PENANG MONTHLY

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TWO-WHEELED ELECTRIC VEHICLES: THE BEST OPTION FOR PENANG

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1. Supply Penangites with information about significant issues in order to promote public participation;
2. Encourage discussion about various aspects of Penang's fate and fortune;
3. Profile Penang personalities who have contributed, sometimes in very unassuming but critical ways, to the reputation and wellbeing of the state;
4. Put the spotlight on ordinary Penangites who otherwise go unnoticed, but who nevertheless define the culture of the state in essential ways;
5. Highlight the importance of Penang as a generator of culture, education, industry and cosmopolitan values;
6. Emphasise present trends in the arts, industry, politics and economics which affect the immediate future of the state and country; and
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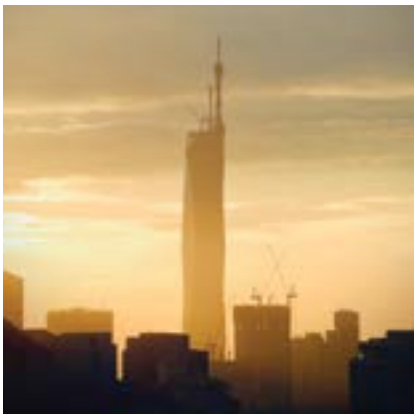

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AS THE SUN WARMS THE VALLEY...

BY OOI KEE BENG

I AM IN the foothills of the peninsula's main mountain range, off Gopeng. It is early morning, 7am. From the balcony of my room, I throw pellets from a bag provided by the hotel to the multitude of pink and gold fish in the pond. They go into an occasional frenzy as the food hits the water surface, giving up the natural and harmonious swimming pattern they had a minute ago.

Two things occur to me. First, how finding food is the major concern of the fish as soon as the Sun is up. Second, how I, with my collection of smelly pellets that I dispense with a wave of my hand, am like the State. I feel the privilege, and the power. My largesse decides how the mass of fishes behave. I decide where and when they go into a frenzy.

Collecting assets, taking a cut along the way, and then favouring this section of the swarm of fish before other sections. That is my power. In this case, my power is arbitrary. Nothing tells me I should favour fish to my left and not the right. I am not accountable. To be sure, all in all, if I do it long enough and if there are enough pellets, I assume every fish gets something. In any case, the fish are optimistic.

I am a source of food, I distribute the energy that they need to survive.

I look up, into the jungle beyond the pond. The diversity of the tropical growth hits me. All is still, apart from the dispersing morning mists and the small birds winging between the trees; looking for insects, I assume. No one dispensing food there, except for Mother Nature. So much optimism.

I look at the trees. They vary so much. Some are darker than the others, some greener; there's one reaching beyond the others. Above the ferns and bushes are the fronds of the palm trees. Higher up the mountain slope, I see leaves of all sizes, some bunched and some stretched out on long branches.

They are still and calming, and part of the reason I am here for the weekend, to be far from the madding crowd. The madding crowd is of course somewhat like the birds and the fishes, fluttering and swimming to collect assets. Using energy burning in their vehicles to collect assets with which they can then buy more energy in the form of food for their families, and fuel for their tools. Their vehicles, their phones, their air-conditioners, their factories. Collect more to collect more.

The jungle is still. At the moment, there is no mountain breeze to move them. The Sun has just risen above the heights to the east, casting brightness onto parts of the carpet of trees. One can feel their awakening, sense them welcoming the heat and the light—energy for their verdant leaves to generate energy. They grow at a pace too slow for my impatient eyes to observe. But grow they do. Rooted in soggy soil, they just need the Sun to keep its promise to rise every morning in order to grow.

Unlike the fish imprisoned in the hotel pond, these trees do not need the State. They just need the Sun. Like the fish though, they do compete rather peacefully for energy. Millimeter by millimeter, day by day, they reach closer to the Sun.

As the air warms in the late morning, I am reminded that the fish and the birds need the Sun too. The temperature must be right for them to survive as well.

Life moves at such different speeds, but energy is always needed.

As I put away my pellets, and as the air becomes uncomfortably hot, I take one last look at how the Sun repaints the mountain scene. So different now from 20 minutes ago. The jungle chorus has changed. I make out insect sounds now, between the bird songs. In the distance, some dog is barking, probably asking for its breakfast from its owner.

I am as yet the only human around. Feeling calm, I stretch my limbs, tired from the long trek up the hills the day before to seek out a Rafflesia in bloom with the help of a young Semai man called Mat. By contrast, I remember my recent days as a member of the madding crowd. I sought sources of energy too, but realise now that I had worried too much. We don't really need much energy to survive. As animals, we are jumpy like the fish and the birds. But as thinking humans, we could be more like the trees, taking our time and waiting for the next sunrise. We need the pace of the Sun more than we need the power of the State. Nature before Man. Fauna has a lot to learn from the wisdom of Flora.

IN RESPONSE TO "WHO GETS TO COOK PENANG'S ICONIC DISHES" BY CAROLYN KHOR

BY MATHIEU WINNICKI

ON A RECENT trip to George Town, I took a break after an afternoon of wandering the narrow streets to sit down in a coffee shop when I stumbled on an issue of *Penang Monthly*. An article by Carolyn Khor caught my eye and I felt compelled to react to it. The title is what drew me in—"Who Gets to Cook Penang's Iconic Dishes". Since I am a chef and restaurant owner in Montréal, Québec, Canada who specialises in cooking these dishes, I felt I could definitely relate to the article's point of view. I was surprised to read about a call to regulate who would be allowed to re-create these hawker favourites. I would have to say that I agree with Ms. Khor's point of view, and would be willing to say that imposing restrictions on who is allowed to cook them could set a dangerous precedent, and even be counter-productive to the preservation of these treasured specialties.

Let me give you a bit of background and context to my situation and point of view.

I am born in Canada to a Chinese Singaporean mother and a Polish father. I was exposed to eating at a young age since both my parents were "foodies", and I have been travelling back to Southeast Asia since the age of six. Most of Mom's family is still in Asia, split between Malaysia and Singapore. As you can guess, they all love to eat. The debate between who has the better Char Koay Teow, chilli crab or kaya toast has been a discussion since I was a child. Who owns these dishes? On what side of the border were they created? I am not a food scholar, but to my understanding these "tze char" icons all came out of straits colonies under British Malaya, so to me, the country of Singapore was not even established, hence their roots are from the Malay peninsula, not a specific country. Don't quote me on that, I am just a simple cook.

My point is I chose to pay homage to my roots by opening a Southeast Asian-influenced restaurant in Canada with my brother, called Satay Brothers. We always loved hawker-style food, and there was nothing here even close to what we experienced in Asia. We wanted to bring these flavours to North America to expose local Canadians to the food we grew up with and loved. Are we allowed to cook these dishes? Some Asian expats seemed skeptical at first to see Caucasians on the wok frying up Mee Goreng or serving Laksa Lemak. Are we authentic?

What is authenticity once you displace the dish from its terroir? At first, we had trouble finding some key pieces and had to smuggle them in ourselves—belacan is not a common ingredient in Québec! My Mee Rebus has no candlenuts since I can't find any locally. I stand by our food, and travel back regularly to see family and can compare. The food we adopted and have recreated, these Penang and Malaysian staples, are on point.

After 15 years of hard labour, we have established a clientele in my home town that recognises these dishes that were not available before. Wouldn't it be a shame that they would not have been able to experience our style of food? Some clients can now order a Satay "Ayam" or get a "Kueh Salat".

When I first started creating this menu, that notion of whether I am allowed to cook this food came to my mind. The notion of cultural appropriation was a hot button discussion 15 years ago. One of my suppliers told me I was not Chinese enough. I am glad that we did not believe the hype and continued with our dream. The restaurant has done well and we are still going strong.

The idea of having only a select few gatekeep these recipes bugs me. I don't understand how anyone would think this is a way of preserving these dishes. Everyone I have trained in my restaurant from the recipes I adapted for a local clientele—mostly just spice levels—have excelled at recreating them.

For the supporters of these regulations, I ask them "Who will be behind the stove?" Since the restaurant business is a ruthless game, it means long hours in hot steamy conditions, with often lower wages. Who do they envision would take these jobs? From my understanding, many first- or second-generation hawkers worked hard to give their children an opportunity to go to school and have a better life. I am sure some kids have taken over family restaurants, but it's not the norm. Mom, being a "Chinese mom", never wanted us to get in to the restaurant business since we both went to school in our specific fields. She knew how hard it would be physically and mentally.

The supporters of these policies want the lineage to continue in their hawker footsteps kind of like a form of restaurant nepotism. Not realistic in my point of view.

I am sure our story is not unique, and that there are others from the Southeast Asian diaspora in the UK, the US or Australia that have brought their families' flavours over with them. I see that as something beautiful, and a way to preserve these flavour profiles for future generations. The best pizza is probably not from Naples anymore, and the top pastries and croissants are probably in Japan. I really doubt they are made by Italian or French chefs.

Thank you for taking a minute to read me, and wish you a wonderful day. Really enjoyed your publication. Was lucky to find this issue that has to do with food. Food is my life.

"Choose a job that you love and you will never have to work a day in your life."

PENANG ENERGY FRAMEWORK: MEETING THE STATE'S ENERGY AMBITIONS

BY NG SHIN WEI AND RENUKA RADAKRISHNAN

AS PART OF the commitment to the Paris Agreement to reduce the carbon intensity of the country by 45% by 2030, and to keep the global temperature rise to within 1.5°C, the Malaysian government introduced the renewable targets of 40% by 2035 and 70% by 2050. The National Energy Efficiency Action Plan (2016-2025) also sets a national energy efficiency target of 8% by 2025. A plethora of energy-related policies and regulations ensued, including the Renewable Energy Roadmap, National Energy Transition Roadmap and the Energy Efficiency and Conservation Act; all these could help Malaysia achieve its net zero target by 2050.

Adhering to the "Penang Leads" mantra, the State took the initiative to adopt a state-wide energy policy that would contribute to the achievement of these national targets. As a highly urbanised and developed state, Penang has higher electricity consumption per capita compared to the national average (see Figure 1). Its electricity consumption per unit of GDP has also been higher than the national average (see Figure 2), largely because almost half of its GDP comes from the manufacturing sector. The trend, however, has been on a downward trajectory, and the electricity intensity per GDP was likely to be below, if not on par with, the national average in the past two years. This is consistent with the downward trend of electricity intensity in the manufacturing sector in Penang (see Figure 3).

In terms of renewable energy (RE), Penang has made great strides. RE made up less than 1.5% (51MW) of the total installed capacity of Penang in 2018. It has since increased to around 5% (233MW) by 2023.[1] The Malaysia RE Roadmap estimated the total potential capacity of solar energy (rooftop and floating solar) in Penang alone could amount to 3,287MW.

ELECTRICITY INTENSITY

ELECTRICITY INTENSITY PER CAPITA (KWH/PERSON)

Source: PGC's own calculation and https://myenergystats.st.gov.my/dashboard

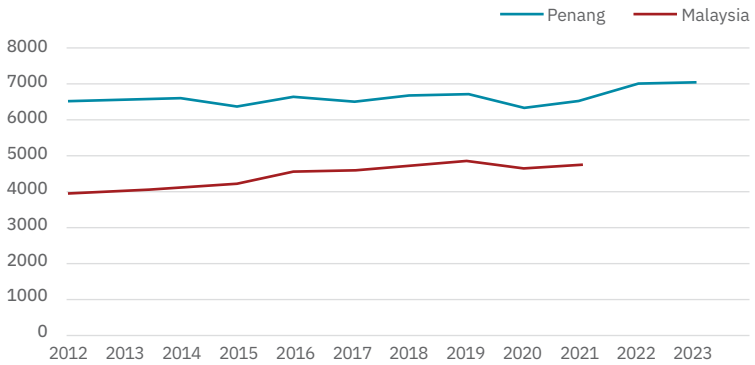


Figure 1: Electricity Intensity Per Capita (kWh/person)—Malaysia and Penang.

ELECTRICITY INTENSITY PER GDP (GWH/GDP)

Source: PGC own calculation and https://myenergystats.st.gov.my/dashboard

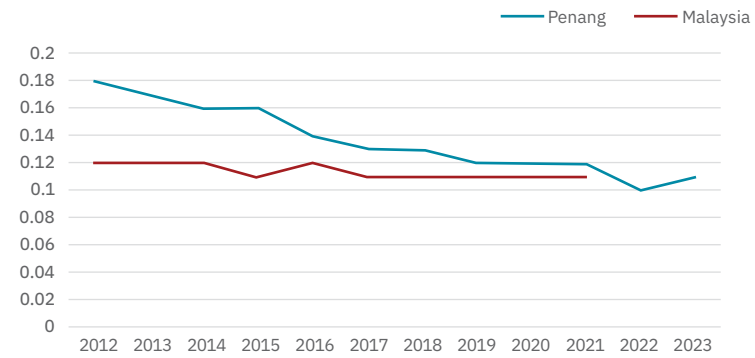


Figure 2: Electricity Intensity (GWh/GDP) in Malaysia and Penang.

ELECTRICITY INTENSITY FOR PENANG'S MANUFACTURING SECTOR (KWH/GDP)

Source: PGC's own calculation

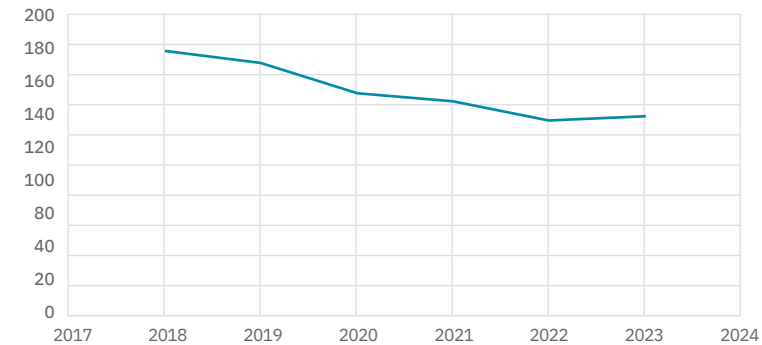
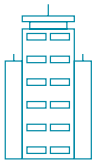


Figure 3: Electricity Intensity in Penang's Manufacturing Sector (kWh/GDP)

BEI REQUIREMENTS

All new buildings need to achieve Building Energy Intensity (BEI) by 2025

OFFICE BUILDING:



BEI of 150

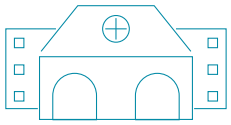
RETAIL:

BEI of 240

HOTELS:

BEI of 200 (1-3 stars) and BEI of 290 (4-5 stars)

HOSPITALS:



BEI of 200 (limited clinical services) and BEI of 290 (major clinical services)

ANNUAL BEI REPORTING (NON-RESIDENTIAL BUILDINGS)

- Voluntary submission from 2025
- Mandatory submission from 2026

UPDATE UNIFORM BUILDING BY-LAW CLAUSE 38(A)E

- Ensure MS1525 requirements are applicable to all new buildings, including residential buildings.

PENANG BUILDING ENERGY RATING SCHEME

- Launch a Penang Energy Rating Scheme.

By 2030, targets for **new** buildings should be **75% of the 2025 targets.**

PENANG ENERGY FRAMEWORK

The Penang Energy Framework (PEF) is hence important in making sure that Penang utilises its renewable energy sources optimally. It starts with energy use in the building sector, and will gradually expand to other sectors including transport, industry and so on.

Launched in November 2024, the clear targets and action plans aim to guide the State in energy transition from now until 2030. Main targets include 10% of RE and 25% reduction in electricity intensity (per GDP) by 2030. All public buildings will be mandated to generate its own RE—mandatory for new buildings or "if found suitable" for existing buildings. In addition, public buildings are also subjected to energy efficiency assessments and improvements.

New commercial and industrial stand-alone buildings are also required to source a portion of their energy from renewable sources based on the Tenaga Nasional Berhad (TNB) commercial and industrial tariff categories: either 25% (low voltage), 5% (medium voltage) or 2% (high voltage) RE according to their usage, or 75% of the roof to be covered with solar PV. New commercial buildings with air-conditioned spaces exceeding 4,000m^2 also need to source at least 2% of their total energy from renewable sources. While these targets may not seem too ambitious (more flexible RE purchase regimes like RE Certificate or Corporate Renewable Energy Supply Scheme (CRESS) were yet to be introduced or widely adopted when these targets were initiated), they serve as a starting point, and can be revised as the State sees fit.

Energy efficiency (EE) is as—if not more—important as RE when it comes to tackling energy use in the building sector. EE is usually a cost-effective way to conserve energy and reduce greenhouse gas emissions. PEF requires all non-residential buildings (public and private) to report Building Energy Index (BEI)[2] values annually—with mandatory submission starting from 2026. Also, new non-residential buildings must achieve specific BEI standards based on building type. More stringent BEI standards will apply to new buildings constructed after 2030. A BEI database will set a standard for efficiency in Penang and support the Building Energy Rating Scheme at the national and state level.

Additionally, PEF requires the state to amend the current Uniform Building By-Law (UBBL) Clause to ensure that the national standard MS1525[3] apply to all types of buildings, including residential buildings.

