

# LESTARI GEMS

Vol. 8

## The Future of Low Carbon Mobility

By Joshua Ng | [joshuang@kenanga.com.my](mailto:joshuang@kenanga.com.my)

### Featured Reports

**ZEVA: A Shift Towards Low Carbon Mobility**

**Tenaga Nasional: Leading the Transition to Low Carbon Mobility**

**Swift Haulage: The Electrification of Logistics Fleet**

### ESG News Round-up

#### New road tax structure for EVs expected by year-end

The Transport Ministry is working on a new tax structure for electric vehicles (EV), said minister Anthony Loke.

He said the new tax structure is expected to be unveiled at the end of the year and will feature prominently in the ministry's Budget 2024 proposals. The new structure is essential because the current EV tax exemption introduced under the previous government in 2022 will only last until December 2025. - *Bernama*

#### Emirates launches USD200m sustainable aviation solutions fund

Dubai-based airline Emirates has announced the launch of a new fund aimed at investing in research and development projects focused on reducing the environmental impact of fossil fuels in commercial aviation.

Emirates said that it has committed USD200m to the fund, making it the largest sustainability commitment by an airline, with the funds to be dispersed over three years. - *ESG Today*

#### EU countries to finalise 42.5% RE target

European Union countries are set to finalise a new renewable energy target to get 42.5% of the bloc's energy from renewable sources by 2030, a final version of the law showed.

The EU's existing target is to have a 32% share of renewable energy by 2030. The

new law sets a binding new goal of 42.5%, and says member states should aim for 45%. - *Reuters*

#### Vietnam PM approves USD135b power plan for 2030

Vietnam Prime Minister Pham Minh Chinh has approved a long-awaited power plan for this decade that needs USD134.7b of funding for new power plants and grids, the government said on Monday, in a move that may help unlock billions of dollars of foreign investment.

The plan, known as PDP8, is aimed at ensuring energy security for the Southeast Asian country while it begins the transition from its current heavy reliance on coal to becoming carbon-neutral by mid-century. - *Reuters*

#### UK could unlock GBP70b a year in renewable energy, report claims

The UK could unlock GBP70b every year by generating enough clean electricity to become a major exporter of energy to mainland Europe, according to a former government economist.

The analysis by former government economist Chris Walker for the UK Business Council for Sustainable Development found that by increasing Britain's clean electricity generation 50% above its projections for 2050, it could become a clean energy superpower capable of exporting GBP17b of green electricity to Europe a year. - *Guardian*

**ESG CALENDAR**

**CO2 Capture, Storage & Reuse 2023**  
**Organiser: Fortes Media Group**  
 Date: 16–17 May 2023  
 Venue: Crowne Plaza, Copenhagen, Denmark  
 Type: In Person, paid  
 Register [here](#)

**Future Mobility Asia Exhibition and Summit**  
**Organiser: Ministry of Energy, Thailand**  
 Date: 17–19 May 2023  
 Venue: Queen Sirikit National Convention Centre, Bangkok.  
 Type: In Person, Free  
 Register [here](#)

**3rd International Conference on Climate Change & Sustainability**  
**Organiser: Aver Conferences**  
 Date: 19–20 March 2023  
 Venue: Belstay Roma Aurelia, Rome, Italy  
 Type: In Person, Paid  
 Register [here](#)

**Responsible Business Asia 2023: Delivering Sustainable Leadership in a Time of Turbulence**  
**Organiser: Reuters Events**  
 Date: 23–24 May 2023  
 Type: Virtual, Free  
 Register [here](#)

**ChangeNOW 2023**  
**Organiser: ChangeNOW**  
 Date: 25–28 May 2023  
 Venue: Grand Palais Éphémère, Paris, France  
 Type: In Person, Paid  
 Register [here](#)

#### ESG Rating 4 stars

Company	F4GBM Index	Rating	TP (RM)
ABMB	Yes	OP	4.40
CIMB	Yes	OP	6.55
PBBANK	Yes	OP	4.90
KLK	Yes	OP	27.00
IOI CORP	Yes	MP	4.20
PPB	Yes	OP	19.30
MISC	Yes	MP	7.50
YINSON	Yes	OP	3.65
CTOS	Yes	OP	1.80
SUNCON		OP	2.13
GAMUDA		OP	5.15
SAMAIDEN		OP	1.15

#### ESG Rating 2 stars

Company	F4GBM Index	Rating	TP (RM)
TENAGA	Yes	MP	10.64
ARMADA	Yes	OP	0.75
TAANN		MP	3.90
KOSSAN		UP	0.85
SUPERMAX		UP	0.70
BAT		MP	12.00
CARLSBERG		MP	23.05
HEINEKEN		MP	27.70

