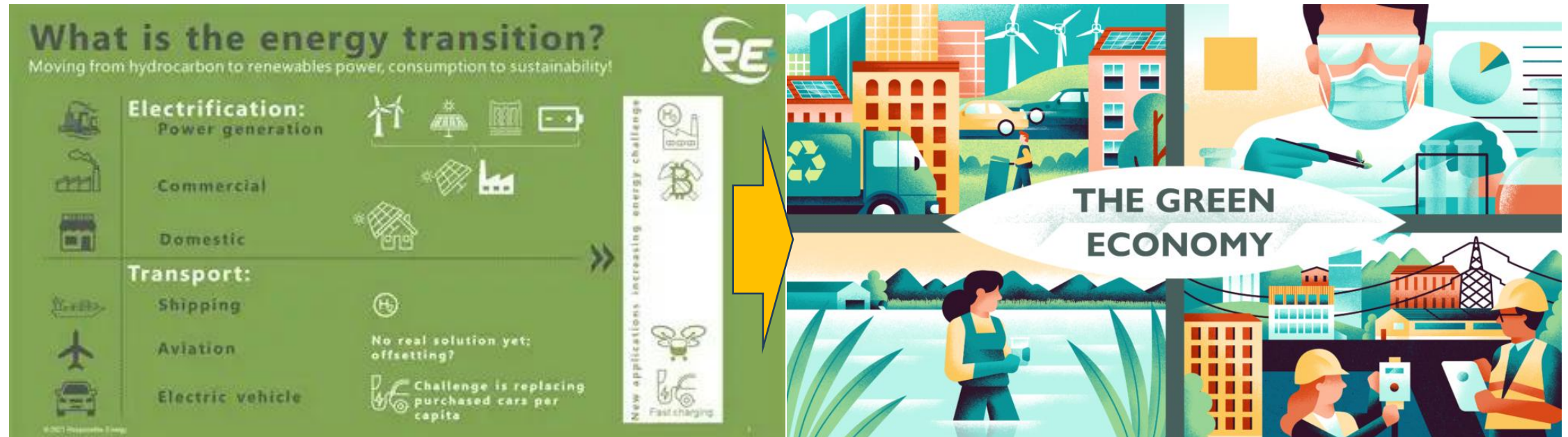


SESSION 3

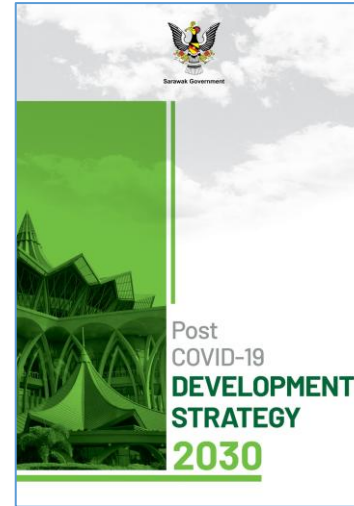
Borneo Energy Transitions and Decarbonisation Approach in Leading Towards a Green Economy Region



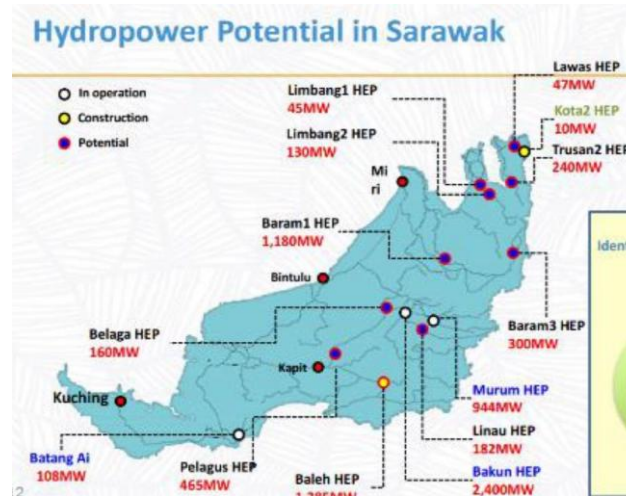
KEY FACTORS;