To bring PEF's vision to life, its implementation will focus on four key areas: Capacity Building, Awareness and Education, Incentives and Certifications, and Data Collection and Enforcement. Penang Green Council (PGC), as the implementing agency, is currently working with government departments, local councils, GLCs and related professional bodies to conduct Energy Management Courses and Communication, Education and Public Awareness (CEPA) programmes, and build the necessary infrastructure for reporting and monitoring.

Although the profile of Penang's energy sector depends heavily on national policy and incentive framework, PEF can turbocharge the transition through the adoption of forward-looking policies and regulations that increase RE and EE adoption locally, which will be a transformational footprint in the nation's energy sector.

FOOTNOTES

[1] Sources: TNB, SEDA and the Energy Commission

[2] BEI is a benchmarking method for monitoring the energy performance of buildings by referring to the energy intensity used per m^2 of floor area. It can be calculated by taking the ratio between the annual energy consumption of a building (kWh/year) and the net floor area of the building or Nett Floor Area (NFA).

[3] According to Pertubuhan Arkitek Malaysia (PAM), MS1525 is a code of practice that gives guidance on the effective use of energy, including the application of RE in new and existing non-residential buildings.

DR. NG SHIN WEI has almost two decades of experience in environmental policy. She has a legal background.

RENUKA RADAKRISHNAN is a senior officer at Penang Green Council. Her area of interest is in renewable energy, energy efficiency and green buildings.

RENEWABLE ENERGY IN MALAYSIA: THE HARD TRUTH AND THE WAY FORWARD

BY LIONEL YAP

MALAYSIA IS AT an energy crossroads, but most Malaysians don't even realise it. For decades, the global narrative on energy has been dictated by governments and corporations, controlling what the public sees and knows. The result? A skewed understanding of what is possible, practical and profitable.

The technology for sustainable energy has existed for decades. The issue has never been about feasibility, but rather about politics, business models and vested interests. Consider Jimmy Carter's solar panels on the White House installed in 1979 as a vision for the future; these were removed by Ronald Reagan in 1986 because they did not align with a fossil fuel-driven economy. The same thing happens today: good technology is overlooked because of bad advice, short-term profits and outdated policies.

Malaysia has been no exception to this pattern. The difference now is that we can no longer afford to sit back and let someone else dictate our energy future. For the first time in the history of Malaysia, we have the opportunity to lead the region in creating a brighter, greener future. We should seize this opportunity; we may never pass this way again.

WHAT MALAYSIANS ACTUALLY WANT: ENERGY THAT MAKES SENSE

The average Malaysian is not interested in energy policies or carbon credits—they just want electricity that is cheap, reliable and clean. But here's the catch: most of what's being sold as clean energy today comes with hidden costs.

Take electric vehicles (EVs). Marketed as green, they rely on lithium-ion batteries that require mining vast amounts of rare earth metals, often under unethical labour conditions. What's more, Malaysia's electricity grid still depends on fossil fuels, meaning that charging an EV here is not as clean as it sounds. A slightly "better" option could be hybrid EVs—these vehicles run on regular petrol or diesel or charging, with its internal combustion engine (ICE) operating as a generator, charging its batteries for the vehicle's all-electric drivetrain.

I'LL HUFF AND I'LL PUFF– AND NOT MUCH WILL HAPPEN

Despite the global push for wind power, Malaysia's geography and climate make large-scale wind energy impractical. Malaysia sits on the equatorial belt, which means consistent but weak wind speeds nowhere near what is required for efficient wind turbines. This is especially true for Borneo. Unlike the Philippines, which experiences powerful seasonal typhoons, Sabah, Sarawak and Peninsular Malaysia, though sharing the same latitudes, remain relatively untouched by strong winds.

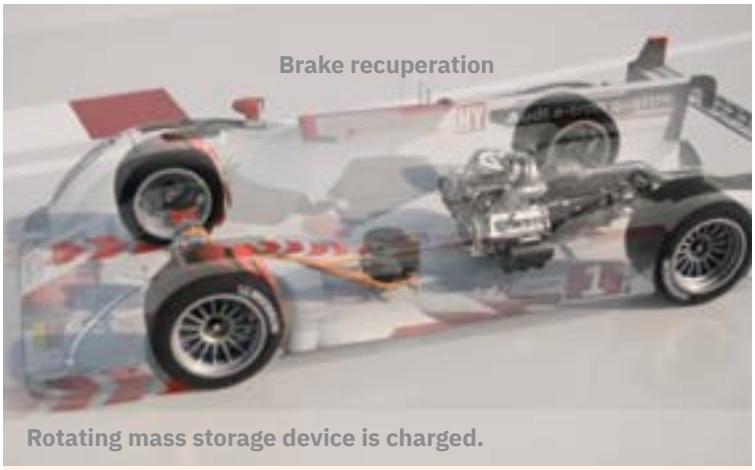
Historical records detail how pirates operating in Borneo's waters relied on oar-driven skiffs instead of sails. Their vessels were designed for speed and manoeuvrability in calm waters where wind propulsion was unreliable. Low and inconsistent wind persists today. What has changed is that the pirates have exchanged manpower for horsepower to power their skiffs, and guns for cutlasses (a story for another day). However, there are frontier tech companies that could change this in the not-so-distant future.

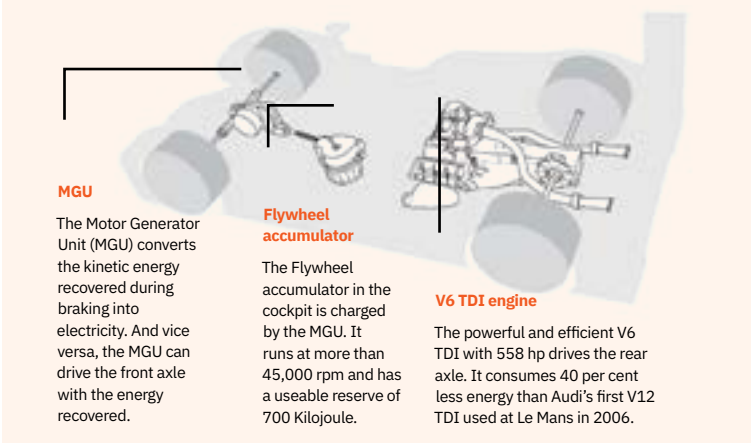
Malaysia's real strength lies in sun power. Unlike wind, sunlight is abundant and consistent throughout the year, making solar power a far more logical and scalable choice for the country's renewable energy future.

THE STORAGE PROBLEM: CAN WE MOVE BEYOND LITHIUM?

Energy storage is the key to making renewables work at scale, and yet, most discussions revolve around lithium-ion batteries, which are far from perfect. What if we had better alternatives? There are four fundamental forms of storage: Electrical, Chemical, Mechanical, and Thermal.

The rest are combinations of the above. So, theoretically, we would have: 4 factorial (4!=4x3x2x1=24) ways for energy to be stored. The one we are most familiar with is electrochemical, which is nearly everything we use that is powered by a battery.





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CAPTION

1. R18 E-Tron Quattro was the first hybrid car to win the Le Mans 24-hour endurance race.

1

SALTWATER BATTERIES: A SAFE AND SUSTAINABLE OPTION

Saltwater batteries have been around for years as a non-toxic, sustainable alternative to lithium-ion. Companies like Aquion Energy had proven their viability before collapsing—not because the tech failed, but because they followed a business model designed for quick returns rather than long-term success. The company was eventually bought out by a Chinese firm and buried under conventional energy interests.[1]

The late Stanley Myers demonstrated back in the 1990s that real-time hydrolysis of water (regardless of purity—read within reason) was possible; to prove that, he drove across Texas in his water-powered dune buggy. State-level news reported his trip across Texas—other related topics are now available on YouTube. Malaysia, and more so Penang, is surrounded by seawater, and could leverage this technology. So, the problem is not the science, it is the market's resistance to disrupting established battery supply chains, both lithium and ferrous-based technologies.

2

FLYWHEEL ENERGY STORAGE: THE TECH THAT ALMOST MADE IT

Flywheel energy storage systems store energy mechanically by accelerating a rotor to high speeds and maintaining it as rotational energy. They offer high power density, rapid discharge capabilities and long lifespans.

CASE STUDY: AUDI'S LE MANS INNOVATION

Audi's R18 E-Tron Quattro, which competed in the 24 Hours of Le Mans, utilised a flywheel-based hybrid system developed in collaboration with GKN Hybrid Power. This system stored energy during braking and released it during acceleration, providing a performance boost. Despite its initial success, Audi transitioned to lithium-ion battery systems in later models, citing advancements in battery technology and energy density as reasons for the shift.

However, with ongoing improvements in materials and engineering, flywheel technology could see a resurgence, especially in applications where rapid energy discharge is essential. Incidentally, the R18 E-Tron Quattro was the first hybrid car to win the Le Mans 24 hour endurance race.

3

FLOW BATTERIES: COMMERCIAL BUT UNDERUTILISED

Flow batteries store energy in liquid electrolytes contained in external tanks, making them scalable for grid-level storage. Companies like BASF have partnered with startups to develop and commercialise redox flow batteries. Among their advantages are that they require smaller installations compared to lithium-ion (LiPo) systems (read that as stackable, because of cooling requirements, lithium-ion polymer batteries are not), minus the usual hazards of lithium e.g. thermal runaway. Yet, adoption remains slow due to:

- High Initial Costs: Unlike lithium-ion, which benefits from mass production, flow batteries still need scale to drive costs down. That being said, they do tend to outlive lithium batteries, if salesman talk is to be believed.
- Paradigm shift inertia: The lack of volume equals lack of familiarity of application, which then equals engineering reluctance. If there was engineering acceptance, there would be higher volume which would equal familiarity—a technical catch 22 resulting in sluggish adoption.
- Market hesitation: The industry is slow to shift away from the dominant lithium supply chain—summed up in the old saying "If it ain't broke, don't fix it".

Regulatory incentives and industry-wide standardisation could encourage adoption. Governments could support pilot projects to demonstrate their viability in real-world scenarios.

THE IMMEDIATE HORIZON: MALAYSIA'S ENERGY ROADMAP 2025-2032

1

SOLAR ENERGY IN MALAYSIA: NOVELTY TO NECESSITY

As Malaysia navigates its energy transition, the next three to seven years will be crucial for determining the balance between economic growth and sustainability. Solar remains the most viable renewable energy source, but complementing it with other renewables such as biogas, geothermal and biomass could further diversify Malaysia's energy mix. Malaysia is in the tropics. We have sun all year. Utilising solar is a no-brainer.

What will require a few more brain cells is how we handle its intermittency. While home solar installations are growing, large-scale solar (LSS) projects

will face (I believe) the coming requirement of energy storage systems (ESS) for grid integration. The power grid was designed for centralised fossil fuel generation, not decentralised renewables. If Malaysia is to further enhance solar utilisation, we will need to continually advance our grid policies and guidelines, perhaps also explore other energy storage solutions.

2 BIOMASS: FEEDSTOCK IS NEVER EVER ENOUGH

"Not enough *la*, it is that simple"—this is the usual rhetoric when it comes to biomass as a viable renewable energy source. Malaysia's vast agricultural sector, palm oil in particular produces an abundance of organic waste that could be harnessed for biomass energy. Palm kernel shells, empty fruit bunches (EFB) and other residues hold significant potential for power generation, reducing reliance on fossil fuels. The challenge lies in creating an efficient and sustainable biomass supply chain; current waste management practices are fragmented and underutilised. Without proper collection and processing, much of this waste is discarded or burned, contributing to pollution rather than energy generation.

To overcome these barriers, Malaysia needs stronger policies that incentivise biomass utilisation, from tax benefits for waste-to-energy projects to investments in supply chain infrastructure. Developing regional biomass hubs, where agricultural waste is systematically processed into biofuels or electricity, could create a sustainable energy loop. With the right framework, biomass could become a key component of Malaysia's renewable energy mix, turning waste into economic value while reducing environmental impact.

The decision to pursue biomass (or not) is a commercial one. It all hinges on critical mass, much like recycling solar modules. Biomass shares the same conundrum of having to reach a critical mass for it to be more attractive. This trend has taken flight and will likely continue as plantation owners make more money by turning their waste into higher value products such as doormats or "netting" to reinforce exposed hill slopes while they are being replanted.

"If Malaysia is to further enhance solar utilisation, we will need to continually advance our grid policies and guidelines, perhaps also explore other energy storage solutions."

3 GEOTHERMAL ENERGY: HOT BUT UNBOTHERED

Despite being underutilised, geothermal energy holds promise for Malaysia, particularly in Sabah's Tawau geothermal field, which has an estimated potential of 30MW. Unlike intermittent solar or biogas, geothermal provides continuous base-load power, making it an attractive renewable energy option. However, high initial investment costs, a lack of local expertise and regulatory hurdles have stalled its development. Additionally, some geothermal sites may be near protected areas, raising environmental concerns that complicate large-scale adoption.

Expanding geothermal beyond Tawau requires public-private partnerships (PPP) with international geothermal experts from countries like Iceland, Indonesia or Japan to de-risk investment and provide technical know-how. A phased approach, starting with direct-use geothermal applications (e.g., for heating in agriculture, aquaculture or tourism) before full-scale power generation, could make adoption more feasible.

Additionally, launching pilot projects in other potential geothermal regions, supported by government incentives and research grants, would help build expertise and prove commercial viability. With the right strategy, Malaysia could integrate geothermal into its energy mix as a reliable and sustainable source.

4 GAS AS A TRANSITION FUEL: BUT FOR HOW LONG?

Natural gas has been sold as a clean transition fuel for Malaysia, but that's just clever marketing. The phrase "Baseload is a business model, not a Technology" says it all. Gas power plants exist because they make financial sense for energy providers, not because they are necessary for energy security.

What Malaysia needs is a structured phase-out plan for gas, one that aligns with emerging storage technologies. Instead of being locked into gas infrastructure for decades, we should be using it as a bridge while aggressively scaling renewables and storage solutions like saltwater batteries.

5 THE HYDROGEN DEBATE: A GAME CHANGER?

Hydrogen is getting a lot of hype, but is it practical for Malaysia? Well, it depends on how we produce it. Green hydrogen—made through electrolysis using renewable energy—is promising, but energy-intensive. Malaysia has seawater, and theoretically, saltwater electrolysis could work. The works of Stanley Meyer, as mentioned earlier, is evident that it is relatively low-tech to achieve. But until the process becomes commercially viable, we need to focus on what we can implement right now.[2]

THE REALITY OF WASTE: ARE WE PLANNING FOR IT?

All energy solutions come with waste. The question is whether we plan for it or ignore it until it becomes a crisis.

China is already attempting recycling PV panels at the nano level, extracting valuable materials in a laboratory. It may only be a matter of time before this loop is also closed, one step closer to a truly circular economy. Australia is repurposing old panels into construction materials.[3][4] Malaysia, unfortunately, is barely getting started. Again, this is not because we are slow. We are only now approaching the point of critical mass to make this a viable business within our borders—remember the biomass conundrum?

> "All energy solutions come with waste. The question is whether we plan for it or ignore it until it becomes a crisis."

Here lies our opportunity. The first wave of Malaysia's LSS1[5] projects still has about 10 years before decommissioning. If we start now, we can build a recycling industry before we hit the crisis point. Companies like Zenviro Solar Panel Recycling Sdn Bhd[6] are already in the game, but they need scale to make it viable. Competition is generally healthy, and it would be good to have more than a handful of Malaysian companies involved in this sector.

While Malaysia has been a significant player in the global solar manufacturing sector, geopolitical shifts, such as trade policies implemented by the US, have impacted this dynamic. Donald Trump's election as US President has forced a realignment to Malaysia's approach. The US-China trade war triggered back in 2018 (earlier, if you want to be pedantic), and the ongoing conflict in Europe, is accelerating change to the global energy landscape at a pace where policies struggle to keep up with the politics (see Table 1).

IMPACT OF US TRADE POLICIES

Year	Action by the US	Impact on Malaysia
2018	Tariffs on Chinese solar panels - manufacturing shift to Malaysia.	Boost in Malaysian solar exports.
		Creation of PV manufacturing jobs.
2024	Tariffs extended to Malaysia, Cambodia and Vietnam.	Manufacturers downsizing/ shut down.
		Reduction in exports to the US, prompting manufacturers to reassess their strategies.
		Module makers have all but left Malaysia to set up in the US.
		China's top five module makers have either set up or in the process of setting plants on US soil, e.g. Trina 10GW plant in Texas (more to come).

Table 1: Far from exhaustive, this table gives a quick snapshot as to where we were and where we should be going.

OPPORTUNITIES: EXPORTING BRAIN CELLS VS. SOLAR CELLS

While these policy changes pose challenges, they also present opportunities. By investing in workforce upskilling, Malaysia can transition from being primarily a manufacturing hub to becoming a centre of expertise in renewable energy technologies. This shift can open avenues for exporting knowledge and services regionally and globally. Anecdotally, it has been highlighted time and time again that Malaysian implementation standards are one of the best (if not THE standard in the region), sometimes outshining its ASEAN neighbours.

From personal experience and interaction with many a foreign multinational entity, I can say that Malaysia shines in terms of the "human side of engineering", in getting things done according to specifications and standards; and having the diplomacy to request for more resources if the said goal cannot be

IMPACT OF THE RUSSIA-UKRAINE WAR

With Trump in office, many of the following aspects will change, given his no-nonsense, straight-shooting approach to matters he deals with.