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## A Shift Towards Low Carbon Mobility: An Industry Perspective

By Joshua Ng | [joshuang@kenanga.com.my](mailto:joshuang@kenanga.com.my)

We recently held a virtual session on the future of low carbon mobility featuring a panel of three speakers representing the Zero Emission Vehicle Association (ZEVA), Tenaga Nasional and SWIFT Haulage who provided industry perspectives in the development of a robust ecosystem that is vital to Malaysia's realisation of low carbon mobility in line with the targets set by the Low Carbon Mobility Blueprint (LCMB). We are upbeat on the country's low carbon mobility future as we are witnessing strong response by industry players in embracing low carbon mobility, embarking on various initiatives, collaborations on multiple fronts and making steady progress in key areas. The government too has stepped up with incentives and grants, and attracting investments to fast track the country's progress towards low-carbon mobility. We look forward to a clear and firm policy implementation that will accelerate the electrification of transportation.

The transition to low carbon mobility is vital if Malaysia is to achieve its goal of reaching net zero GHG emissions by 2050. The Low Carbon Mobility Blueprint (2021–2030) is formulated to drive the principles of sustainable mobility, kicking off a series of measures to decarbonise land transportation. Electrification of the transportation sector is seen as the most viable way for the country to transition to low carbon mobility. Transportation is the second biggest contributor of GHG emissions, making up over 25% of the total energy sector's emissions, and accounting for 40% of Malaysia's total energy consumption. As at September 2022, the Road Transport Department estimated that there were 21.7m active vehicles in Malaysia (a vehicle is inactive if the road tax is not renewed after three years). Last year, the government spent RM50.8b in subsidies for petrol, diesel and liquefied petroleum gas (LPG).

**Finally, a dedicated policy for EVs.** To accelerate the country's electrification agenda, a policy specifically for the EV industry is currently being drafted by the National EV Taskforce. According to Deputy Investment, Trade and Industry (MITI) Minister Liew Chin Tong, the taskforce, which was approved by the Cabinet in February, will review manufacturers, importers and brands to allow local companies to participate in the development of the EV ecosystem. It will also review the second aspect involving charging stations other than electronic and electrical (E&E) networks with EV manufacturers. This significant step shows that the government is heeding the calls of industry stakeholders on the need to regulate, standardise to ensure a concerted push towards low carbon mobility.

### Local development gaining momentum albeit challenges in charging network

Kicking off the discussion, **ZEVA** lauded the government's continuous efforts to support the growth and development of the EV industry through various incentives (Exhibit 3). As a non-governmental organisation that brings together all parties across the entire spectrum of the EV ecosystem including manufacturers, importers, utility company Tenaga Nasional, charge point operators, charging equipment providers, as well as research institutions and EV owners, ZEVA advocates for a cleaner future via a large-scale adoption of battery EVs (BEVs) in reducing carbon emission.

Being a unified voice for industry stakeholders, ZEVA plays an important role in helping the government achieve the 2030 targets of 15% of total industry volume which translates to about 700k EVs on the road and powered by 50,000 chargers as set out in the LCMB and eventually net zero in 2050 (Exhibit 1). Since its inception in 2021, ZEVA has been actively engaging the government, local authorities and agencies at the federal and state levels to provide feedback and suggestions in formulating EV-friendly policies, successfully paving the way to a more conducive environment for the development of a robust EV ecosystem.

According to Datuk Thiruchandran Thiruchelvam, who is part of the executive committee, 2022 was a pivotal year for the EV industry, as it hit the inflection point. Analysis by both ZEVA and Tenaga Nasional showed that a significant jump in the number of EVs, AC and DC chargers (fast chargers) with 3,690 EVs (as at February 2023) on Malaysian roads compared to only 428 units, 791 AC chargers versus 500 and 109 DC fast chargers from just nine in 2021 (Exhibit 2). To put this into perspective, 2022 recorded a TIV 720,658 while the latest data showed that there are more than 10,000 units of electric vehicles on the road. These EV and charging point figures are still meagre and remain far behind the targets, but the growth is strong and it will continue to gain momentum.

Looking ahead, ZEVA viewed the target of 50k charging points by 2050 as challenging but achievable. Similar to building any other big and new infrastructure, expansion at such speed and scale is cash flow intensive which requires huge investments, especially during the initial stage. Adding to the challenge is the still low adoption rate of EVs among Malaysian

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consumers and even fewer among businesses. In a study by the International Council on Clean Transportation, DC fast chargers, which are installed at commercial charging stations, cost between USD28,000 and USD140,000 installed per station, based on the kW charging capacity, brand, sitework and installation or labour rates. DC fast chargers' output ranges from 50kW to 350kW. Closer to home, in Thailand for example, the cost of an installed AC charger is about 300,000 baht (RM40k) and 1m baht (RM132k) for a DC charger. In Malaysia, a 7kW EV charger (AC) costs RM3,000–RM5,900 per unit while a 22kW model is RM3,500–RM7,900 (for home and commercial use) with installation cost starting from RM1,200. A DC charger is estimated to cost above RM100k.

