

Energy Transition in Malaysia: Technology Choice and Sustainability

On 10 November 2022, the third ET-MACE roundtable discussion had been successfully conducted at the Sabah International Conventional Center. The initiative is part of on-going discussions in driving advocacy and developing strategic plans towards the net zero carbon emission by 2050.

Hosted by the Sabah Energy Corporation (SEC) Sdn. Bhd, YBhg En. Adzmir Abdul Rahman opened the discussion with a welcoming speech. During this event, additional two ET-Mace council members were introduced, namely Ts Abdul Razib Dawood (Energy Commission) as well as Mr. Mohamad Nazri Mizayauddin (SEDA).

Reducing emission in 2050 by 6 technologies avenues:-

- Hydrogen
- Electrification
- Energy efficiency
- Renewables
- RE based CO2 removal (BECCS)
- Fossil fuel based CO2 capture & storage



Currently, emerging technologies are related to (a) autonomous and robot, (b) design & 3D printing, (c) Internet of Energy, as well as the (d) Quantum Computing.

While the industrial development and modernization is imperative currently, Dr. Sing Muk Ng (Sarawak Energy Sdn. Bhd.) highlighted the significance to evaluate it with respect to the local context, capability, and time frame. In this sense, the local context basically include the following:

- Energy resources i.e., hydropower, wind, wave, solar, tidal, etc.
- Resource optimization
- Hybrid (blending) technologies
- Circular economy
- Energy convergence
- Energy efficiency

Dr. Ng further added that the key enablers in terms of the local context include the following: Innovation that bring value added to the market demand, utilization of new technologies and best practices, as well as provision of open innovation that establish shared information and knowledge.

In addition. path forward that can be implemented to drive the energy transitions comprised of:

- Diversification of green energy resources.
- Continuous exploration of new generation technologies from renewable that is adaptable, efficient, and affordable.
- Cross participation and contribution from various industries.
- Public awareness for market creation, etc.

Overall, the energy transition by 2050 requires a collection effort and action from all stakeholders, and there is no single solutions that can solve the problem.

The needs of sustainability in

OIL AND GAS SERVICES AND EQUIPMENT (OGSE)

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Due to the sense of urgency in sustainability in the OGSE sector, the National OGSE Industry Blueprint that uphold four (4) pillars: resilience, competitiveness, development and sustainability has been introduced in year 2021, with targets of inclusion of five (5) companies in the Dow Jones as well as 70 OGSE100 companies to adopt and report their sustainability practices by 2030. To date, only 39% companies (14% non-PLCs and 25% PLCs) have reported their sustainability practice. Out of 25% PLCs, only 20% of them have reported their progress towards achievement in long-term and climate change targets.

Ms. Ilham Sunhaji (MPRC) reported that non-compliance to the strong sustainability practices may cause these companies to suffer from the limited in financial opportunities, loss of top-line growth and company values, failure in attracting and retaining talents, and negative public image. Based on the classification system of economic activities, the companies that bring harms to environment and with no remedial measurements are taken (Category: Watchlist) will cause them to face more stringent lending terms, such as shorter tenors, lower loan limit, as well as potential loan decline.

Thereby, PETRONAS uphold the sustainability as one of the core component in shaping the ESG strategies. Under the PETRONAS Sustainability Goal, four (4) elements are outlined:

- Net zero carbon emission by 2050
- Commitment to cap the GHG emission from the Malaysian operations at 49.5 mtCO₂e by 2024
- Commitment to increase renewables' capacity to 3000MW by 2024
- Reaching > 24,000 beneficiaries via education programs in 2020-2024.

Overall, best sustainability practices should comprise of system of governance, materiality assessment, sustainability disclosure and target setting as a way to clarify the organizations' priorities and improve the performance. The targets are considered as 'science-based' if they are parallel to the latest climate change that is deemed necessary to meet with the goals of the Paris agreement. In summary, Malaysian OGSE companies need to improve their sustainability practices, in which the assessment can be evaluated in terms of the local Malaysian requirement, best practice of global OGSE company, as well as international standards or guideline.

Moving forward, the OGSE Sustainability Roadmap 2023 to align with the National OGSE Industry Blueprint 2021-2030, and focus on six deliverables, as follows:

- Identification of climate-related risk and pathway
- Setting up the sustainability targets
- Provision on guidance on material sustainability topics
- Initiation of sustainability baseline assessment
- Development of simplified reporting standards for SMEs
- Engagement and communication with critical stakeholders