Aspect	Global Impact	Impact on Malaysia
Oil Prices & Supply	Global oil prices surged due to sanctions on Russian crude, forcing Europe to seek alternative suppliers.	Higher fuel prices impacted Malaysia's domestic energy costs, but as a net oil and gas exporter, Petronas benefited from higher revenues.
Natural Gas Disruptions	Europe faced severe gas shortages as Russian pipeline supply was cut, leading to a surge in liquefied natural gas (LNG) demand.	Increased demand for LNG boosted Malaysia's LNG exports, particularly to Europe, but also led to higher domestic gas prices.
Coal Market Volatility	Europe increased coal use due to gas shortages, pushing up global coal prices.	Malaysia, still reliant on coal for power generation, saw higher electricity generation costs, driving up TNB's operational expenses.
Renewable Energy Acceleration	Countries in Europe fast-tracked solar, wind and hydrogen adoption to reduce dependency on Russian energy.	Provided export opportunities for Malaysian solar companies, but local adoption remained "slow" due to policy and grid constraints, and perceived high cost.
Fertiliser Shortages	Russia, a major fertiliser exporter, reduced exports, causing price spikes.	Higher fertiliser costs increased food production expenses, affecting agriculture and palm oil sectors.
Energy Security Awareness	Governments worldwide prioritised energy security, shifting toward domestic energy production.	Malaysia reassessed energy policies, but reliance on imported coal and LNG still posed risks.
EV & Battery Demand	Rising fuel prices pushed consumers and automakers toward EV adoption.	Spurred interest in EVs and battery storage, Malaysia is now embarking on more focused policy incentives to accelerate adoption.
Geopolitical Realignment	Countries diversified their energy partners, leading to a more fragmented global energy trade.	Malaysia strengthened ties with non-Western energy players (e.g. China and the Middle East) for long-term energy security.

Table 2: The next six months will be crucial to see if the status quo remains or a new world order emerges (as far as energy is concerned).

achieved with the present kit—it is either that Malaysians in general shine when it comes to implementation, or I am the luckiest Malaysian to have encountered so many expatriates who share this notion.

However, before we go high-fiving ourselves, the Philippines presently has the most sophisticated energy market in the region—and we would be wise to take note of and study how the Philippines has succeeded with the Electric Power Industry Reform Act (EPIRA) Republic Act No. 9136.

SAFEGUARDING ENERGY SECURITY FOR THE FUTURE

So, what can Malaysia do? For the short term—in the next three to seven years—there must be a push for better grid policies to support decentralised solar. Then, we need to kickstart a solar recycling industry before LSS1 projects start decommissioning, and invest in energy storage beyond lithium-ion—saltwater, flywheels and flow batteries.

Our long-term aspiration—looking beyond 2032—should be restructuring the education curricula to include and promote vocational and skills training as a valid route for a career path. We also need to move from being a solar module maker to a global centre for renewable energy expertise.

Despite our resources, talent and geographical advantage, the energy future we want is not going to happen by accident. The only thing we need to do is to maintain the momentum we have already generated (pun intended) to foster and strengthen the political will and public demand to make it happen.

As Malaysia assumes the ASEAN Chair in 2025, it has a unique opportunity to lead the region in fortifying its energy security and resilience. The 1980 film *North Sea Hijack* serves as a stark reminder of how critical energy infrastructure remains vulnerable to geopolitical risks and disruptions. In the movie's universe, the destruction of a North Sea oil rig would have sent shockwaves through global markets, much like how Southeast Asia's energy security could be destabilised by emerging threats—be it cyberattacks, supply chain vulnerabilities or geopolitical tensions. It would seem that in 2025, life imitating art would be the narrative.

Malaysia can use its ASEAN leadership to champion a Regional Energy Security Initiative Alliance (pronounced RESI-alliance, sounding deliberately like "resilience"), fostering deeper cooperation in protecting vital infrastructure, accelerating renewable energy investments and ensuring supply chain resilience. By prioritising innovation, cross-border energy integration and robust security frameworks, Malaysia can not only future-proof its own energy sector, but also position ASEAN as a global model for sustainable and secure energy transition. A hard but certainly worthwhile way forward.

FOOTNOTES

[1] https://www.greentechmedia.com/articles/read/saltwater-aquion-emerged-from-bankruptcy-new-owner?utm_source=chatgpt.com

[2] https://www.businesswire.com/news/home/20241203440827/en/Salgenx-Unveils-Revolutionary-Saltwater-Redox-Flow-Battery-for-Grid-Scale-Energy-Storage?utm_source=chatgpt.com

[3] https://www.pvindustries.com.au/#process

[4] https://sircel.com/how-we-work/our-process/

[5] Large Scale Solar 1

[6] https://www.zenvirosolar.com/

LIONEL YAP TECK LI-ONG is a Senior Manager with over 20 years of leadership in the renewable energy industry, particularly notable for securing 3,500MW PV for a major client and heading the Malaysian Photovoltaic Industry Association (MPIA). He has demonstrated expertise in stakeholder collaboration, regulatory affairs and policy advocacy, contributing significantly to Malaysia's solar energy frameworks while serving as a thought leader and industry advocate.

HOW MUCH ENERGY ARE WE CONSUMING?

BY HAJAR ARIFF & ONG SIOU WOON

THE HUM OF our cities, the charge in our devices—energy powers our lives. But what fuels that power, and how sustainable is it? Here, we dive into the nation's energy transition, a shift that is not just about policies, but about the future we're building together.

ONG SIOU WOON 20 years (and counting) in Penang, and more than a decade with Penang Institute—she is a YSEALI alumnus trained in urban planning. She finds learning about nature and food a never-ending journey.

HAJAR ARIFF graduated from Universiti Tun Hussein Onn Malaysia (UTHM) with a Bachelor of Science (Hons) in Industrial Statistics. She is an introvert who lends her time to activism whenever the need calls.

NATIONAL ENERGY POLICY (DTN) 2022-2040

The National Energy Policy aims to establish a **sustainable, secure and affordable energy future** by outlining progressive goals across multiple phases. From 2021 to 2025, the focus is on **foundational improvements,** while the 2026–2030 period emphasises **energy security,** and finally, from 2031–2040, the policy drives transition towards a **low-carbon economy** through large-scale renewable energy integration.

2021–25
TWELFTH PLAN

- Improve rural electricity supply to achieve 99% coverage.
- Implement step change in industry energy efficiency (EE) through enforcement of Energy Efficiency and Conservation Act (EECA), energy audits and Minimum Energy Performance Standards (MEPS).
- Increase usage of smart meter and smart grid as well as upgrade grid.
- Improve Sabah power supply reliability.
- Improve fuel economy standard for vehicle.

2026–30
THIRTEENTH PLAN

- Grow gas-based petrochemical hubs.
- Thrive Third-Party Access (TPA) gas market, investments in regasification terminal (RGT) for energy security.
- Increase upstream investments to develop deepwater, marginal and sour gas fields.
- Enhance OGSE players capacity through consolidation and international participation.
- Phase down broad-based energy subsidies, move to market-based pricing.
- Capture growth with LNG uptake in marine bunkering.

2031–40
FOURTEENTH & FIFTEENTH PLANS

- Thrive domestic EV ecosystem, with at scale EV penetration.
- Adopt large scale energy storage for RE.
- Implement pilot and market entry programmes of hydrogen as well as next generation bioenergy.
- Establish globally competitive hydrogen export hub in Sarawak.
- Enhance energy efficiency with digital technology adoption.
- Capture growth opportunities of biofuels in marine and aviation sectors.

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

ENERGY TRANSITION PLAN

National Energy Transition Roadmap 2023-2050 is a comprehensive strategic plan by Malaysia to shift its energy systems away from traditional fossil fuel-based sources towards **cleaner and more sustainable alternatives.** It focuses on the importance of six key energy transition levers—**Energy Efficiency (EE), Renewable Energy (RE), Hydrogen, Bioenergy, Green Mobility, as well as Carbon Capture, Utilisation and Storage (CCUS).**

Imagine cutting the energy bill by a fifth, or even more. That's the goal of Malaysia's energy efficiency drive. Businesses are set to see a **23% drop** in their energy use, while homeowners can expect a **20% saving** by switching to efficient appliances and making simple changes.

ENERGY EFFICIENCY

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

23%
Industry and Commercial EE savings

20%
Residential EE savings

RENEWABLE ENERGY

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

0%
Coal share of installed capacity

70%
RE share of installed capacity

HYDROGEN

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

UP TO 2.5
MTPA of Green H_2 production

100%
Grey H_2 feedstock phase off

3
H_2 hubs

As for the green mobility lever, the goal is to see electric vehicles, especially motorcycles, dominating the roads, aiming for a stunning **80% electric** two-wheeler fleet. In the skies, the ambition is to drastically reduce aviation's carbon footprint by mandating a **47% blend of sustainable aviation fuel (SAF)** into jet fuel.

BIOENERGY

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

3.5bil
litres of biofuel capacity

1.4GW
Bioenergy power generation

GREEN MOBILITY (LIGHT VEHICLE)

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

60%
Urban public transport modal share

80%
xEV (2W) share of fleet

80%
xEV (4W) share of fleet

~30%
Light vehicle fuel economy

GREEN MOBILITY (HEAVY VEHICLE)

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

~24%
Heavy transport fuel economy

B30
Biofuel blending for heavy transport

GREEN MOBILITY (AVIATION)

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

47%
SAF blending mandate

GREEN MOBILITY (MARINE)

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

40%
Green fuel penetration in marine transport

CCUS

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

3–6
CCUS clusters

40–80
MTPA of CO^2 storage capacity

SYSTEM GENERATION AND DEMAND FOR 2024: WHERE ARE WE TODAY?

While the energy grid has been meeting demand, hitting a peak of over **20,000MW** in 2024 and delivering a record **428,610MWh** in a single day serves as a wake-up call! That **29% reserve margin** might sound comfy, but it is shrinking as energy needs grow. This highlights the urgent need for continued investment in **generation capacity and efficiency measures** to keep the lights on and avoid potential strain on the energy system in the future.

Note: MW—Megawatt, MWh—Megawatt-hour

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

HIGHEST DEMAND RECORDED

25 Jul 2024

20,066 MW

HIGHEST ENERGY RECORDED

428,610 MWh

INSTALLED CAPACITY

25,952 MW

RESERVED MARGIN

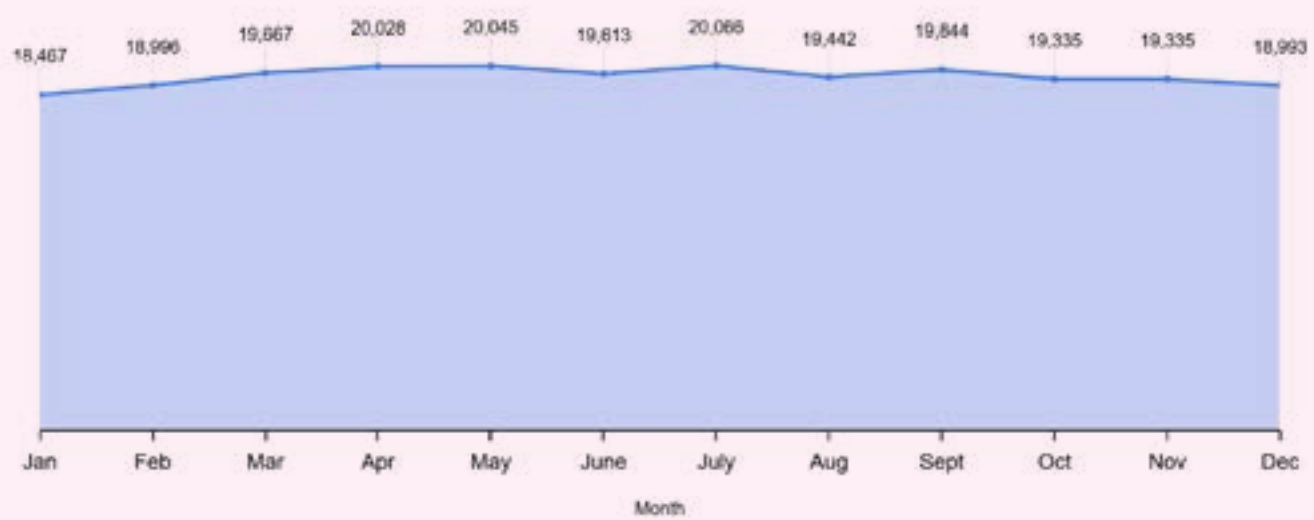
29%

HIGHEST SYSTEM DEMAND PROFILE FOR PENINSULAR MALAYSIA IN 2024

In Peninsular Malaysia, there is a clear link between the **weather and energy use.** As the **heat rises** from March to May, so does **demand for electricity,** likely fueled by hardworking air conditioners. But the real shocker is that July takes the crown for **peak electricity consumption.** What's happening in July that has got us all reaching for the switch?

HIGHEST SYSTEM DEMAND PROFILE FOR PENINSULAR MALAYSIA IN 2024

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

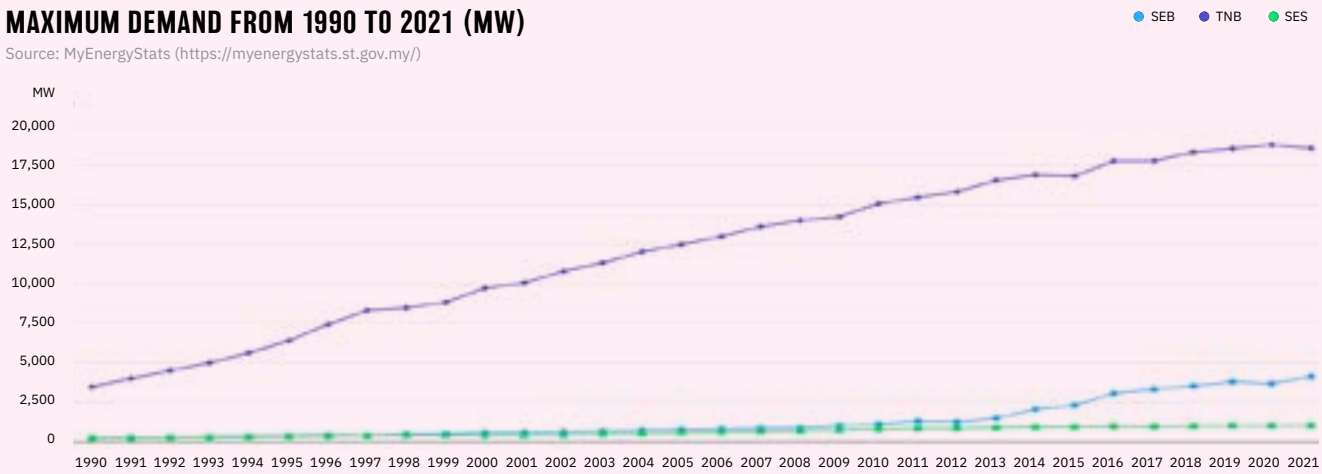


MAXIMUM DEMAND: ELECTRICITY IN THE LAST THREE DECADES

The graph reveals a **clear upward trend** in electricity demand over the past 30 years. Tenaga Nasional Berhad (TNB) in Peninsular Malaysia has experienced the most significant growth, reflecting the region's **rapid industrialisation and urbanisation.** However, Sarawak Energy Berhad (SEB) and Sabah Electricity Sdn Bhd (SESB) have also witnessed **increased demand,** albeit at a **slower pace,** highlighting development in East Malaysia.

MAXIMUM DEMAND FROM 1990 TO 2021 (MW)

Source: MyEnergyStats (https://myenergystats.st.gov.my/)



SUMMARY OF ENERGY BALANCE FOR 2021

Natural gas dominates the primary energy supply[1], accounting for **45%,** followed by crude oil, petroleum products and others at **27%.** This dependence on fossil fuels is mirrored in the final energy consumption[2], where petroleum products represent a **significant 42%** and natural gas contributes **31%.** The industrial sector is the largest energy consumer at **33%,** with the transport sector close behind at **32%.** As **electric vehicles** become increasingly popular—a trend that gained momentum in 2021—they might be playing a role in the transport sector's substantial **32% energy use.**

Note: ktoe - kilotonnes of oil equivalent

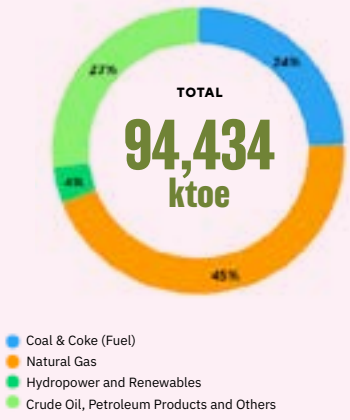
FOOTNOTES

[1] According to the Organisation of Economic Co-operation and Development, primary energy supply is energy production plus energy imports, minus energy exports, minus international bunkers, then plus or minus stock changes.

[2] According to the European Environment Agency, final energy consumption (FEC) represents the energy used by final consumers (such as households, transport, industry, etc.) for all energy uses.