Despite the hefty investment cost involved, ZEVA firmly believes that in order to instil confidence among users and businesses, building an adequate infrastructure network is essential if Malaysia wants to transition to low carbon mobility. The availability and convenience of EV charging facilities greatly influences EV adoption and utilization. Strong support from the government, local authorities and agencies is critical in terms of fiscal values and compliance fees in the initial years, fast-tracking processes, reducing red tape in the deployment of chargers, ensuring easy and affordable access to charging facilities in homes, offices and public areas, and making sure that charging station operators fulfil all safety and compliance requirements so that providing charging facilities can be a viable business.

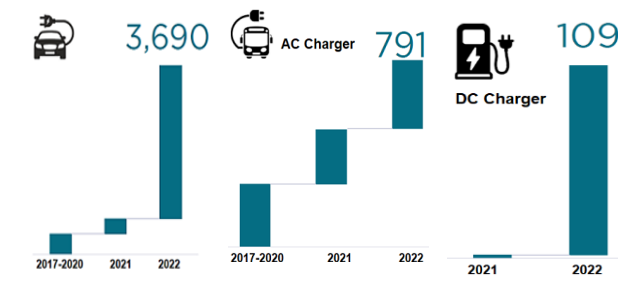
### Exhibit 1: Government Targets Towards Net Zero by 2050



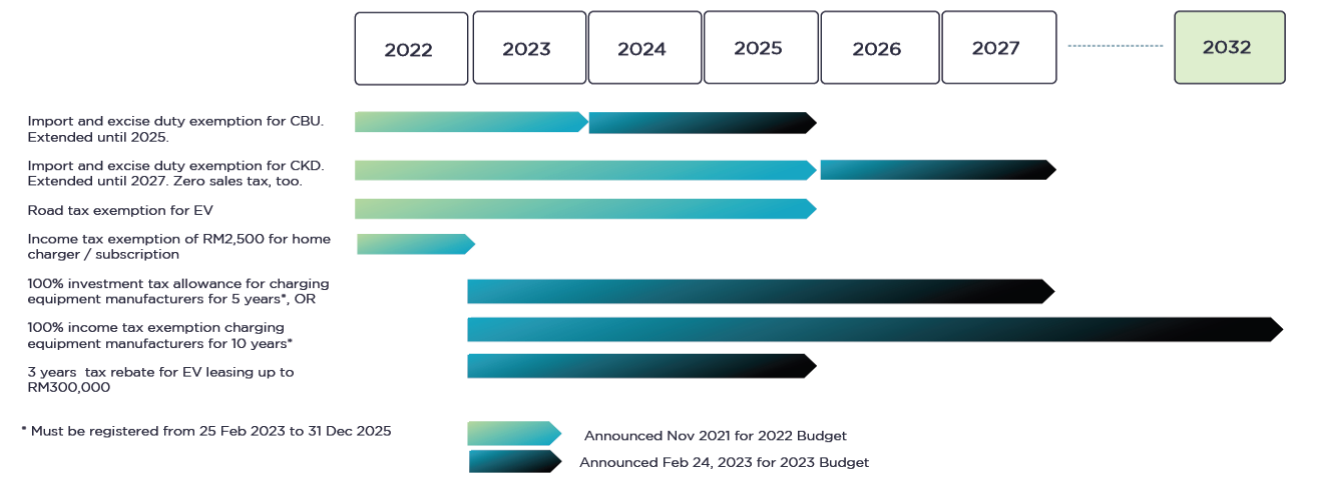
**2023: 4,000 chargers**  
**2025: 10,000 chargers**

Source: ZEVA, Tenaga Nasional, 2022 EV Taskforce (as of 4Q2022)

### Exhibit 2: Growth in EVs, AC and DC chargers



### Exhibit 3: EV-related Incentives



Source: ZEVA

One key area that ZEVA highlighted is policy changes that must take place, particularly those related to the deployment of chargers. The charging infrastructure is divided into two segments i.e. AC and DC chargers which present different deployment challenges. AC chargers, also known as destination chargers, are usually located where users park their vehicles for longer periods of time such as homes, office buildings and shopping malls.