1. Sarawak's Net Zero Strategy and Carbon Plan

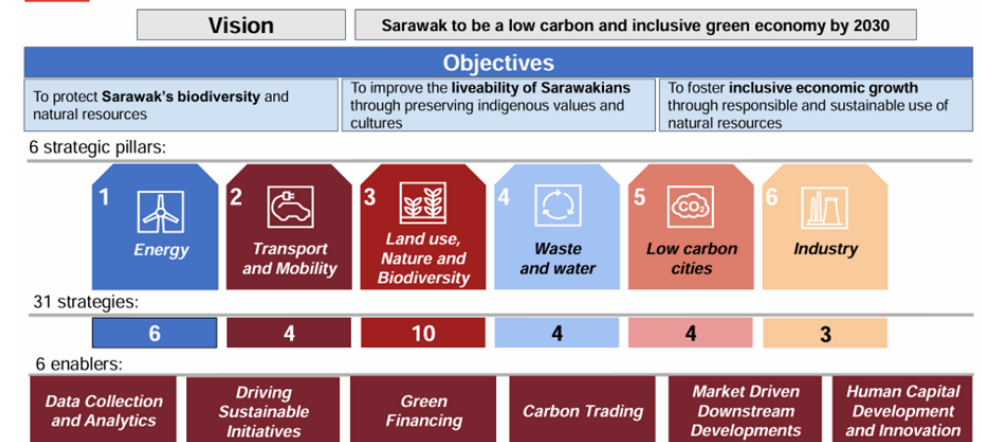
- Renewable Energy Plan
- Nature-based Solutions
- Carbon Market Readiness
- Policy Innovation



Sarawak aspires to be a developed State by 2030.



Sarawak's Green Economy Policy sets out the vision to achieve 3 policy objectives supported by 6 strategic pillars and 6 enablers



For more information, visit www.sarawak.gov.my

KEY FACTORS;

2. Regional Collaboration Across Borneo

- Cross-border Partnerships
- Creates Business Opportunities
- Accelerate the Energy Transition Landscape

Towards Becoming a Renewable Energy Powerhouse in ASEAN



Proposed Interconnection in Borneo - Borneo Grid



Southeast Asia's Green Economy

Unlocking Systems for Growth and Impact



Sarawak 2030 Blueprint Key Targets

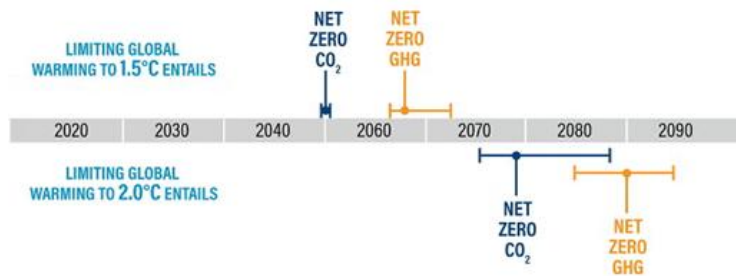
ENERGY TRANSITION			SUSTAINABLE AGRICULTURE & FOOD SECURITY	
Maintain at least 60% RE capacity mix by 2030	Achieve 10 GW capacity by 2030	Grow energy export market 130MW by 2030	80% application of Good Agricultural Practices (GAP) by 2030	100% MSPO certified smallholder by 2030
Increase hydro capacity from 3,500MW to 4,800MW	Improve SAIDI performance by reducing ~31% from 2020 and achieve <60 minutes by 2030	Grow Sarawak NEM via rooftop solar by 150MW	SUSTAINABLE MOBILITY	
Increase 1,500MW of solar capacity	Improve SAIFI performance by reducing ~8% from 2020 and achieve <1 occurrence by 2030	Increase gas generation from 1,300MW to 3,100MW	15% CO ₂ reduction by 2030	25% CO ₂ reduction from port operations
400 EV chargers by 2030			600 ktCO ₂ e annual CO ₂ reduction via electrification of mobility fleet	54,000 tCO ₂ reduction for KUTS by 2030
			50% reduction through movement of cargo	

KEY FACTORS;