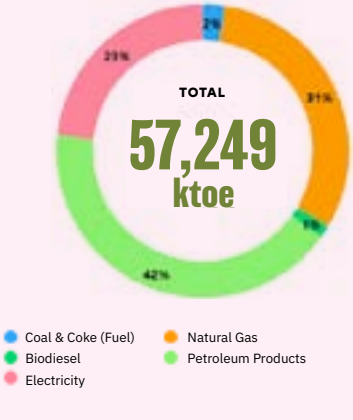
TOTAL PRIMARY ENERGY SUPPLY IN KTOE

Source: MyEnergyStats (https://myenergystats.st.gov.my/)



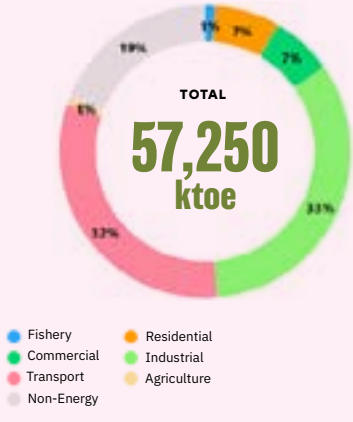
FINAL ENERGY CONSUMPTION IN KTOE

Source: MyEnergyStats (https://myenergystats.st.gov.my/)



FINAL ENERGY CONSUMPTION BY SECTOR IN KTOE

Source: MyEnergyStats (https://myenergystats.st.gov.my/)



ENERGY BALANCE FLOW IN 2021

Malaysia's 2021 energy sector faced **substantial losses; 36,039 ktoe** of fossil fuel input yielded only **15,365 ktoe** of electricity. This inefficiency is driven by **thermal losses, aging infrastructure and high industrial demand.** This may require urgent investments in **renewables, grid modernisation and nationwide energy efficiency.** Industry and commercial sectors consume the most energy, but the rise of electric vehicles may add to the growing demand.

Source: MyEnergyStats (https://myenergystats.st.gov.my/)

POWER SECTOR

36,039 ktoe → **15,365 ktoe**

ELECTRICITY

INPUT (ENERGY SUPPLY)

NATURAL GAS	11,122 ktoe
FUEL OIL	8 ktoe
COAL & COKE (FUEL)	21,525 ktoe
HYDROPOWER	2,676 ktoe
RENEWABLES	435 ktoe
DIESEL	273 ktoe

OUTPUT

ELECTRICITY	15,365 ktoe

INPUT

POWER SECTOR	15,365 ktoe

OUTPUT (ENERGY CONSUMPTION BY SECTOR)

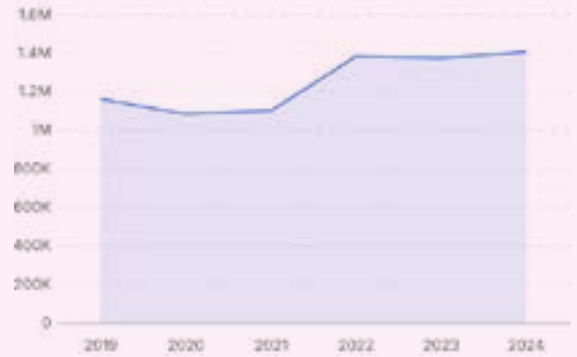
INDUSTRY	6,604 ktoe
RESIDENTIAL	3,174 ktoe
COMMERCIAL	3,443 ktoe
TRANSPORT	30 ktoe
AGRICULTURE	59 ktoe

VEHICLES REGISTRATION BY TYPE OF FUEL (2019-2024)

Malaysia's vehicle registration trends from 2019 to 2024 tell a story of **evolving energy priorities.** While petrol vehicles remain popular, the rise of **hybrid and electric vehicles,** especially since 2021, signals a growing shift towards **sustainable transportation.** This trend aligns with the **global push for cleaner energy and reduced reliance on fossil fuels.** However, challenges remain, such as the need for **robust charging infrastructure** and a **greater share of renewable energy** in electricity generation.

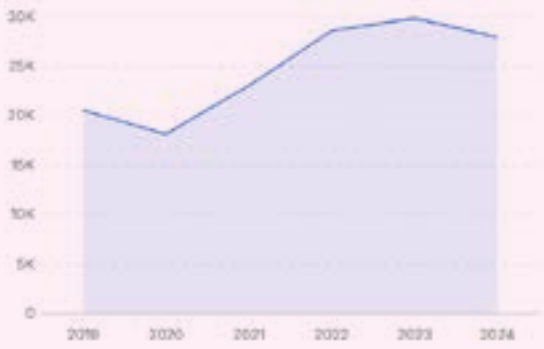
PETROL

Source: JPJ (https://data.gov.my/dashboard/vehicle-registrations)



DIESEL

Source: JPJ (https://data.gov.my/dashboard/vehicle-registrations)

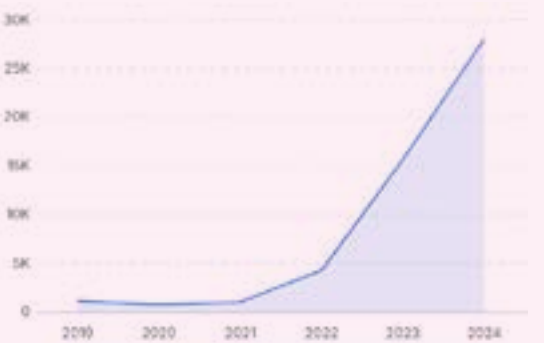


HYBRID (PETROL OR DIESEL)

Source: JPJ (https://data.gov.my/dashboard/vehicle-registrations)

ELECTRIC

Source: JPJ (https://data.gov.my/dashboard/vehicle-registrations)



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April 26 | 9am - 1pm

> **...when Malaysia locked up its factories during the Covid-19 pandemic, General Motors and other major automotive manufacturers in Detroit had to shut down. That was how dependent the world was on Malaysian semiconductors."**

ELECTRIFICATION OF MOBILITY IN MALAYSIA: THE "WHY" IS AS IMPORTANT AS THE "HOW"

BY LIEW CHIN TONG

AFTER HAVING MANY conversations with automotive industry players as well as colleagues in government on the electrification of mobility in Malaysia, I am now of the view that forming a national consensus on the "why" is probably as important—if not more important—as the "how" in making significant progress on that front.

In 2024, 40.9% of cars sold in China were "new energy vehicles"—a Chinese term for all cars powered by electricity, either fully or in part—ahead of the US (20%) and Europe (34.5%). Leaders in China realised early on that there was no way they could beat the Germans and Japanese in terms of technology and sophistication if China merely continued producing more internal combustion engine (ICE) cars. Electrification was thus a leapfrog industrial strategy.

Moreover, China spent many years battling severe air pollution caused by mass industrialisation, especially in the heavy industries such as steel making. Up until the 1980s, the most common mode of transport in China was bicycles. But soon, the massive spike in car ownership among the burgeoning middle class and high dependence on coal as the main energy source contributed substantially to the worsening air quality. This has also been an important motivation for the transition to electric vehicles (EVs).

Just under 15 years ago, the main worry among Chinese geopolitical strategists was "the Malacca dilemma". As China's industrialisation was in part powered by petroleum shipped from the Middle East via the Malacca Strait, the Chinese were concerned that if the US enforced a blockade in the Malacca Strait, it would effectively cut off their fuel supply. To deal with the choke point, China decided to diversify its sources of oil imports, open up rail links with Central Asia and Europe, and cut down on petroleum consumption.

SLOW PROGRESS IN MALAYSIA

The electrification of mobility in Malaysia, on the other hand, has been progressing at a snail's pace. In 2024, Malaysia sold as many as 816,747 vehicles (total industrial volume, TIV), making it the second largest automotive market in Southeast Asia after Indonesia, surpassing Thailand. Yet, Malaysia's battery electric vehicles (BEV) and xEV (hybrid electric vehicles, plug-in hybrid electric vehicles and fuel cell electric vehicles) sales were only 14,766 (1.8%) and 45,562 (5.6%). In comparison, the penetration rate of EVs are higher in other Southeast Asian countries in 2024: Vietnam (estimated to be 7.1%), Singapore (33.6%) and Thailand (estimated to be 15.4%).

There could be many reasons for this: incentives may not have been generous enough; range anxieties remain high, given that charging facilities lag behind; fuel price is still highly subsidised; and most industry players do not want to disrupt the highly profitable ICE car market.

Globally, electrification of mobility usually does not happen on its own without policy changes and support from the state.

This goes back to the "Why" question. Malaysian society—and especially the Malaysian government—will have to find the electrification of mobility compelling enough to make it happen fast.

The most prominent rationale cited in the push for electrification of mobility is that it is good for the environment, and would contribute to the nation meeting its emission/net-zero targets. However, this is not compelling enough for the state to coordinate across the system, and to expend its limited fiscal or financial firepower to speed up the transition.

I would like to suggest a three-fold answer to the "Whys":

First, the electrification of mobility is likely to be the most effective tool for transitioning from the Malaysian public's expensive dependence on fuel subsidies. At its height in 2022 and 2023, fuel subsidies (RON95, diesel and gas) cost the Treasury RM50bil each year.

In 2024, the government has boldly removed diesel subsidies on the Peninsula and is in the process of removing petrol subsidies for the top 15% income earners. But how to determine who the top 15 percentile are, and how to prevent the system from being gamed remain to be seen. There may come a point where incentivising a rapid transition into electrification is more worthwhile and more effective.

Second, Malaysia is now a net oil importer, never mind that the nation exports higher grade petroleum. Cutting total consumption of oil and restoring Malaysia's position as a net oil exporter should be made a strategic objective, paving the way for a whole-of-government drive to electrify mobility.

Third, it is regrettable that the strong semiconductor sector in Malaysia has never had much horizontal connection to the automotive industry.

I was in Detroit in May 2023 for the Asia Pacific Economic Cooperation (APEC) meeting. Gina Raimando, then US Commerce Secretary, told our group of ministers that when Malaysia locked up its factories during the Covid-19 pandemic, General Motors and other major automotive manufacturers in Detroit had to shut down. That was how dependent the world was on Malaysian semiconductors.

However, by some accounts, while Malaysia produces a third of the global automotive chips, Proton remains dependent on China and Perodua on Japan for technology.

For Malaysia to cement its position as the "indispensable middle" in the semiconductor industry, Malaysia needs to create its own designs, products and other intellectual properties. The electrification of mobility, especially in the race to develop smart and autonomous driving, is battleground that the Malaysian semiconductor strategy should not concede. Clearly, the future of Malaysia's automotive policy should be tied to that of the semiconductor sector, for strategic and economic reasons.

In fact, we already have all the tools, the "How", to electrify mobility. What Malaysia needs is to convince its people of the "Whys".

LIEW CHIN TONG is the Deputy Minister for International Trade and Investment, and a Board Member of Penang Institute. He was a key player in establishing *Penang Monthly* back in 2009.

TWO-WHEELED ELECTRIC VEHICLES: THE BEST OPTION FOR PENANG

BY HAJAR ARIFF AND ONG SIOU WOON

THE GLOBAL AUTOMOTIVE landscape is undergoing a dramatic shift, with electric vehicles (EVs) rapidly gaining traction. One evident phenomenon is the genesis of a merger discussion between long-time Japanese automakers due to investment in electrification (which ended at the beginning of February 2025) and powerful newcomers in EVs, like Tesla and BYD. While four-wheeled EVs often dominate the conversation, the potential of two-wheeled electric vehicles (2WEVs), particularly e-motorcycles, presents a compelling solution, especially in densely populated urban environments.

THE EVOLVING EV LANDSCAPE IN SEA

EVs are gaining significant traction in Southeast Asia. Frost & Sullivan (2018) found that one in three people in the region are considering EVs as their next car. However, Deloitte's 2023 Global Automotive Consumer Study reveals a more nuanced picture. Traditional internal combustion engine (ICE) vehicles still dominate, particularly in Malaysia (58%), Indonesia (59%) and the Philippines (72%). Singapore, with its strong government support and urban environment, stands out with the lowest ICE preference (34%) and the highest for hybrid electric vehicles (HEVs-36%). Thailand leads in battery electric vehicle (BEV-31%) preference, followed by Vietnam (19%) and Singapore (13%). These varying preferences highlight the diverse factors influencing EV adoption across the region, from infrastructure readiness to consumer attitudes and government policies.

The Malaysian government has been promoting EV adoption through various incentives. These include tax exemptions for EV imports and rebates for charging infrastructure installation, as outlined in the Low Carbon Mobility Blueprint (LCMB) 2021-2030. The 2023 Federal Budget further solidified this commitment, offering income tax exemptions, investment tax allowances for EV charging equipment manufacturers and substantial investments by Tenaga Nasional Berhad (TNB) in charging facilities.

However, as of October 2024, the country accounted for just a little more than 3,300 charging stations, mostly concentrated in urban areas and highways, falling short of the 10,000 target by 2025. Concerns about charging infrastructure, resale value, maintenance and battery life also contribute to consumers' hesitation. Fire safety concerns surrounding EV batteries, while rare, are also being addressed through updated guidelines. Furthermore, the relatively low cost of fossil fuels in Malaysia makes EVs a less financially attractive option for some consumers.

TWO-WHEELED ELECTRIC VEHICLES

2WEVs offer a distinct set of advantages, particularly relevant to Penang's context. The city, like many urban centres, struggles with traffic congestion and limited parking. Compared to cities like KL, proximity within Penang and its narrow streets result in a high number of two-wheelers. If done well, 2WEVs could be used for last-mile connectivity, bridging the gap between public transport and final destinations. For example, a commuter taking the Rapid Penang bus to the Weld Quay terminal can easily use a 2WEV to reach their destination in the nearby heritage area, navigating smoothly through narrow streets where cars often struggle. Furthermore, 2WEVs are generally more affordable than four-wheeled EVs, making them much more accessible to a wider segment of the population.

Affordability is crucial in Malaysia, where the T20 income group is relatively small. A typical four-wheeled EV might cost more than RM100,000, while a 2WEV could be purchased for a fraction of that.

From an environmental perspective, all EVs produce zero tailpipe emissions, contributing to cleaner air and a healthier environment. Other than that, the requirement for regular replacement of lubricants is no longer required, creating less waste lubricant that often pollutes our waterways.

2WEVs align with existing transportation trends in Malaysia—like many Southeast Asian nations, we have a high motorcycle ownership rate (83% in 2023, according to Statista). If you were to examine the data further, the number of cars (including MPVs, jeeps and trucks) registered in Malaysia is not very far off compared to motorcycles (see figure 1). It makes almost zero sense when the generic discussion around automobile electrification is predominantly centred around four-wheelers. Leveraging this existing preference can

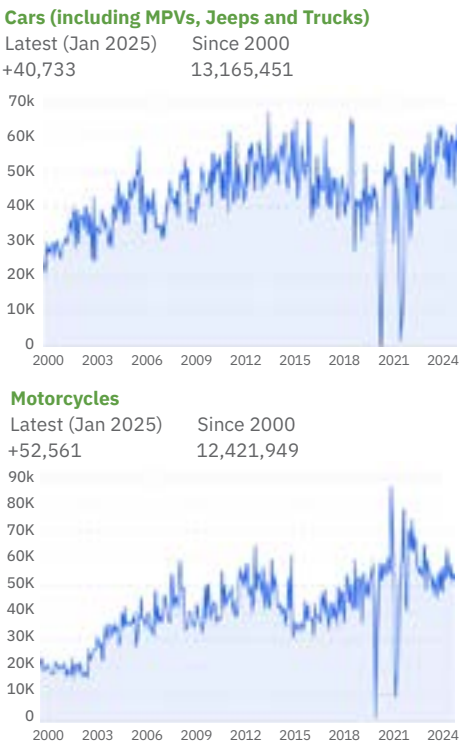

Figure 1: Number of vehicles registered in Malaysia from 2000 to 2025. (Source: https://data.gov.my/dashboard/vehicle-registrations)

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ONG SIOU WOON 20 years (and counting) in Penang, and more than a decade with Penang Institute—she is a YSEALI alumnus trained in urban planning. She finds learning about nature and food a never-ending journey.

accelerate the adoption of 2WEVs, furthering the decarbonisation effort to reduce Malaysia's economy-wide carbon intensity of 45% in 2030.[1]

The burgeoning e-commerce sector in Malaysia also presents a significant opportunity for 2WEV adoption. Referring to Digital 2024, Malaysia, 61.9% of Malaysians are purchasing products or services online weekly as of January 2024, and 27.2% are ordering their groceries online. The demand for efficient and agile delivery services is high. Think of food delivery riders navigating the streets of George Town with their insulated bags; 2WEVs are perfectly suited for this role, particularly given the substantial market size for food (USD240mil) and beverages (USD70mil) within the e-commerce landscape. The speed and manoeuvrability of 2WEVs make them ideal for navigating urban traffic and delivering goods quickly and efficiently, directly translating to increased demand for last-mile delivery. Other than food and e-commerce goods deliveries, there are also p-hailing trips for urgent document delivery.

THE ROAD TO ADOPTION

One of the key elements is commercial adoption, prioritising the use of e-motorcycles for delivery services, last-mile logistics and security or patrolling services. A report by the Asian Development Bank entitled "e-Mobility for Penang in 2019" also suggested that strategically, the promotion of commercial EVs will be more effective than pushing for consumer adoption as it creates initial demand and drive infrastructure development.