Studies undertaken by ZEVA in the urban areas of Penang, Johor and Klang Valley, showed that 75% of people staying in areas under the jurisdictions of Putrajaya and the Kuala Lumpur City Hall (DBKL) live in high-rise dwellings. Based on the value of the properties, ZEVA expects at least 30% of the population would be potential EV users. Hence, these areas are identified as potential growth areas for charging facilities with heavy power consumption anticipated to take place at night when EV charging takes place.

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For users of AC chargers, convenience (availability) and cost (charging price) are more important than charging speed. While it is relatively easy for those living in landed properties to install a home AC charger, those residing in high-rise properties are faced with issues such as limited parking space and reluctance of the property manager to invest in a facility that is used only by a few. Coupled with extensive compliance requirements that must be fulfilled currently, these could lead to delayed decision making. To resolve these issues, ZEVA proposes regulations that will standardised safety and compliance requirements, fast tracking of application and approval procedures by local authorities and the implementation of the right-to-charge policy where property managers must provide charging facilities as part of the amenities.

DC chargers, on the other hand, are catered to long-distance travel where charging speed is critical; hence, users would be willing to pay a premium for the convenience of shorter charging time. Also, DC chargers are necessary to power electrified fleet vehicles, in particular those in the logistics and transportation industry, an important party to ensure the transition to low carbon mobility. The deployment of DC charges is hampered by the high cost of the charging equipment and having the right location (the most convenient are along major highways), adequate power solutions, all of which require multi-party negotiations, approvals and installations. For a successful deployment of DC charging network, there needs to be streamlined procedures with the right incentives and financing. Fleet owners should also be given special incentives to encourage them to start migrating to low emission vehicles.

Going forward, ZEVA aims to continue educating and building public awareness on the benefits of EVs, engaging with local authorities and agencies to ensure a smooth and seamless deployment of charging facilities, and also advocating policy changes to create a conducive environment for the development of an EV ecosystem.

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## Leading the Transition to Low Carbon Mobility

By Teh Kian Yeong | [tehy@kenanga.com.my](mailto:tehy@kenanga.com.my)

**Low carbon mobility is part of Tenaga Nasional's (TENAGA) Energy Transition Plan**, which is anchored on three key levers, namely decarbonisation, digitalisation and electrification. The development of a low-carbon mobility ecosystem is a crucial aspect of the electrification of the country's transportation sector. Based on surveys and feedback from its customers, TENAGA has identified three barriers that could hamper the growth of the EV industry i.e. (i) affordability (the price of the EV), (ii) range anxiety (the availability of charging points), and (iii) the technology cycle of EVs. Hence, to spur the transition to low carbon mobility, TENAGA is focusing on the following four areas in line with the Low Carbon Mobility Blueprint (LCMB).

### (i) Driving the EV industry through EV policies, advocacy and regulation

- a. TENAGA is a founding member of ZEVA. Together with its 33 members, TENAGA plays an active role in giving inputs to the government in formulating policies, advocating and drawing up regulations related to the development of the EV industry. Among the positive outcome of such engagement is the announcement of various incentives under the national budget, which have made the ownership of EVs more affordable and accessible. The introduction of many brands with different models, including the Neta V recently (currently the cheapest EV is the market at RM99,800), points to better choice and affordability in the near future.
- b. Recognising the need for more efficient procedures, it has introduced a **"green lane"** for charge point operators (CPOs) for an easier and speedier application process to encourage more players to become CPOs.
- c. TENAGA has also developed the Electric Vehicle Charging Station (EVCS) technical guide with the Energy Commission, a prerequisite to the requirement for all CPOs to obtain an EVCS licence by 31 March 2023. This is to ensure that all charging systems are standardised and meet the safety and technical aspects of the Electricity Supply Act 1990.

### (ii) Investing and developing EV public charging infrastructure

- a. TENAGA is directly involved in the **installation of public charging points** where it has committed RM90m over 2022 to 2024 to install 120 chargers mainly along major highways and trunk roads. Its TNB Electron DC charging stations are already operating in three R&R locations i.e. Tapah, Perak (northbound) and Air Keroh, Melaka northbound) along the PLUS Highway and Paka, Terengganu (northbound) in the East Coast Expressway (Exhibit 1). Another six DC chargers will be operational this year in the R&R stops in Machap, Kelantan (southbound) Rawang (northbound), Gunung Semanggol, Perak (southbound), Gurun, Kedah (northbound & southbound) and Paka (southbound). TENAGA has committed to putting 3,300 EV chargers to work by 2025, one-third of the 10k target set by the government.
- b. There are two approaches on the **supply of power to charging stations** i.e. systemic generation where charging stations are powered by the grid directly, and localised generation where the charging stations are powered by a combination of solar power generated by panels installed at the station, battery and power from the grid to spur a higher mix of clean energy for EV charging. This means an EV can be directly charged with solar energy and when there is no charging, the solar power is stored in the battery or redirected to the grid. Deployed by TNB Electron, this charging system can be made available for home installation as well.
- c. TENAGA believes that **battery swapping** will play a more prominent role with the increased adoption of EVs, having already been deployed in Malaysia for electric motorcycles. Its subsidiary Tenaga Switchgear Sdn Bhd (TSG) is working with several parties to roll out battery swapping stations in Malaysia and across ASEAN. Going forward, TENAGA sees the battery swapping service extending to passenger cars, similar to the current development in Norway where it is gaining traction. Nevertheless, the key success factor is the standardisation of battery for vehicles where a battery that is universal across multiple vehicles will be ideal.
- d. TENAGA, via its subsidiary TNBX Sdn Bhd, also offers an array of **solutions for potential CPOs** including the setting up of a charging platform, supply agreements for renewable energy and smart city planning (Exhibit 2).
- e. As part of its ESG initiative, TENAGA will be gradually **converting its current fleet** of 4,217 ICE vehicles comprising lorries, trucks, vans and passenger cars into EVs.