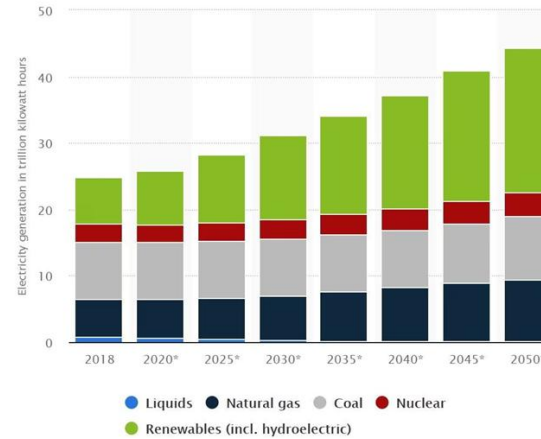
3. ASEAN Integration and Sarawak's Role

- Clean Energy Collaboration
- Digital Innovation for Smart Grids and Energy Efficiency
- Inclusive Transition Strategies to Benefit All Member States

Global timeline to reach net-zero emissions



WORLD RESOURCES INSTITUTE



Grid Emission Factor (GEF) in Malaysia

GEF is the generation weighted-average greenhouse gas (GHG) emission per unit of electricity generation of all generating power plants serving the electricity grid (GHG intensity of the grid electricity), including RE power plants that may generate Renewable Energy Certificate (REC).

Year	Grid Emission factor (Gg CO2e/GWh)		
	Peninsular	Sabah	Sarawak
2022	0.774	0.525	0.199
2021	0.757	0.524	0.198
2020	0.821	0.503	0.203
2019	0.753	0.548	0.222
2018	0.797	0.500	0.193
2017	0.767	0.530	0.213

Sources:

1. Grid Emission Factor for Peninsular and Sabah is calculated by the Energy Commission.
2. Data for Sarawak's Grid Emission Factor is from Sarawak Energy Berhad (SEB) Annual and Sustainability Reports.

Sarawak owns all Carbon Storage sites located onshore & offshore

Positioning Sarawak to be the CCUS Heartland for the Asia Pacific Region



Key Enablers:

- Regulations covering the life cycle of CCUS
- Technical know-how to manage CCUS opportunities and execute CCUS projects and hubs
- Fit-for purpose business model & favourable fiscal

KEY FACTORS;

4. Main Driver Towards a Green Economy

- Hydropower Dominance
- Green Hydrogen Potential
- Sarawak Sustainable Blueprint



S3 Exhibit 1

SECTOR AND KEY PRIORITIES			2030	2035	2040 and Beyond
Renewable Energy (RE)	Total power generation installed capacity (GW)		At least 10GW	At least 15GW	
	RE installed capacity (%)		60%	65–70%	
	Coal share of capacity mix (%)				0% (2045)
Natural Gas	Domestic gas utilisation share (%)		30%		
	Natural gas hubs (#)		4 (set up)	Continued expansion of the 4 gas hubs	
Energy Efficiency	Reduction of electricity intensity per capita in Residential & Commercial sectors vs. 2023 baseline (%)		2.5%	5–7.5%	7.5–10% (2040)
	Reduction of Industry sector energy intensity vs. 2023 baseline (%)		2–5%	7.5–10%	10–12.5% (2040)
Clean Hydrogen	Clean H ₂ production ¹ (MTPA)		0.1–0.2	1.0–1.3	2.0–2.5 (2050)
Low-carbon Mobility	Land	Public transport modal share (%)	20% (Kuching)	20% (Kuching) 20% (Bintulu)	
		Low carbon vehicle share of fleet for light transport (%)		35%	80% (2050)
		Low carbon fuel penetration for heavy transport (%)		20%	35% (2050)
	Marine	Low carbon fuel penetration in marine transport (%)		20%	40% (2050)
	Aviation	SAF blending mandate (%), based on international targets	1%	20%	47% (2050)
CCUS	CO ₂ storage sites operationalised (#)		2–3	3–4	>4
	Annual CO ₂ captured and stored/utilised (MMTCO ₂ e pa)		5–10	10–20	>20
Alternative Energy	Bioenergy production, in natural gas equivalent (mmscfd)			10	30 (2040)

1. Includes blue and green hydrogen. Development of low-carbon hydrogen is subject to development of CCS (for blue), opportunity economics, off-taker agreements, and implementation of supporting policies.