Companies worldwide are paying a lot of attention to their carbon emissions through their respective ESG (Environment, Social, Governance) policies. This can be implemented by e-commerce platforms like Shopee or Lazada and logistics companies like J&T Express or DHL to electrify their fleet. Unlike the investment in four-wheelers, a two-wheeler electrified fleet demands a smaller capital for investment. Perhaps, p-hailing services such as Lalamove, Foodpanda or Grab could offer incentives to EV riders to achieve their ESG strategy. This targeted approach not only creates a visible presence of 2WEVs on Penang's streets, demonstrating their practicality and efficiency, it also helps to encourage the development of charging infrastructure- and maintenance-related industries. This will further drive the R&D investment in improving the 2WEVs altogether.

Investing in a robust charging infrastructure includes establishing charging stations at strategic locations, such as residential areas, commercial centres and transportation hubs. Under the leadership of Zairil Khir Johari, Penang State Exco for Infrastructure, Transport and Digital, beginning 2022, free public charging for 2WEVs has been made available at Astaka Persiaran Gurney, Medan Renong food complex (Padang Kota Lama) and Astaka Batu Lanchang. These locations serve as starting points for expanding the charging network. Six additional locations are at 1st Avenue complex, MBPP Lebuh Pantai complex, Desiran Tanjung complex (Tanjong Tokong), Sri Selera Bayan Baru complex, Bukit Jambul Complex and Bukit Gedung food complex. These additions will significantly improve public charging access around Penang. Other innovative charging solutions for 2WEVs including battery swapping stations, like the Blueshark swapping station in Bayan Lepas, could also be beneficial, particularly for commercial users who require quick turnaround.

Other than being used for deliveries and logistics, imagine if security forces and enforcers were being equipped with 2WEVs for their patrolling chores. Hats off to Perbadanan Bekalan Air Pulau Pinang (PBAPP) for using 2WEVs for their patrolling crew at the dams in Penang. A special mention also to the City Council of Penang Island (MBPP) for starting their electrification journey by equipping their enforcement team with 30 units of 2WEVs. Factories and universities can adopt the same for their enforcement and patrolling fleet. This can also expand further to strata properties (residential or commercial complexes alike)—e-pedal bicycles and 2WEV will work perfectly depending on the area of coverage.

Public awareness campaigns focusing on improved air quality, reduced congestion, the convenience of e-motorcycles and potential cost savings associated with switching to EVs can resonate with Penang's residents and drive adoption. Imagine a campaign featuring local food delivery riders who have switched to e-motorcycles, sharing their positive experiences and emphasising the cost savings they've achieved. Relatable storytelling can be very effective in changing public perception, encouraging wider adoption.

Of course, policy and regulations play a vital role in incentivising 2WEV adoption. Supportive policies, such as offering subsidies, tax breaks and preferential parking for 2WEVs, will make them a more attractive option for consumers and businesses. More needs to be done to achieve the National Energy Transition Roadmap (NETR) where Malaysia aims to increase the share of 2WEVs on the road to 80% by 2050. In fact, Malaysia's 2025 Federal Budget, for the second consecutive year now, is offering a purchase rebate of RM2,400 for 2WEVs that are completely knocked down (a product delivered in parts and assembled at the destination) in Malaysia, with RM10mil allocated to encourage the ownership of 2WEVs in the country.

While there is a push for 2WEVs adoption, there are other concerns and challenges that must be addressed. Unlike EV cars, 2WEVs do not have a standardised charging mechanism. Due to its lightweight nature, both battery swapping and plug-in charging are both viable options for 2WEVs charging technology. According to some motorcyclists we managed to interview, one of the biggest challenges in consumer adoption is probably the thrill in riding a conventional motorcycle coupled with the speed and engine sound that 2WEVs do not possess. Also due to the lightweight nature of motorcycle design, range anxiety could be worse for long-distance motorcyclists, making 2WEVs more suited for localised use.

Penang is uniquely positioned to embrace 2WEVs and to be a model for sustainable urban transportation. By focusing on commercial adoption, particularly within the thriving e-commerce delivery sector, investing in charging infrastructure, raising public awareness, implementing supportive policies and fostering collaboration among stakeholders, Penang can unlock the full potential of 2WEVs, creating a cleaner and more sustainable city for its residents. Although electric cars are a part of the solution, the inherent agility and cost-effectiveness of 2WEVs make them a particularly apt option for Penang's diverse transportation requirements.

FOOTNOTE

[1] https://unfccc.int/sites/default/files/NDC/2022-06/Malaysia%20NDC%20Updated%20Submission%20to%20UNFCCC%20July%202021%20final.pdf

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[3] Malaysia's EV "Roadmap"-(Low Carbon Mobility Blueprint (2021-2030) Regional Trends: Motorcycles ownership rate in Asia, 2023 *(Source: Statista, 2024)*

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SUSTAINABLE ENERGY TRANSITION: THE CASE OF KL

BY NEIL KHOR

MALAYSIA IS COMMITTED to fulfilling its global climate goals. This includes making our cities and human settlements more carbon neutral by transitioning to renewables. At the same time, consistent with Malaysia's campaign for a just transition, policies and local-level energy transition efforts need to be inclusive, making sure that no one and no place is left behind.

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As we all know, cities are the biggest consumers of energy. 73% of the world's energy consumption happen in cities. The network of towns and communities that are part of our urban reality channel natural resources to feed the insatiable hunger of our city-regions. It is therefore not surprising that some 70% of the world's carbon emissions are produced by cities.

However, urbanisation is irreversible. Even during the Covid-19 pandemic, rural-urban migration continued to increase unabated. This is because cities are responsible for 80% of the world's GDP, and it is where jobs are abundant. More importantly, over 63% of all the United Nations Sustainable Development Goals (UN SDGs) have an urban dimension.

"This is why we need to flip the script on urbanisation," says Maimunah Mohd Sharif, Malaysia's Advisor on Sustainable Urbanisation and former Under-Secretary-General and Executive Director of the UN Human Settlements Programme (UN-Habitat). Currently the Mayor of KL, Maimunah has made it her lifelong pursuit to advocate for plan-led development as the best way to make urbanisation sustainable.

"SDGs as well as our climate goals cannot be achieved if we do not get our cities right," she warns. "It is projected that cities will generate close to 4 billion tonnes of waste. However, with plan-led development, the harms of urban growth can be mitigated with better use of energy. We can flip the script on urbanisation by making our cities the *solution* to climate emergency."

THE CASE OF KL

By 2030, KL aims to reduce its emission intensity by 70%, which represents a 48,206ktCO²eq (kilo tonne carbon dioxide equivalent) reduction in greenhouse gas (GHG) emissions. This aim is consistent with the city's long-term commitment to reducing its carbon footprint while creating a more sustainable urban environment.

In 2023, KL's energy sector accounts for around 77%, or over 14.57 million tonnes, of the city's GHG emissions. Through the implementation of the KL Energy Management Plan 2050, the city is reducing its carbon footprint through energy-efficient construction and building retrofits.

Furthermore, DBKL developed the KL Low Carbon Building Checklist Calculator together with a Technical Guide to reduce carbon emissions from new building developments at all stages' approval. Working with real-estate developers and the construction sector, DBKL introduced a policy requiring real estate developers to utilise at least 30% renewable energy in their projects.

The KL Energy Management Plan also encourages key innovations in renewable energy, enhancing energy efficiency and, through a feasibility study on implementing district cooling systems, the city hopes to transition the energy landscape in KL. The feasibility study of installing a District Cooling System (DCS) is now being implemented in DBKL Tower 1 and Tower 2. DBKL is also working to enhance energy performance through the installation of Rooftop Solar Photovoltaic systems. These energy-saving measures will be scaled up across 27 DBKL-owned buildings.

"The KL Energy Management Plan is a roadmap for transformative change, ensuring that these buildings are future-fit. I believe that the steps we are taking now will inspire other building-owners to embark upon the journey towards greater energy efficiency. 27 buildings under our custodianship is hardly a ripple in a city like KL, but if we can get 1,000 buildings to follow suit, I am sure we will be a game-changer in Malaysia and the wider region," Maimunah adds.

> **"It is projected that cities will generate close to 4 billion tonnes of waste. However, with plan-led development, the harms of urban growth can be mitigated with better use of energy."**
>
> **—Maimunah Mohd Sharif, Malaysia's Advisor on Sustainable Urbanisation**

INVESTMENTS IN INNOVATIONS

In KL, the city council recognises that inclusive planning means incorporating diverse perspectives into the planning process. The KL Climate Action Plan 2050 and the Low Carbon Society Blueprint 2030 provide guidance to ensure that strategies are rooted in equity and sustainability.

By integrating innovative technologies and environmentally sustainable practices, DBKL aims to reduce the City Hall's carbon footprint by up to 180,000 tonnes of CO^2 emissions over the span of 25 years. The ultimate goal of this plan is to enhance climate resilience by accelerating the implementation of energy transition plans.

GoKL's free electric bus service has deployed 78 electric vehicles, with the goal of reducing carbon emissions from public transport by up to 40%. In 2023, this has already resulted in a 59% reduction in carbon emissions per bus, which is an important environmental success. This effort provides citizens with sustainable, low-carbon mobility options, and supports the city to meet its environmental goals. By 2030, the transition to electric buses and better transport solutions is expected to reduce KL's transport sector emissions by 25%. Moreover, 1,000 electric vehicle (EV) charging stations are planned around the city to promote EV adoption.

FINANCING ENERGY TRANSITION

To achieve Malaysia's energy transition objectives, it is estimated that we need to invest about USD1tril over the next decade. KL, the capital city and the country's largest urban agglomeration, will need to raise a significant amount of the funds required. This is particularly challenging as cities have to also invest in climate adaptation works. In KL, this means investing in green infrastructure to combat climate challenges, expanding flood retention ponds by 25%, installing 30 new water pumps in flood-prone areas, and planting 50,000 trees annually.

Getting local communities involved in the climate resilience initiative is vital. The KL: Towards Zero Waste Initiative established 20 community composting hubs, and expanded recycling services to 70% of neighbourhoods. DBKL has successfully diverted over 50,000 tonnes of waste from landfills annually, reducing municipal solid waste by 15%.

As Mayor Maimunah proclaims, "I believe in the 4Ps—Public, Private, People and Partnership. Thus, I am looking to collaborate to achieve our common objectives, and promote the New Urban Agenda and SDG 11 to make cities more inclusive, safe, resilient and sustainable. I also hope to strengthen cooperation in the fields of urban regeneration, climate adaptation and cultural exchange programmes to improve our cities' vitality and resilience, while also contributing significantly to the global urban agenda."

IKEA MALAYSIA LEADS IN ADOPTION OF EVS

BY CAROLYN KHOR

BY 2030, IKEA Malaysia aspires to have fully electrified its last-mile deliveries, or to have adopted other sustainable transport solutions to ensure that the company remains climate-positive and circular. As of now, IKEA operates three electric vehicles (EVs), servicing areas around IKEA Damansara and IKEA Cheras. Plans are in place to add nine more EVs by mid-2025, followed by a further 10 in 2026. Additionally, IKEA Batu Kawan is set to transition to EVs within the next three years.

"This will potentially ensure wider coverage as we continue to meet the demand for our home furnishing products," says Malcolm Pruys, Country Retail Director of IKEA Malaysia.

He adds that IKEA wants to inspire its clients by integrating sustainability into all aspects of their business. The other reason, he says, is that e-commerce accounted for 16.5% of IKEA Malaysia's total revenue in 2024—this makes investing in EVs a priority.

Presently, one of IKEA Malaysia's EV fleet includes the DFSK EC35 EV van, which has a battery capacity of 38.7 kWh. Depending on the electricity output, a full charge takes approximately 45 to 60 minutes on a DC power outlet, and allows vehicles to travel up to a maximum distance of 200km. Pruys says the EV fleet potentially reduces IKEA's carbon emissions by 74% in a year compared to a conventional diesel fleet of similar size and distance travelled.

"Key considerations in selecting our EVs were efficiency and cost-effectiveness. We wanted vehicles that could handle our delivery demands while being sustainable and cost-effective in the long run."

Charging costs are significantly lower than refuelling a diesel vehicle, and maintenance expenses are also reduced due to fewer moving parts in an electric drivetrain.

IKEA Damansara has a DC charging bay, while several are being installed at IKEA Cheras. IKEA Batu Kawan has two charging bays, and charging points will be offered in IKEA Tebrau in the future as well.

"One of the biggest challenges is infrastructure and affordability, particularly the availability of charging bays and costs associated with maintenance, battery life and more as we grow our fleet to eventually serve a wider geographic area," says Pruys, who remains optimistic about achieving the goal of fully transitioning to EVs.

He also acknowledges that IKEA Malaysia cannot achieve this goal alone, and needs the cooperation of suppliers, partners and like-minded organisations to find innovative solutions to reduce environmental impacts. IKEA is exploring the best approaches to address vehicle end-of-life, including battery recycling.

"We will continue to build strong relationships with our transport service providers and EV manufacturers to learn together, adapting, step-by-step, throughout this journey."

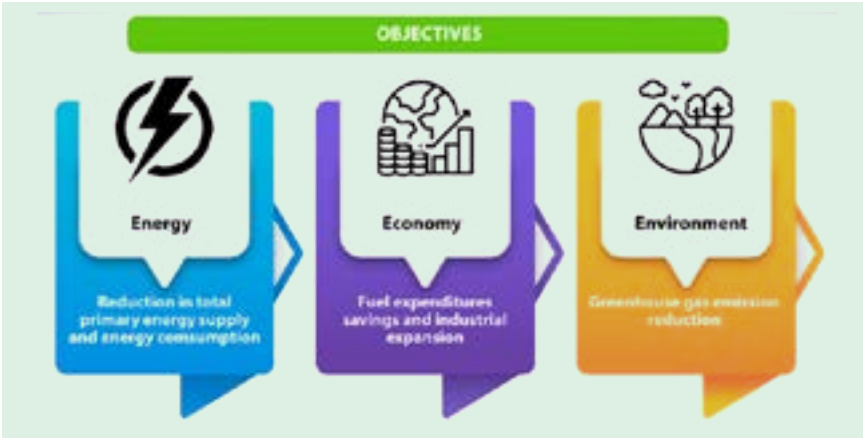
While IKEA Malaysia still uses internal combustion engine (ICE) vehicles, they are being gradually phased out. "IKEA has been in Malaysia for over 45 years, and we are in the position to help turn ambitions into tangible actions," emphasises Pruys.

CAROLYN KHOR
is a former ministerial press secretary, a former United Nations volunteer and an independent researcher/writer.

1. Objectives of the Low Carbon Mobility Blueprint. Source: Malaysian Green Technology and Climate Change Corporation.

2. Existing EV charging bays. Source: MEVnet.

3. EV charging station for IKEA's fleet.



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MALAYSIA'S EV POLICIES

In Malaysia, EVs are categorised into EVs, which refer strictly to fully electric vehicles, and xEVs, which includes vehicles such as Battery Electric Vehicles (BEV), Hybrid Electric Vehicles (HEV), Plug-in Hybrid Electric Vehicles (PHEV) and Fuel Cell Electric Vehicles (FCEV), among others.

Under the Low Carbon Mobility Blueprint (LCMB) 2021-2030, Malaysia targets EVs to comprise 9% of passenger vehicle sales by 2025 and 15% by 2030. Additionally, the government plans to install 10,000 EV charging bays throughout Malaysia by 2025.

According to LCMB, electric cars offer a great alternative for reducing greenhouse gas (GHG) emissions in land transport.

The blueprint also reports that the cost of this technology is closely related to global EV battery prices. "While battery prices have been steadily decreasing, the current focus of Original Equipment Manufacturers (OEMs) is to extend battery life to reduce charge cycles." Once an optimal battery capacity is achieved, vehicle costs are expected to decrease, leading to price parity in the future, it says.

Meanwhile, PLANMalaysia's Malaysia Electric Vehicle Charging Network (MEVnet) website reports 3,611 existing charging bays as of March 10, which makes up 36.11% of the initial target of 10,000 charging bays. Of the total number of EV charging bays, 2,516 are AC and 1,095 are DC chargers. In Penang, there are 344 charging bays, with 264 AC and 80 DC chargers, 178 of these are located indoors and 166 outdoors.

Despite being still far from the targeted number of chargers, Minister of Investment, Trade and Industry of Malaysia Zafrul Aziz said on February 26 that the government is maintaining its target to provide 10,000 EV charging bays (8,500 AC and 1,500 DC) chargers by 2025. In addition, tax incentives have been introduced to reduce the cost of BEVs.

The 12th Malaysia Plan, spanning the years 2021 to 2025, and the National Energy Policy 2022-2040 laid the groundwork for energy transition; meanwhile, the National Energy Transition Roadmap (NETR), launched on August 29, 2023, is the latest document by the government to forge ahead in this transformative journey to lower carbon footprint in the transport sector. Collectively, these documents provide a framework for developing the EV ecosystem, including investments in charging infrastructure, research and innovation in battery technology.

IKEA Malaysia's sustainability efforts align well with these national objectives, and by adopting EVs early, the company is positioning itself as a leader in corporate sustainability. "Our customers care about sustainability, and we want to show that businesses can lead by example," Pruys adds. "When we invest in EVs and green mobility, we are driving change and creating a more sustainable future together for our customers and Malaysia as a whole."