### (iii) Forging partnerships to nurture EV Ecosystem growth

- a. TNB Electron is actively engaging and collaborating with various stakeholders to nurture the growth of an EV ecosystem. Thus far, it has formed partnership with:
  - i. **vehicle manufacturers, importers and distributors** such as Sime Darby, BYD and BMW to understand market depths and needs, assess the potential adoption and charging point needs of EVs;

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- ii. **property developers** to incorporate building EV infrastructure within the development. TENAGA is working with SP Setia to embed EV charging infrastructure in its development so that its property projects are equipped with solar, battery and EV power charging,
  - iii. **fleet management companies** to facilitate their transition to EVs. TENAGA's partnership with DHL Express Malaysia has seen the global logistics and shipping company deploying six electric vans to its fleet across Klang Valley for last-mile deliveries.
  - iv. **charge equipment manufacturers** on charging equipment costs, standards adoption and regulatory framework, streamlining the setting up of charging stations and making it more affordable so that more parties can take part in the development and operation of charging facilities.
- b. TENAGA is a key player in **talent development** in the Malaysian electricity supply industry. In tandem with the rapid development in the EV industry, its training academy ILSAS now offers EV-related reskilling programmes (also open to public) to help Malaysia build and develop capacity for the energy transition in the transportation and automotive sectors.

**(iv) Accelerating customer adoption by promoting the convenience of using EVs.** TENAGA is leveraging its network of 125 branches (Kedai Tenaga) located in all major districts of the country to engage consumers directly, raising the awareness in EV and promoting electrification as the mobility of the future. So far, it has received positive feedback from its customers on its public charging facilities with the utilisation rate on its three existing stations exceeding expectations. TENAGA is organising a conference on energy transition in August with "Electrifying Mobility" as one of the three themes (Exhibit 3).

TENAGA is committed to realising the EV market potential in Malaysia in line with the targets set by the government. By 2025, it aims to help put 33,350 EVs on the road which will reduce 69,000 tons of CO2 emission and generating annual electricity sales of 0.15 TWh. By 2030, TENAGA sees further growth with 18,000 charging points installed (out of the 50k target), 524,409 EVs with a reduction of 4,432,000 tons of CO2 emission and annual electricity sales of 2.318 TWh. The steady growth in the demand for power will not only drive the development of green sources, it will contribute significantly to the demand and sales of green energy.

We are optimistic on TENAGA's energy transition plan as it is an aggressive step in addressing its ESG issues, particularly its reliance on coal generation capacity currently that forms a big chunk of the country's CO2 emissions. And the success of a low carbon mobility future depends on not just the electrification of vehicles, but a higher proportion of renewable energy (RE) in TENAGA's energy generation mix. Towards this end, TENAGA is embarking on a two-pronged approach i.e. increasing its RE capacity and early retirement of its coal-powered plants. TENAGA has said that it is focusing on hydro power, and has also embarked on floating solar studies. It is also seeking to shutter its 1,400 MW Kapar coal plant in Selangor, originally slated to retire in 2029, up to a year ahead of schedule as part of its initiative to achieve 8,300MWac RE capacity by 2025. Coal makes up 43% of its power generation mix followed by gas at 36%, hydro 17% and solar 2%.

We continue to like TENAGA for: (i) its dominant position in power generation, transmission and distribution in Malaysia; (ii) its earnings defensiveness backed a resilient domestic economy and its assets that are largely regulated, and (iii) its heavyweight index-linked stock status. Maintain OP with a higher DCF-derived TP of RM10.64 (WACC: 6.7%; TG: 2%) from RM10.00 as we raise our DCF valuation to RM11.20 from RM10.52 and ascribe a 5% discount to reflect its 2-star ESG rating. The upgrade in our DCF valuation is attributed to a lower WACC of 6.7% from 7.1% as we tweak our previous 45:55 debt-to-equity ratio assumption to 55:45, which is TENAGA's optimal target level. The terminal growth rate remains unchanged at 2%.

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## Exhibit 1: A TNB Electron Station



## Exhibit 3: TENAGA's Energy Transition Conference



SAVE THE DATE

**28-29 AUGUST 2023**

ACCELERATING A RESPONSIBLE ENERGY TRANSITION  
KUALA LUMPUR CONVENTION CENTER

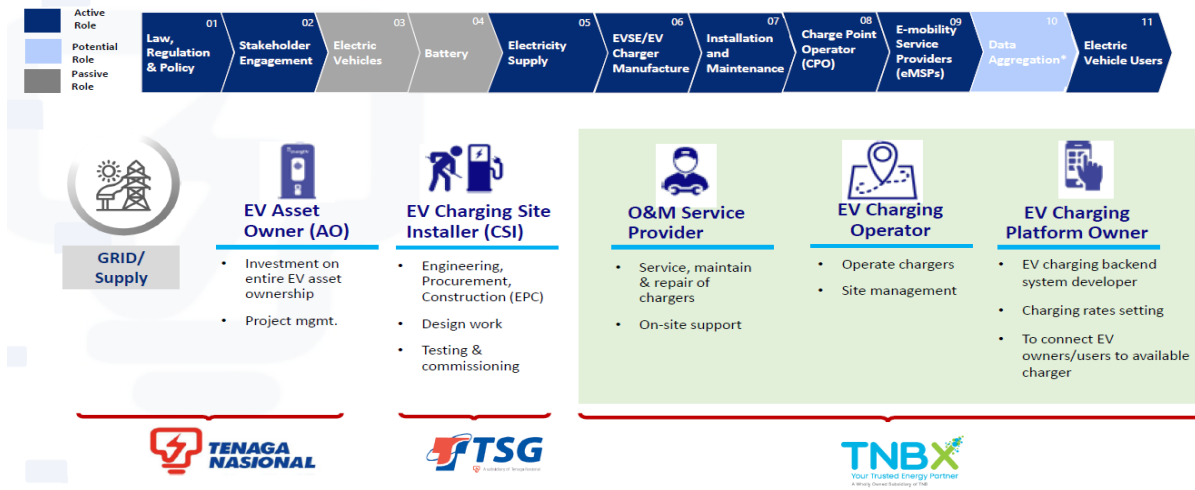
Accelerating a responsible Energy Transition

3 themes of The Energy Transition Conference 2023

- Transitioning Energy
- Electrifying Mobility
- Sustainable Cities

Register your interest

## Exhibit 2: TENAGA's Offerings of Services to Potential CPOs



Source: Tenaga Nasional

## The Electrification of Logistics Fleet

By Wan Mustaqim Bin Wan Ab Aziz I [wanmustaqim@kenanga.com.my](mailto:wanmustaqim@kenanga.com.my)

The electrification of logistics fleets can play a significant role in the reduction of emissions. In Malaysia, transportation activity emits some 25% of the country's total GHG emissions, making it the second biggest sector after electricity and heat production. While much of the spotlight for a low carbon mobility future is on passenger vehicles, decarbonisation of logistics operations is gaining momentum as commercial vehicles, particularly logistics fleets, are a significant component. According to the Ministry of Transport, there are 67,613 prime movers in Peninsular Malaysia while Sarawak has 7,278 and Sabah 1,467, traversing across the country, enabling the delivery of goods to and from ports to businesses.

A study by the International Council on Clean Transportation showed that an operator of a 10-truck electric fleet can achieve considerable savings of up to EUR15,000 annually, or about 10%–15% of total energy costs in Europe, including charging. In Malaysia, the electrification of logistics fleets is still in its infancy. Swift Haulage (SWIFT), which has more than 1,500 prime movers, is the first to integrate EV trucks into its fleet, signing a memorandum of understanding (MoU) with Volvo Trucks Malaysia in August 2022 to bring in two electric trucks.

**SWIFT's strategy towards carbon neutrality.** For SWIFT, apart from reducing emissions, the electrification of its fleet will also result in lower fuel costs which in turn will improve its operation costs. The electrification is made more urgent by the European Union's move to implement the carbon border adjustment mechanism (CBAM) by 2026 which will impact the entire supply chain of businesses. As Malaysia is a trading nation with many companies exporting to the EU and US, emissions from the logistics partner are included as Scope 3 of the importers' total carbon emissions. Hence, logistics players will be required to fulfil certain emission reduction targets.