3

A TALE OF TWO COASTAL CITIES:

BY CHEE SU YIN

1

FOR CENTURIES, coastal cities have thrived at the intersection of human civilisation and the natural world, drawing their identity, economy and way of life from the sea. Penang and Tongyeong are two such cities—both rich in maritime heritage, both reliant on fisheries and aquaculture, and both celebrated for their unique blend of history, arts and culture.

Yet, as I embarked on my two-month academic attachment at the Regional Centre of Expertise (RCE) in Tongyeong, South Korea, as its 5th Sejahtera Fellow, I noticed a fundamental difference: marine conservation is deeply embedded in Tongyeong's everyday life in ways that Penang has yet to fully embrace.

This experience has been a revelation, a case study in how an entire city can be mobilised to protect its marine environment, while ensuring sustainable economic growth. As Penang grapples with coastal development pressures, land reclamation and marine pollution, there are invaluable lessons to be learned from Tongyeong's success.

CONSERVATION AS A WAY OF LIFE

One of the most striking aspects of Tongyeong is how marine conservation is not an isolated effort driven by a handful of environmental groups; it is instead a shared responsibility embraced by the entire community.

Fisherfolk practise sustainable fishing methods, understanding that overexploitation would harm future generations. Coastal businesses and tourism operators take proactive measures to ensure that their industries do not degrade the very ecosystem that sustains them. Restaurants proudly advertise locally and sustainably sourced seafood, and waste management—particularly marine debris monitoring and reduction—is an active and continuous effort, not just a seasonal campaign.

In contrast, while Penang has various marine conservation programmes, their impact is often limited by fragmented implementation and low community involvement. A shift is badly needed—from seeing conservation as a niche activity led by scientists and NGOs to making it a collective cultural and economic practice.

THE ROLE OF EDUCATION: RAISING A GENERATION OF OCEAN STEWARDS

One of the most inspiring experiences of my time in Tongyeong was visiting Yongnam Elementary School, where sustainability is built into the education system. Children are taught from a young age about marine conservation—not just in theory, but through real-life, hands-on experiences. They visit coastal areas, participate in environmental clean-ups, and engage in projects that teach them about the fragility and importance of marine ecosystems.

By the time they reach adulthood, sustainability is no longer just an abstract concept—it is a mindset and a responsibility they carry into their daily lives, professions and social consciousness.

Penang, too, has made strides in marine education, with various outreach programmes led by universities, NGOs and government agencies. However, many of these initiatives are sporadic and often do not reach students at a young enough age to create lasting behavioural changes. Imagine if every school in Penang incorporated marine conservation into its curriculum, infrastructure and culture, much like Yongnam Elementary does. The long-term impact on our oceans would be profound.

CAPTIONS

1. Panoramic view of Tongyeong, also known as the "Naples" of Korea. Pictured are some of Tongyeong's 192 islands.

2. Roadside mural along Yongnamhaen-ro, Tongyeong.

3. The *Eco & Echo* concert performed by the Korean National Symphony Orchestra highlighted global issues including climate change, habitat destruction and extinction.

THERE IS MUCH PENANG CAN LEARN FROM TONGYEONG'S MARINE CONSERVATION EFFORTS

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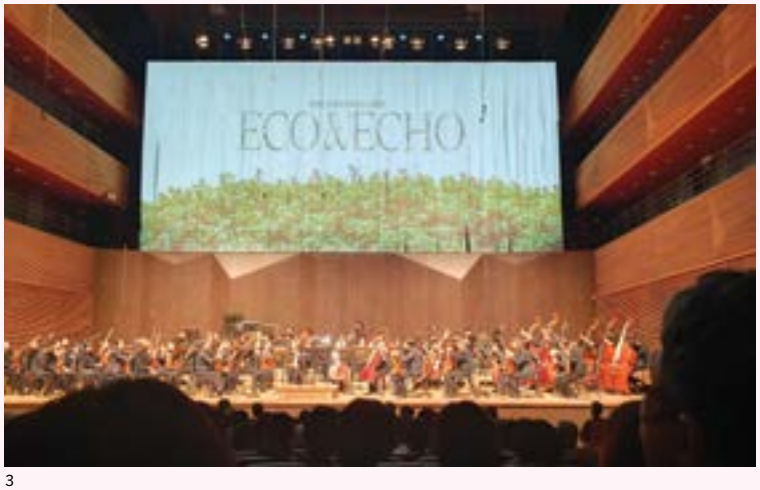

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ARTS AND CULTURE AS VEHICLES FOR CONSERVATION

Beyond science and education, another remarkable feature of Tongyeong is its seamless integration of arts and culture with environmental awareness. As Korea's UNESCO Creative City of Music and contemporary art heritage site, Tongyeong uses music, theatre and visual arts to communicate conservation messages in ways that resonate deeply with people.

One evening, I attended a concert by the Korean National Symphony Orchestra at the stunning Tongyeong Concert Hall surrounded by the sea. As the orchestra played Beethoven's "Symphony No. 6", visuals of climate change, habitat destruction and marine degradation were projected on a screen—an emotional and thought-provoking reminder of our role in protecting the planet.

This approach is something Penang could adopt. Given Penang's vibrant creative scene, marine conservation messages could be effectively communicated through music, murals, theatre and digital media, inspiring public awareness and action. Penang's George Town Festival, street murals and cultural performances already draw massive audiences. Why not channel this creative energy into marine conservation? Public art installations, music performances and storytelling sessions that highlight the beauty of Penang's marine ecosystems—and the threats they face—could spark conversations and inspire action on a much larger scale.

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4. Ongoing monitoring of awareness programmes to promote zero-waste recreational fishing at Gonri Island, Tongyeong.

5. Spring Day Bookstore, Bongpyeong-dong, curates art and literature with marine elements produced by local artists.

6. The sea is more than just a backdrop—it is a way of life, seamlessly embedded in café culture, art, education and daily rituals, fostering a deep appreciation and collective responsibility for marine conservation.

7. Marine conservation embedded in the curriculum of Yongnam Elementary School, Tongyeong.

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GEOGRAPHICAL AND CULTURAL PARALLELS: A SHARED DESTINY

Penang and Tongyeong share striking geographical similarities—both are coastal, island-linked cities with a heavy reliance on fisheries, aquaculture and eco-tourism. Both have deep cultural and historical roots, evident in places like Dongpirang, Sebyeonggwan and Cheongnyeolsa in Tongyeong, which remind me of George Town's heritage zones.

However, where Tongyeong excels is in its ability to create a paradigm shift in environmental consciousness. Marine conservation is not seen as an economic burden, but as an economic advantage. Sustainable tourism is heavily promoted, with clear efforts to balance development with ecological preservation.

In contrast, Penang continues to face challenges with extensive developments, where land reclamation projects threaten marine biodiversity, fisheries and coastal resilience. While there is growing environmental awareness, it has yet to translate into a large-scale, community-driven movement for sustainable change.

A VISION FOR PENANG'S FUTURE

As I bade farewell to Tongyeong, I left with a renewed sense of hope and determination. What I witnessed here is proof that consistent, purposeful efforts can lead to significant environmental change.

Penang, too, has the potential to foster a paradigm shift in marine conservation. The key lies in education, community involvement, and leveraging arts and culture as powerful tools for change.

If we can integrate marine conservation into daily life the way Tongyeong has, Penang can emerge as a model coastal city that thrives economically, while protecting its most valuable asset—the ocean. The sea has shaped our history, culture and way of life. Now, it is our responsibility to shape its future, ensuring its protection for generations to come.

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PLACES OF WORSHIP IN PENANG PHOTOGRAPHED BY THE TRAVELLER, JULES CLAINE

BY ANNE TAN

JULES CLAINE WAS a French explorer and diplomat who spent a year travelling across Malaysia in 1889 and 1890, photographing and commenting upon all that he saw and encountered here. This he published in *Un An En Malaisie* (One Year in Malaysia), and gave a paper for the 9th International Congress of Orientalists in London in 1891. He appeared on the cover of the *Journal des Voyages*, where his travels were featured as the cover story.

Instalments of his story appeared in *Journal des Voyages* in 1892 with the cover illustration showing two tigers looking on as a paddle-boat steamed up a river. *Journal des Voyages* was a French weekly travel journal sold through a network of railway stations. Aimed at a popular readership, it devoted its content to travel and exploration.

Claine also spent time in Singapore, and collected reptiles which are now specimens in the National Museum of Natural History in Paris. His records are kept at the Société de Géographie of Paris, of which he was a member.

Jules Claine, the intrepid photographer, captured images of *kampungs* in Kedah, a Buddhist monastery in Singora in Siam, and temples and gardens in Penang. His photos are available in Gallica BnF, the digital archive of the National Library of France. Each photo bears a handwritten title in French and Claine's name.

JULES CLAINE IN PENANG: TEMPLES AND MOSQUES

This photograph captures the Goddess of Mercy Temple at Jalan Masjid Kapitan Keling. Jules Claine simply titled it *Temple Chinois*—a very general description.

While still recognisable from the 19th century framing, some present-day figures on the roof ridges have been enlarged and made more prominent. The distinctive roof with a sweeping curvature that rises at the corners has a deeper meaning than merely protecting structures against the elements. Chinese temple roofs are curved because Buddhists believe that it wards off evil spirits, which were believed to assume the form of straight lines. The front is now more enclosed, and the beautiful, ornate street lamp has become a victim of progress. Then and now, the temple is busy with worshippers and passers-by.

La grande mosque captured the gaze of Jules Claine. Known as the Kapitan Keling Mosque, this building at the corner of Jalan Masjid Kapitan and Buckingham Street is a good example of Indian Muslim architecture, with the original dating back to the early 19th century.

As seen in this photo, the mosque was a small single story brick structure, with a sloping roof on all sides. A minaret stood at each corner and two of these can be clearly seen in Claine's photo. Visible also is the outer colonnade and granite flooring where the photo's subjects are gathered. This photo precedes one of the mosque's major facelifts which begun in 1910 and was completed in 1916.

The present day grand mosque has been expanded many times, and is today the largest mosque in George Town.

Photo by CEphoto, Uwe Aranas, via Wikimedia Commons (CC BY-SA 3)

Jules Claine also photographed a Burmese and a Siamese temple. The Burmese temple, described as "temple Birman", was a modest building back then. Claine did not mention the location of this temple, but it is most likely the one situated in Lorong Burmah, at Pulau Tikus.

The present day Dhammikarama Burmese Buddhist Temple is much grander, and has a pair of large stone elephants flanking the front gates. Renovations have continued through the years, and the new Golden Pagoda Bell Tower was added in 2011.

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[1] Jules Claine's photographs accessed via gallica.bnf.fr

[2] Claine, Jules. (1892) *Un an en Malaisie, 1889-1890.* Cornell University Library. Ithaca: NY.

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The Siamese temple, or *Temple Siamois,* as described by Claine, is likely the present day Thai Sleeping Buddha temple opposite Dhammikarama Burmese Temple.

The stupa to the left in Claine's photo still stands today. The temple was founded in 1845, and, since its establishment, has undergone several renovations. The reclining Buddha statue, one of the world's longest, was constructed in the temple in 1958. The statue serves as a columbarium in which the urns of the cremated are housed.

The *Journal des Voyages*, in which Jules Claine's travels appeared, was a prominent travel magazine in its day. Its subject matter described in detail most of the great expeditions which marked the end of the 19th century and the beginning of the 20th century—the last great period of exploration of the world by Western travellers.

Claine's observations and comments allowed for readers' vicarious travel. His writing displayed his taste for both geography and ethnology. He wrote of Sumatra: "…The site is of a picturesque and grandiose savagery. A few beautiful flowers of a brilliant red bloom at the top of tall gnarled stems, sheltered by tree ferns whose immense parasol invites to rest." He described seeing towering peaks and semi-active volcanoes. Also in Sumatra, he found himself housed in the same lodging as a woman's grandfather who had recently died of cholera. With phenic (carbolic) acid, he made a sanitary cordon to protect himself from being infected!

Of "Poulo-Pinang" (as Claine called Penang), he wrote of the diversity of its inhabitants and of the climate. He located the island of Penang in the Sunda Strait—geologically Penang is in the Strait of Malacca, but it sits on the Sunda Shelf. He recognised the diverse Malaysian population: "… the preponderance belongs to the Babas, Chinese born in the Straits, of which they are more masters than the English, who nevertheless consider them as subjects. While not abandoning anything from outside or from Chinese customs, they have monopolised almost all commerce and industry, and leave little chance for Europeans to establish themselves there successfully…" The Portuguese rated a mention also, although Claine compared them unfavourably with the young Chinese.

He made mention of the climate in Penang, describing it in terms which might easily resonate with present-day travellers. "The temperature of Pinang is more variable than in Singapour; on the mountains which dominate the city are installed sanatoria, where come to quench the Europeans exhausted by the fevers of the lowlands of the surrounding countries."

Claine was far from complimentary with regards to provisioning his table: "… here, you can only buy fish, rice and tough beef!" On the other hand, if one has sufficient money, that "allows him to obtain in Europe everything that should provide him with a somewhat decent table."

Jules Claine left Penang and travelled to "Alos-Stah" (Alor Setar) in Kedah, by means of small steamers. In June 1890, he left Singapore "from where the Yangtze brought [him] back to France".

"I brought back numerous collections of ethnography and natural history destined for our museums," he recorded.

REWANG: A WONDERFUL MALAY TRADITION LOSING OUT TO URBAN LIVING

BY HUSNA SHAFIRAH

DRIVE-THRU *KENDURI*[1] is an ongoing joke among my siblings. Why not? It is fast, cheap and convenient! In fact, my eldest sister had a drive-thru wedding during the pandemic. My second sister's wedding, on the other hand, was done through *rewang*. It was the most tedious *kenduri* preparation I have ever participated in. So, for my future *kenduri*, my sister joked that I should marry into money and have a hotel wedding, or at least a buffet catering—no more *rewang!*

Jokes aside, *rewang* is a cherished tradition; a community affair and a dance of teamwork many urban and modern Malays have forsaken. It is a manifestation of the traditional Malay practice of *gotong-royong*[2], where friends, family and neighbours come together to prepare for big occasions like a *kenduri*. *Kenduri,* or communal feasts, are held to celebrate big occasions like weddings, Eid and even young boys' circumcision. All these require *rewang*.

Although the practice of *rewang* exists in most places in Malaysia, the most unique *rewang* I've ever experienced was in Langkawi. But divert your mind from the turquoise blue seas and bustling beaches tourists are exposed to. Not that Langkawi. This is the Langkawi of the locals, backgrounded by verdant paddy fields and pink albino buffaloes (who love mud facials)!

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PELANTAR: THE PULSE OF REWANG

In Kampung Bohor Tempoyak from where my mother hails, we take *rewang* very seriously. A day before the wedding, the men gather and assemble the *pelantar*, a structure of raised wooden flooring with a canopy without walls. The platform essentially functions as the working area for food preparation—think of it as an open kitchen. *Kawah*[3] (big woks) are also placed near the *pelantar* for cooking.

The *pelantar* is the busiest and most rowdy area during *rewang*. Spices, onions, garlic and potatoes are stacked in bulk in huge basins, waiting to be prepped. Although the *kenduri* is usually done at the hosts' house, the host is not obliged to prepare all the cooking utensils for *rewang*. For the prep work, female community members usually bring their own knives and their preferred utensils from home. Others lend their *kawah*, cookware and pots for bulk cooking. They keep track of utensils by placing personalised markings (stickers and markers) on the items.

In my experience, you don't need to know everyone to work on the *pelantar*, but once you're there, everyone will get to know you. While the head in charge of the main dishes will usually have been decided during the *kenduri* meeting, the rest of the roles are flexible. As one of the younger

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FOOTNOTES

[1] *Kenduri* refers to Malay celebrations and social gatherings which usually involve a feast and religious rituals to thank God.

[2] *Gotong-royong* is communal work, especially in cultural activities or deeds meant for the collective good, such as cleaning up the *kampung* together.

[3] *Kawah* (literally translates to crater) is a thick and large wok used for bulk cooking over open fire.

[4] *Pijar* refers to the burning sensation caused by handling chillies. The elders suggest rubbing the affected parts with coarse salt to alleviate the discomfort.

[5] *Kerisik* is made by toasting coconut until it is golden brown before pounding it into a paste (usually until the oil is drawn out). The process is quite similar to making peanut butter, but are usually manually grinded with a mortar and pestle.

[6] *Bunga Telur* refers to hard-boiled eggs tied on a stick and decorated with flowers and embellishment, typically given as a door gift for guests. The eggs symbolise fertility for the groom and bride.

ones on the *pelantar*, I might start off slicing onions and find myself moved to the frying team an hour later. Young children might not be skilled enough to peel and cut onions, so they are tasked to help with other tasks, like peeling eggs or deshelling peanuts. That's the beauty of the *pelantar*—you get to bond with everyone through shared tasks, shedding onion tears and suffering from *pijar*[4].

KERABU BERONOK: A LANGKAWI SPECIALTY

Amidst the frantic chopping, boiling and frying happening on the *pelantar*, there is another delicate task: making *kerabu beronok*. This dish is a sour and spicy raw sea cucumber salad made with shallots, cashew tree shoots, green sour mango, grated coconut, bird's eye chillies and lime juice. Cousin to the more popular sea cucumber, *gamat*, *beronok,* or its scientific name *Acaudina molpadioide*s, is a popular exotic delicacy popularly enjoyed in Langkawi.

You cannot call yourself a seasoned *rewang* helper until you have cleaned this slimy, eerie-looking sea creature. Hundreds of these lying in a basin is not the best view—imagine staring at a pile of pink alien-looking translucent eggs. The inside of *beronok* is mainly seawater and mud, and cleaning it involves gutting them to remove

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these and wormy-looking strands. Speed is key when handling *beronok;* prolonged handling can cause them to break down. Holding the slimy, bulbous sea cucumbers is also hard work, as they constantly slip from your hands like slippery water balloons.

Cut and cleaned, *beronok* resembles raw squid or octopus tentacles, only firmer and glossier. The *beronok* slicing station often becomes a snacking spot—nobody can resist the temptation of the salty, chewy and crunchy pieces.

After a final rinse, the prepped *beronok* finally joins the rest of the ingredients, which have been chopped up. The elders can be quite particular about how you cut these—everything has to be sliced thin, but not too thin. The green sour mango must be finely shredded by repeatedly hitting the mango with a knife. All those are to be mixed with a spice paste called *sambal nyioq* (coconut sambal) made from blended chillies, shrimp paste, grated coconut, lime juice, *kerisik*[5] and sugar and salt. It sounds tedious, but get one taste of the *kerabu beronok* and you think it is all worth it.

THE BUFFALOES

Can't find men at the *pelantar*? Well, they are with the buffaloes in the field! Langkawi without its buffaloes isn't Langkawi. These animals work in paddy fields and graze on unwanted weeds. But they mean a lot more to my family—buffalo milk nourished my mother after her mother succumbed to breast cancer. For us, buffaloes play a central role in *rewang*, especially during Eid al-Adha or the Festival of Sacrifice.

Back in the day, every house had buffaloes. My favourite were Opie and Lola, my uncle, Pak Lang's buffaloes, whom I stubbornly named despite my mother's warnings. In Islam, Muslims are not encouraged to eat animals they have grown affection for, like pets, so nobody really names their buffaloes. I learnt the lesson the hard way during the *rewang* for my cousin's wedding. On that day, I was a vegan.

In Langkawi, buffaloes are more popularly chosen as sacrificial animals during *kenduri,* as opposed to cows in mainland Kedah. Men take on the responsibility of handling, tending to and slaughtering buf-

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CAPTIONS

1. Women cooking on the *pelantar.*
2. A *beronok.*
3. Buffalo in the field.
4. Buffalo slaughter.
5. Processing the buffalo meat.

faloes. They also manage the meat processing—dismembering, dressing, cutting, deboning and trimming.

Out of respect, they ensure that the animal is kept separately during the slaughter and meat preparation. Buffaloes are prevented from witnessing the slaughter of their cohorts. For holy sacrifices, we try to utilise all parts of the animal, and whatever remains are buried to prevent other animals (such as cats and dogs) from scavenging.

Maximising the edible parts of the animal is key here, and with that comes the cleaning of the buffalo's four tripes. This tends to be the loneliest task in *rewang*, as it is usually done by a small water canal near the paddy field—far from the lively open kitchen. And the person doing that? Me—the not-so-skilled worker with a strong gut for tolerating the stench of predigested grass. Despite how unpopular this job might seem, the four types of tripe—*perut kitab* (bible tripe), *perut sarang lebah* (honeycomb tripe), *perut tuala* (blanket tripe) and *perut jerami* (reed tripe)—are some of the most sought-after delicacies during the *kenduri*.

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TANAM TODAY, *KENDURI* TOMORROW

One of the most important roles in *rewang* is the logbook keeper. During *rewang*, there is a practice called *tanam,* which literally means "to plant". Think of the *tanam* system like a community savings account for *kenduri* supplies. There are two main types of transactions in the system: *tanam* and *bayar*. If you *tanam* 10kg of sugar with a *kenduri* host, it is like making a deposit that they will repay or *bayar* during your own *kenduri* in the future.

According to my mother, who is usually the log keeper for our family weddings, this person acts like the account manager. She records all the *tanam* and *bayar* transactions in a *kenduri* logbook. At the same time, the log keeper also tracks every item in the *kenduri* supply and communicate to contributors what is needed, so there's no surplus.

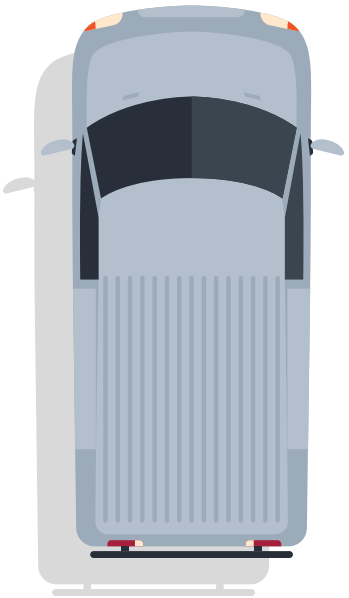
What can be *tanam*-ed is inexhaustive, you can *tanam* onion, spices, rice, traditional snacks and even a buffalo or a cow, if necessary. The same goes for *bayar*—if someone *tanam*-ed a carton of condensed milk, you can *bayar* with other items of equal value, such as a carton of sugar or rice. If a host already has enough supplies for the *kenduri*, contributors might *tanam* other wedding essentials, like *bunga telur*[6] (egg flowers) or door gifts instead. Some contributors may choose to donate instead of participate in *tanam* or *bayar*; in these cases, it's really up to the hosts whether or not to return the favour.

From the buffalo to the kilos of rice, onions and other essentials, feeding hundreds during a *kenduri*—sometimes up to 500 people—can be hard on the pocket. Thus, in *rewang*, the *tanam* system is essential to financially support the host. It can only work within close-knitted, communal communities, where there is a strong sense of trust and reciprocity—a spirit that is hard to maintain in urban areas.

Circling back to my sister's joke about "no more *rewang*", the reality of why *rewang* is dwindling should not be attributed solely to the reluctance of the younger generation to continue the tradition. With urbanisation, the *rewang* I have described is simply no longer feasible. We no longer have the time, space and communal energy to execute it. The *pelantar*, the buffaloes and the logbook system—they all seem to have disappeared in our fast-paced city life.

UNCLOGGING PENANG ROADS THROUGH IMPROVED MEANS OF LAW ENFORCEMENT

BY KENNETH CHIN



THE MOST AUTHENTIC driving experience in Penang would definitely include getting stuck in traffic, struggling to secure a parking spot, and worse, getting blocked by vehicles parked illegally.

Traffic enforcement in Malaysia is primarily conducted by three agencies, the Road Transport Department (JPJ), the Royal Malaysian Police (PDRM) and local councils. Nevertheless, the public takes lightly traffic enforcement—or indeed any form of enforcement—from the local councils. This is evident; in Penang, as of March 2024, the amount owed to the City Council of Penang Island (MBPP) for traffic and parking fines is a staggering RM61mil.[1] The Kuala Lumpur City Hall (DBKL) has appointed three companies as agencies to carry out the collection of arrears for assessment tax in the Federal Territory. Public compliance with local council enforcement in any form remains a persistent challenge, especially when compared to other agencies equipped with similar enforcement authority.

Although local council traffic wardens are given the power to compound offences like illegal parking and non-payment of parking, problems arise when the local council lacks discretionary powers to prosecute—it is also unrealistic and wasteful to prosecute minute offences. Despite the installation of multiple surveillance cameras, traffic wardens do not have the authority to obtain digital evidence for the purpose of issuing summonses for traffic offences. Their counterparts, JPJ and PDRM, however, do have the authority to use such digital evidence. Hence, traffic enforcement conducted by the local council has to rely on traditional and non-automated methods, which involve deploying traffic wardens manually on the ground. The limitation has caused inef-

FOOTNOTES

[1] Moroter, T. (2024, March 22). MBPP to reset compounds and introduce new rates. Buletin Mutiara. https://www.buletinmutiara.com/mbpp-to-reset-compounds-and-introduce-new-rates/

[2] Malaysian Parliament. (2010, December 15). Debate on the Road Transport (Amendment) Act 2010. Hansard. Retrieved from http://www.parlimen.gov.my/files/hindex/pdf/DR-15122010.pdf

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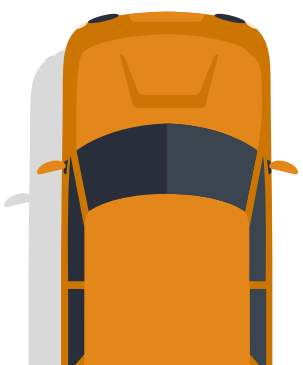
“The complication is primarily due to loopholes that exist in present traffic laws. The limited enforcement powers of the local councils have, therefore, created lacunas, preventing the full achievement of their intended goals.”

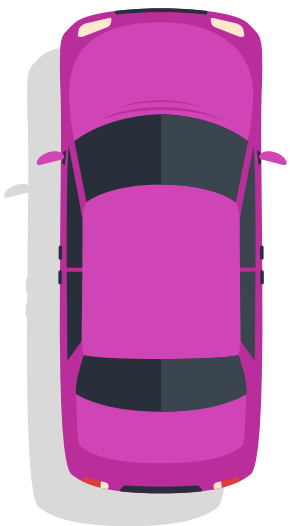
fective traffic enforcement by the local councils.

The complication is primarily due to loopholes that exist in present traffic laws. The Road Transport (Amendment) Act 2010 included the addition of Section 53A of the Road Transport Act 1987, through which only PDRM and JPJ officers have the authority to use digital evidence obtained from devices like CCTV units to issue summonses for traffic-related offences. However, according to the Hansard, the intention of Parliament was to enhance road safety through effective monitoring, enforcement and automated detection of traffic violations.[2] The limited enforcement powers of the local councils have, therefore, created lacunas, preventing the full achievement of their intended goals.

If automated systems such as Automated Enforcement System (AES) and Automated Awareness Safety System (AWAS) can be applied by local councils for hotspots where offences under their portfolio, like illegal parking, are prevalent, they would be able to use CCTV units equipped with AI for effective and automated enforcement. However, such efficacy can only be achieved if the lawmakers fill up the legal gaps; local councils are not able to enact regulations that empower themselves beyond the powers conferred upon them by Parliament.

Courts have checks and balances to ensure that local councils do not act outside their jurisdiction. Based on this principle, the court once ruled that local councils do not have the authority to clamp vehicles for unpaid parking fees and outstanding fines.[3] This has to be corrected so that it does not contradict the recommendation of the Royal Commission of Inquiry on Local Authorities Athi-Nahappan Report, which says





that there must be efficacy in enforcing local laws in terms of power to compound offences.[4]

Additionally, all traffic enforcement agencies—local councils included—should also optimise the automated systems that provide evidence, in both image and video form so that it complies with the requirements in accordance to the law of admissibility of digital evidence in Malaysia. Essential procedures include certifying system functionality, routine maintenance and expert witness training to avoid technical acquittals for traffic offenses.

There needs to be better forms of collaboration with the Attorney General’s Chambers so that local council officers can be appointed to conduct trials for these offences when necessary. Granted, it is impractical and extremely burdensome to prosecute minor offences; pursuing repeated offenders or those who have accumulated a significant number of fines could be more effective as deterrence. The logistical and financial burdens of attending court, which can act as forms of indirect punishment, would incentivise offenders to pay their summonses and act as more prudent motorists.

These forms of deterrence had been successful in the past, as seen through the implementation of AES systems across Peninsular Malaysia. Statistically, the number of red light violations after the implementation of the system significantly decreased.[5]

Penang is truly a mesmerising state, but many would agree that better traffic enforcement coupled with a shift in the mindset of motorists can transform Penang into a smarter state that inspires the nation—an ideal espoused in the Penang2030 vision.

[4] The Athi-Nahappan Report, issued in 1968 by the Royal Commission of Inquiry on Local Authorities in Malaysia, critically evaluated the administrative structure, powers and responsibilities of local governments. It aimed to offer substantial recommendations for enhancing their efficiency and accountability, and importantly, to explore the reinstatement of local council elections, which had been suspended initially during Indonesia’s confrontation against Malaysia.

[5] Kabit, M. R., Sabihin, N. A., & Wan Ibrahim, W. H. (2016). Effectiveness of automated enforcement system (AES) in reducing red light violation (RLV) behaviours: A case study in Kuala Lumpur. Journal of Civil Engineering, Science and Technology.

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STAMP COLLECTING: THE KING OF HOBBIES

1

BY LIM WAN PHING

THE SAYING GOES that "one man's trash is another man's treasure"—that's how it began for Ng Wee Theng, the president of the Penang Philatelic Society. In his own words: "I started out as a rubbish collector, but now I'm an advanced collector."

As an 11-year-old, Ng helped a friend of his father cut stamps out from envelopes, soak them in water and meticulously arrange them in an album. Today, five decades on, the schoolteacher has a collection worth over six figures comprising rare stamps, postcards and postal stationery.

THE KING OF HOBBIES

Philately comes from the Greek words *philo-* "loving" and *ateleia* "exemption from payment", referring to the recipient not having to pay a franking mark or postage stamp. In Malaysia, it is likely we inherited the hobby from the British, one that was dubbed "the hobby of kings and the king of hobbies" since only the wealthy could pursue stamp collecting in the past.

"Now it's a sunset hobby," laughs Ng, who is trying to reverse that by getting the younger generation interested. He keeps the group active by organising bi-annual stamp fairs, quarterly auctions and public talks, while producing publications and encouraging the society's 150-odd members to participate in exhibitions abroad.

The name Penang Philatelic Society was used during the colonial era. The society eventually became inactive, but over the decades, many stamp-collecting groups spruced up and the current Society was founded in 1982 by a group of eight stamp lovers.

STAMP VALUE

Ng explains that stamp collecting goes far beyond the four corners of a stamp: it is postal stationery that commands the highest price, complete with the recipient's name, address and postmarks with the date and location on a pristine, intact envelope.

A stamp is valued by how and when it was used, in the context of time and history. For example, stamps during the Chinese cultural revolution between 1966-1976 are highly sought-after amongst collectors.

Closer to home, the period of Japanese occupation in Malaya—three years and eight months between 1941 and 1945—makes stamps issued during that timeframe rare and valuable. One example is the Kedah stamp with an image of Sultan Abdul Hamid Halim, overprinted with the DAI NIPPON 2602 Japanese imperial year, the year 1942. Another is an envelope in Ng's collection, sent from Kangar, Perlis to an address in Ayer Itam Road, Penang in 1944. It commands a five-figure sum due to the Thai stamp and Japanese postmarks. In 1943, the four northern states of Kelantan, Terengganu, Kedah and Perlis were ceded to Thailand by the Japanese imperial army. The postmarks are censor markings, meaning the letter was opened twice and read by Japanese censorship officers in Alor Setar (blue) and in Ipoh (red).

In the world of philately, it would seem that used stamps are worth more than new ones. First day covers are considered a beginner's collection. Ng explains that stamp exhibitions are generally categorised into Traditional Philately, Postal History, Thematic, Social, Literature and Postcards, with First Day Covers being recently introduced as a way to get younger collectors interested.

2

> **"It trains your patience, endurance and attention to detail, and you also cultivate a love for geography, history and language."**

CAPTIONS

1. This prized envelope has a Kedah stamp with an image of Sultan Abdul Hamid Halim, overprinted with the DAI NIPPON 2602 Japanese imperial year.

2. Stamp on the Commonwealth Games IV: Sports (1997) featuring netball.

3. Sri Kathirvel Murugan Maha Parasakthi Pathai Amman, Taiping, Perak is one of the most prominent Hindu temples in Malaysia. It was established in 1885.

4. 100th anniversary celebration of Jit Sin High School, Penang (2018).

5. First day cover of Trees in Malaysia released in 1981. The stamp at the top features a rain tree with its typical wide crown. On the left is a *Dyera Costulata* and on the right is a Borneo camphor tree (*Dryobalanops aromatica*).

3

4

"Stamp collecting is actually a great hobby because people are so used to instant results these days," says Ng, who teaches English at Chung Ling Butterworth High School, and loves introducing the snail mail hobby to his students. "It trains your patience, endurance and attention to detail, and you also cultivate a love for geography, history and language."

PENANG ICONS IN STAMPS

Over the years, many Penang icons have featured in Pos Malaysia stamps—P. Ramlee, Penang Hill Railway and Penang's two bridges that connect the island to the mainland; St. George's Anglican Church, Fort Cornwallis and Pulau Rimau appeared too as part of wider series like "Places of Worship" or "Lighthouses in Malaysia". Even Penang Free School, Chung Ling High School and Jit Sin High School have been commemorated in philately for their centenaries.

There is no doubt that the favourites are flora and fauna stamps, which Pos Malaysia says is the second fastest-selling theme after Yang di-Pertuan Agong's commemorative stamps, issued during the King's installation every five years.

"The popularity of a design is determined by how quickly the collection sells out," explains Haidan Abdul Rahman, Head of Stamp and Philately at Pos Malaysia. "However, all stamp issuances eventually sell out due to the limited quantities printed." Haidan says that an average of 12 to 14 new stamps are released each year, with the current cycle of definitive stamps—those used daily at post offices—themed around marine life. This changes every five years, and previous themes have included rubber and paddy.