In SWIFT, 94% of the group's total emissions are from Scope 1 largely made up of emissions from its diesel and liquefied petroleum gas (LPG) consumption (Exhibit 1). Of this figure, 99% of the diesel consumption stemmed from its fleet of prime movers and trucks with a small portion used by its yet-to-be-converted forklifts. As such, targeting Scope 1 emissions will see the most significant reduction in carbon emissions and for this, SWIFT is targeting to put its Volvo electric prime movers on the road by 4Q 2023. SWIFT's transition plan involves completely upgrading its fleet to the latest fuel-efficient models of Euro 5 prime movers (c.5% reduction in CO2 emission over five years' operation assuming 100km mileage per year) from the current Euro 3 prime movers (currently, SWIFT owns 1,546 prime movers), by April 2024. At the same time, the group is working towards achieving 100% battery-operated forklifts in the near term.

**Benefits of fleet electrification.** The obvious advantage of an electric prime mover is that it directly reduces CO2 emissions as it produces zero tailpipe emissions. This also results in improved air quality as electric commercial vehicles travel to different localities are shown to release about three times less GHG emissions compared to diesel vehicles. Based on studies conducted by SWIFT, its operations cost will be lowered as its fuel cost (electricity) will be cheaper compared with diesel. While the current cost of diesel is still manageable due to fuel subsidy, SWIFT is mindful of the eventual reduction or even removal of fuel subsidies which could have a big impact.

EVs also reduce noise pollution as the vehicles produce less noise compared to diesel engines, making it ideal for urban operations. Another important factor pushing for the electrification is regulatory compliance. As countries around the world set emission targets in line with their respective net zero ambitions, so are companies that seek to meet those goals. SWIFT's customers, in particular large companies and multinational corporations, are demanding that their logistics services providers manage and cut emissions in order to meet the customers' Scope 3 targets.

**Key considerations and challenges in fleet electrification.** SWIFT listed the following areas for a feasibility study by logistics companies in order to make an informed decision on electrifying their operations (Exhibit 3):

1. **Infrastructure.** Although there was a significant jump in the number of public AC and DC chargers from 2021 to 2022, there was not much consideration to commercial vehicles, rendering most of the available chargers out of reach for logistics companies. SWIFT noted that AC chargers are not applicable to commercial vehicles due to their much larger battery size at 370 kW. At this size, even with the fastest 240 kW DC fast charger, it takes almost two hours to fully charge an electric commercial truck. Also, substations need to have bigger supply of electricity current (amp) in order to power a much bigger capacity charger. Hence, significant changes need to be made not only in installing different DC chargers but also the high charge requirement for electric trucks.
2. **Range.** Based on SWIFT's observation, most prime movers that are available now have a low range of 300km per charge, which is a constraint for long haul travel. It would not be possible to travel between Klang Valley and Penang, Johor or even Kuantan without costly and time-consuming recharge between the destinations. Hence,



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electric trucks are best used in port haulage operations to cater to customers located between the port and nearby industrial areas (e.g. between Port Klang and Klang or Shah Alam) where the vehicles are able to return to the base at the end of the shift to be readily charged for the next day.

3. **Upfront cost.** Currently, an electric prime mover cost is almost triple (c.RM1.5m) of an internal combustion engine (ICE) truck despite the various incentives. The electrification of fleet will require higher upfront cost.
4. **Parts cost.** SWIFT shared that two-thirds of higher cost associated with an electric prime mover is attributed to its battery. Current technology dictates that the lifespan of an EV battery is about eight years but as electric trucks are a fairly new development, it remains to be seen how long the battery will truly last before it starts to lose its capacity. There are also still many “unknowns” in terms of practical usage.
5. **Supply chain.** Similarly, as the technology of electric trucks is still new, the supply and availability of parts and batteries could face challenges during these initial years.
6. **Maintenance.** As of now, SWIFT foresees issues with regards to maintenance work for electrified fleet as mechanics still lack the required knowledge and skills. Although most logistics companies are equipped with their own workshops and team of mechanics, a new technology presents risks and challenges in handling parts and high voltage batteries.
7. **Training.** Drivers and operational staff require proper training to handle electric vehicles. As these vehicles need charging, drivers must also incorporate route planning along the availability of suitable charge stations and using of high-power chargers to optimise their deliveries.
8. **Regulations** on the adoption of electric commercial vehicles such as safety and compliance requirements, incentives and the fuel subsidy structure are among the many factors at play in the electrification of logistics fleets.

**Going forward, to optimise its electrified fleet,** SWIFT is identifying customers that are best suited for the use of its electric prime movers. Deciding factors include locations within the limited range of 300km, dedicated routes and customers with specific and stringent emissions target who are willing to pay a premium for the use of zero emission vehicles. This will also allow SWIFT to discuss with its customers on passing through some of the extra costs involved in its transition to low carbon mobility. To cater to its own needs, SWIFT is installing charging points in its base to enable overnight charging of its electric vehicles. It is also looking at installing chargers at designated warehouses to optimise charging during the loading and unloading of goods. Meanwhile, its MoU with Volvo Trucks Malaysia allows SWIFT to tap into the expertise of the Swede truck maker in terms of servicing, repairs and knowledge transfer to SWIFT's technical team.

On a positive note, SWIFT has been getting more enquiries from customers on its plan to further electrify its fleet, showing increased interest and potential in deploying electric trucks in spite of the higher cost. The group is confident of the bright outlook in its electric fleet with Volvo targeting half of its fleet sold will be EV trucks.

SWIFT hopes to see more incentives by the government such as grants by the Malaysian Investment Development Authority (MIDA) for logistics players when they inject EVs into their fleet. Meaningful collaboration among utility company Tenaga Nasional, clean energy company Gentari and charge point operators to roll out infrastructure that can accommodate logistics and transportation companies is key to the successful deployment of electric commercial vehicles.

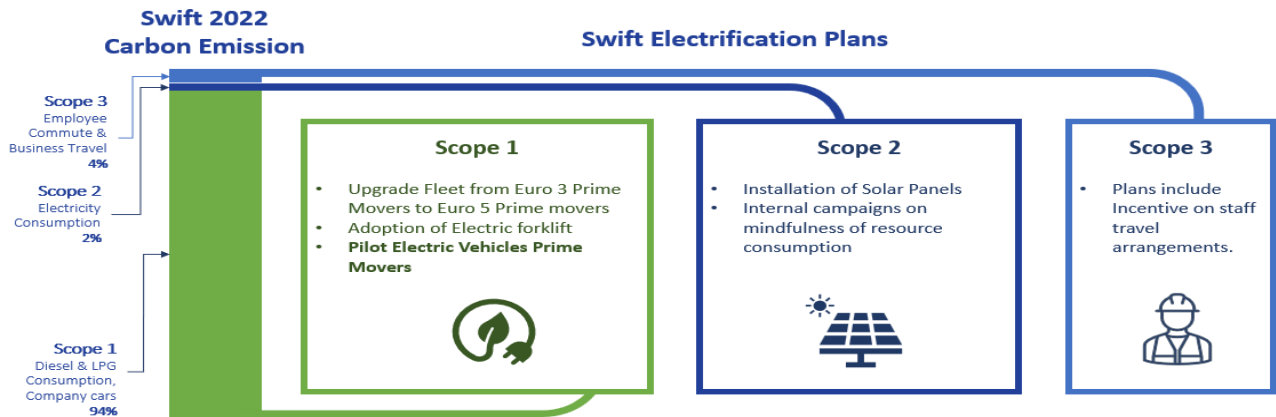
The future of electrification in logistics is rapidly evolving, with new technologies and trends emerging on a regular basis. SWIFT holds the view that in order to stay competitive and successful, logistics operators must stay up-to-date with the latest developments in electrification and anticipate future trends and challenges. SWIFT is open to adopting other technology beyond battery powered vehicles such as hydrogen fuel cell as the technology continues to develop. The low carbon mobility future is the new reality.

We continue like SWIFT for: (i) its leading position in the Malaysia haulage market commanding close to 10% share, (ii) its value-adding integrated offerings resulting in a superior pre-tax profit margin of c.10% compared to the industry average of 4%, and (iii) the tremendous growth potential of its warehousing business, riding on the booming domestic e-commerce. We maintain our OUTPERFORM call with a TP of RM0.97 based on FY24F PER of 14x which is in-line with the average forward PER of local logistics companies (i.e. TASCOS, and TNLOGIS).

Risks to our call include: (i) sustained high fuel cost, (ii) global recession hurting the demand for transportation service, and (iii) delays in its primary warehousing expansion plan.

17 May 2023

## Exhibit 1: SWIFT's Carbon Neutral Plan



Source: Company, Kenanga Research

## Exhibit 2: An Impression of SWIFT's Electric Prime Movers based on Volvo FM Electric, 180–540 kWh, 2–6 batteries, with range up to 300km



Source: Company, Kenanga Research

## Exhibit 3: Key Challenges in Fleet Electrification



Source: Company, Kenanga Research

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**KENANGA INVESTMENT BANK BERHAD (15678-H)**

Level 17, Kenanga Tower, 237, Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia

Telephone: (603) 2172 0880 Website: [www.kenanga.com.my](http://www.kenanga.com.my) E-mail: [research@kenanga.com.my](mailto:research@kenanga.com.my)