The Society's stamp fair in February this year featured a talk about flora philately by Thomas Uhl, a member of Friends of the Penang Botanic Gardens, and Ooi Im Hin, a botanist who worked at the Gardens for seven years. Both explained that the first rubber tree in Penang was planted in the Gardens, while endemic species of Penang like the slipper orchid (*Paphiopedilum barbatum*), witch hazel (*Maingaya malayana*) and ginger (*Geostachys penangensis*)—even the Botanic Gardens itself—are yet to be featured on Malaysian stamps.

However, Ooi points out that Penang's Jelutong tree (*dyera costulata*) did appear in a Trees of Malaysia First Day Cover in 1981, along with the rain tree (*samanea saman)* and Borneo camphor (*dryobalanops aromatica)*.

IMPRINTED IN HISTORY

"Pos Malaysia welcomes stamp design ideas from the public," says Haidan. Anyone can propose designs through the Malaysian Communications and Multimedia Commission (MCMC), which regulates the country's stamp issuance. He adds that a survey is conducted among collectors for their proposed themes each year, though themes must be significant to Malaysia, and reviewed by a design committee before submission for approval.

For the coming year, Ng himself is preparing to exhibit a Botanic Gardens series, featuring lithographs, photogravures and real photos under the Postcards category. He is currently busy in research, while also planning to publish a journal under the Literature category to commemorate the 80th anniversary of the end of World War II.

"With stamps, we can look back at history as a way to remember and learn from world events," says Ng. "Far from glorifying themes like war, it's a way to be grateful for what we have today, and to keep the world in peace and harmony." Through philately, one can imprint history or preserve visuals of endemic flora and fauna for the next generation, lest they forget.

LIM WAN PHING is a freelance writer based in Penang. She has a short story collection, *Two Figures in a Car* published by Penguin SEA.

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Credit: Photo by Yuin Zhi on Unsplash.

TOWARDS AN AGE-FRIENDLY STATE BY 2027

BY CAROLYN KHOR

CAROLYN KHOR is a former ministerial press secretary, a former United Nations volunteer and an independent researcher/writer.

PENANG WILL BE the first state in Malaysia to have an aged population; according to a report published by Penang Institute in October,[1] the state is not yet sufficiently equipped to manage these demographic changes. The institute also opined that Penang would need to place more emphasis on age-related policies to sufficiently meet the demands of an ageing population in the future.

The state Executive Councillor of Social Development, Welfare and Non-Islamic Religious Affairs, Lim Siew Khim, has said that Penang has ambitions to become an age-friendly state by December 2027, with a clear and determined vision to address the rapidly ageing population.

Currently, Penang has an elderly (65 years old and above) population of 8%, or 144,000 of its residents, as reported by the Department of Statistics Malaysia (DoSM). It also has about 12.7% or 228,400 residents aged 60 and above.

According to the United Nations (UN) definition, an "ageing society" is one in which 7% of the population is 65 or older, 14% in an "aged society", and 20% in a "super-aged society". Thus, according to this definition, Penang currently fits within the category of an ageing society.

OLD AGE
65+ years

District	%
1. Timur Laut	9.8
2. Seberang Perai Utara	7.5
3. Barat Daya	7.3
4. Seberang Perai Tengah	7.1
5. Seberang Perai Selatan	6.4

OLD AGE
60+ years

District	%
1. Timur Laut	15.0
2. Barat Daya	11.8
3. Seberang Perai Utara	11.8
4. Seberang Perai Tengah	11.6
5. Seberang Perai Selatan	11.2

Figure 1: Percentage of the elderly in Penang by district. Source: DoSM

No.	Cawangan	Penglihatan	Pendengaran	Pertuturan	Fizikal	Pembelajaran	Mental	Pelbagai	Jumlah
1	BARAT DAYA	372	238	12	1657	1530	220	175	4204
2	PULAU PINANG	77	91	2	291	334	36	26	857
3	SEBERANG PERAI SELATAN	398	302	20	1845	1717	254	179	4715
4	SEBERANG PERAI TENGAH	892	705	41	3791	3195	707	311	9642
5	SEBERANG PERAI UTARA	776	556	33	3509	3431	441	302	9048
6	TIMUR LAUT	1441	1125	26	5149	3770	900	382	12801
Jumlah	Jumlah	3956	3017	134	16242	13977	2566	1375	41267

Figure 2: Disability population in Penang. (Source: Penang state government.)

Lim stresses that the goal is not only about meeting the needs of the elderly, but also ensuring that the environment is inclusive and accessible to people of all ages, particularly older adults and persons with disabilities (OKU).

As published by the DoSM in 2024, Seberang Perai Tengah in Penang is identified as one of 11 newly designated ageing districts, where 7.1% of the population comprises those aged 65 years and over.

"Penang aims to become an age-friendly state by December 2027, and we are committed to improving the quality of life for people of all ages. We envision Penang as a place where everyone—including the elderly and disabled (OKU)—can live independently, access the facilities they need, and actively engage in their communities," Lim says.

> **"Digital access is equally crucial in establishing Penang as an age-friendly city."**

WHAT IS AN AGE-FRIENDLY STATE?

Being an age-friendly state goes beyond offering services to the elderly, explains Lim. It is about ensuring that the infrastructure, policies and community services are tailored to meet the needs of older people.

"An age-friendly state caters to the needs of all age groups, and prioritises the well-being of older residents by creating inclusive environments that foster active ageing."

The ultimate aim is to ensure that older people remain healthy, socially connected and independent for as long as possible, while also fostering respect for older individuals and recognising their valuable contributions to society, she elaborates.

To achieve this, Penang is following the framework and guidelines set by the World Health Organisation (WHO) under its Global Network for Age-Friendly Cities and Communities. The framework identifies eight key domains: outdoor spaces and buildings, transportation, housing, social participation, respect and social inclusion, civic participation and employment, communication and information, as well as community support and health services.

"Our goal is to excel across these domains, ensuring accessibility, inclusivity and quality services tailored to the needs of older adults." Lim explains that in Penang, many older people experience physical and sensory impairments. By integrating universal design principles, the government ensures accessibility for both the elderly and the OKU.

The data provided in Figure 2 shows that 41,267 persons are living with various disabilities in the state. Of these, over 16,000 have physical disabilities, nearly 4,000 people have problems with their sight, over 3,000 struggle with hearing, and about 2,500 people have mental disabilities.

Forward-looking policies and programmes are being implemented to address the needs of the elderly and the OKU communities by recognising the "integral role older people play in our society".

The Penang state government's age-friendly initiatives also align with the UN Sustainable Development Goals (SDGs), especially those that promote health, well-being and reduced inequalities. Lim also acknowledges the importance of economic considerations, and believes that active ageing reduces healthcare costs while enabling healthy elderly individuals and OKUs to contribute to the economy.

The state government is focusing on enhancing accessibility in several areas, including public spaces and infrastructure such as parks, walkways and community centres. Plans are also underway to expand accessible public transportation options as well as strengthen geriatric services and community-based care. As for housing, age-friendly housing designs and retrofitting are being carried out in existing residences.

Digital access is equally crucial in establishing Penang as an age-friendly city. Initiatives to bridge the digital divide, such as providing older people with skills and tools for digital connectivity, are being carried out. Additionally, programmes are organised to promote active ageing and social participation.

All these forward-thinking measures put Penang at the forefront of addressing the challenges of an ageing population, besides serving as a model for other states in the country.

"While other states are beginning to recognise the importance of age-friendly policies, Penang has already made significant strides in implementing programmes that promote active ageing. We see this as an opportunity to lead by example and inspire other states to adopt similar measures."

One such initiative is the Program Khidmat Bantu di Rumah (KBDR), a form of "buddy system", which supports elderly citizens and OKUs living alone. Through this initiative, trained volunteers provide support by conducting home visits, assisting with daily tasks like meal preparation, house cleaning, attending medical appointments and offering companionship.

"This programme reduces reliance on institutional care and also strengthens community-driven support," says Lim.

FOOTNOTE

[1] https://penanginstitute.org/publications/issues/a-sustainable-active-ageing-policy-for-penang/

WEALTH TAX SYSTEMS NEEDED IN ASEAN

BY IAN MCINTYRE

THIS YEAR, Malaysia chairs the Association of Southeast Asian Nations (ASEAN). But ASEAN is not just about government-to-government ties, neither is it just about integrating economics nor playing competitive sports, or promoting culture, arts and heritage.

It is a growing platform for people-to-people amalgamation, and champions the goals of sustainability and equitable distribution that civil society in the region has been advocating for the past five decades. In a world riveted with uncertainties from climate change to harsh geopolitics and extremism to economic stagnation, the synergy within ASEAN is more important than ever before.

While ASEAN navigates bureaucracies and its geopolitical burden, worsened by the strife in Myanmar, NGOs have, in some ways, taken the lead to integrate the region. Regional NGOs, such as the Asian

People's Movement on Debt and Development (APMDD) and the Global Alliance for Incinerator Alternatives (GAIA), have cemented strong ties across the region. APMDD, for example, is at the forefront of incorporating a "wealth tax" in the respective budgets of ASEAN members.

Singapore is a good reference point. When addressing the 35th Singapore Economic Roundtable, then-Singapore Minister for Finance, Lawrence Wong (now the Prime Minister), emphasised the need to guard against rising inequality and for fiscal resources to tackle such challenges. He noted that an important element of a progressive tax system is to consider not just a person's income, but also their accumulated wealth.

In its purest form, wealth taxes are recurrent taxes on a broad range of an individual's movable and immovable properties, and their net of debts. They are separate and distinct from taxes levied on income generated by assets, e.g. capital gains taxes, taxes on transactions involving immovable properties, stamp duties and property tax as well as inheritance or estate taxes, which are only levied when wealth is inherited.

One of the main arguments against wealth taxes is the concern for capital flight—the risk of wealthy individuals relocating themselves or their capital or assets to avoid being taxed. In hindsight, wealth taxes have also been criticised on the basis that they are imposed irrespective of the actual returns generated by the assets. Therefore, a net wealth tax can potentially penalise the owners of low-return assets and favour the owners of high-return assets.

APMDD coordinator Lidy Nacpil, a veteran civil activist from the 1980s, is relentless on the fight to impose wealth tax, citing that data obtained revealed that the rich are getting richer and the poor, well, poorer. "Wealth taxation is a practical necessity."

In 2022, taxes on goods and services—such as VAT, GST, and sales and excise taxes—made up an average of 48.8% of government revenues in Asia-Pacific countries. This is significantly higher than the 31.9% average in developed countries. The heavy reliance on regressive taxes in Asia puts an unfair burden on workers, farmers, women, youths and other vulnerable groups, often with little benefits in terms of public services or improvements in living and working conditions.

"It is high time the region puts an end to inequality and push for more progressive taxation," she argues, adding that while there might not be a uniform wealth, a progressive one in line with the national conditions of each regional nation is needed.

Now, there is also a need to tap into cybercurrency and trade occurring online through e-commerce, online transactions and fintech. Then, there are scams which have burgeoned into a multi-billion dollar illicit industry.

Nacpil is motivated by the situation in the Philippines, where the worsening state of climate emergency and continuing crises in public financing are exacerbating poverty and inequalities, impacting the government's ability to deliver its human rights obligations. The Department of Social Welfare and Development estimates, for example, that more than 2.3 million people, or over 630,000 families, were affected by typhoons last year.

During the height of the Covid-19 pandemic, the demand for taxing the rich and not the poor gained popularity, she noted. APMDD has organised a public forum on championing "wealth tax now", which gained traction after some academics lent their voices to the cause.

One of Nacpil's associates in Malaysia is former Klang Member of Parliament, Charles Santiago, who echoes the need for some form of wealth tax in Malaysia. "It may even curb corruption, since ill-gotten wealth can be traced and then taxed even in cases where the prosecution finds it difficult to acquire the evidence." Santiago said that the tax would only impact the "ultra-rich" with assets exceeding RM100mil, not the aspiring middle class. He had previously proposed that the country's top 50 wealthiest individuals be charged a 2.5% wealth tax, adding that it is only fair and just for these beneficiaries of public support to contribute back to society.

Economist Goh Lim Thye has, however, reportedly cautioned that a wealth tax requires careful planning and a robust asset valuation framework to avoid underreporting.[1] Goh was quoted saying that this was a problem Argentina initially faced when it introduced the tax in the 1990s, as it struggled with the valuation of offshore assets. However, the government could counteract this form of tax evasion by negotiating bilateral agreements on tax information exchange and global asset reporting.

At the beginning of this year, Thailand's Finance Permanent Secretary Lavaron Sangsnit announced that implementing a wealth tax is becoming more feasible due to the ability to monitor the assets of the country's richest citizens, including those held in foreign countries, brought about by Thailand's membership in the international tax information exchange network.[2] Can Malaysia follow suit?

Bank officer Bernard Lim related that the problems faced by the working class is mounting, especially in Penang, due to the escalation of living costs post-pandemic. "It is time for a profound measure to be introduced to address the growing divide between the rich and the poor," he said.

IAN MCINTYRE is a veteran journalist with over 25 years of experience reporting for the mainstream and alternative media. He subscribes to a belief that what is good for society is likewise beneficial for the media.

FOOTNOTES

[1] https://www.freemalaysiatoday.com/category/nation/2024/12/10/wealth-tax-will-raise-revenue-without-burdening-lower-income-groups-say-activists/

[2] https://www.malaymail.com/news/money/2025/01/18/thailand-moves-closer-to-introducing-wealth-tax-with-new-asset-tracking-capabilities/163742#google_vignette

“The evolution of Penang’s linguistic landscape raises critical questions: Can the state strike a balance between globalisation and preserving its linguistic heritage?”

PENANG’S UNIQUE LANGUAGES UNDER THREAT

面临威胁的槟城独特语言

BY AGNES CHIN

Penang-born **AGNES CHIN** blends the worlds of writing and entrepreneurship as the creative force behind Meraki Word Craft, drawing on her experience in strategic management and operations. A lover of happy endings and Char Koay Teow, Agnes believes every story is worth telling—especially Penang’s.

IN THE BUSTLING Air Itam market area, the air thrums with a symphony of voices. A hawker calls out in Hokkien, laced with Malay and English words, enticing you to try his Rojak. An Indian auntie barters for spices in Malay, seasoned with a hint of Hokkien intonation. A group of teenagers weaves through the crowd, their conversation peppered with the ever-inventive Manglish. This is the music of Penang, a beautiful cacophony that speaks volumes about the state's history and its people.

Penang's dialects and languages, shaped by centuries of immigration, trade and multicultural coexistence, are an essential part of its identity. As globalisation and modernisation influence daily life, these languages face existential challenges, raising questions about preservation, identity and adaptability in a rapidly changing world.

PENANG HOKKIEN: A LINGUA FRANCA IN TRANSITION

Penang Hokkien emerged with the arrival of Hokkien-speaking Chinese immigrants in the 18th and 19th centuries. Over time, it evolved into a distinct dialect, absorbing Malay, Tamil and English phrases. Historically, Penang Hokkien was the island's lingua franca, used in markets, neighbourhoods and even classrooms. "I remember growing up in the 1960s when Penang Hokkien was spoken everywhere—in wet markets, on the streets, even in classrooms when teachers weren't watching," recalls Madam Chan, a retired teacher from Air Itam. "Now, my grandchildren can barely hold a conversation in Hokkien, and that breaks my heart."

This generational gap highlights the gradual shift as English, Malay and Mandarin become dominant in schools and workplaces. Today, Penang Hokkien is often confined to informal settings, primarily within family circles. However, efforts to preserve the dialect are gaining traction. John Ong's Penang Hokkien Podcast, for instance, provides a digital platform for speakers and learners to connect, ensuring the dialect's nuances are recorded for posterity. Similarly, community classes targeting younger generations have sparked a renewed interest in Penang Hokkien, offering hope for its survival. Timothy Tye's online Penang Hokkien Dictionary is another valuable resource, providing definitions, pronunciations and usage examples.

BABA MALAY: THE DECLINING TONGUE OF THE PERANAKANS

Another linguistic gem in Penang's heritage is Baba and Nyonya Malay, which reflects the Peranakans' historical role as cultural intermediaries between the Chinese and Malay communities.

In its heyday, Baba Malay flourished in Peranakan households, where seamless switching between Hokkien and Malay took place. Phrases like "*Lu eh kia cho hamik? Ini macam tak boleh jalan la*," (What is your child doing? This way won't work) embodies the creative fusion of languages.

Sadly, Baba Malay is now on the brink of extinction due to the fading of Peranakan traditions. While Peranakan cuisine and fashion have experienced a revival, the language has not enjoyed similar attention. Cultural advocates have called for urgent documentation and teaching initiatives to save this tongue from becoming a relic.

MALAY AND TAMIL: SHARED INNOVATIONS IN EVERYDAY SPEECH

Penang Malay, distinct from standard Malay, features unique colloquialisms influenced by Hokkien and English. For example, "*Hangpa pi makan durian tak jio aku!*" (You all went to eat durian without inviting me!) exemplifies Penang's playful linguistic innovations. Words like "*hangpa*" (all of you) and "*depa*" (they) are regional markers specific to Penang and northern Malaysia. Those from the central and southern regions of Peninsular Malaysia are less likely to use or understand these readily.

Similarly, Tamil has contributed vocabulary to Penang's shared vernacular. Words like "*anneh*" (elder brother; also functions as the English slang "bro") and "*aiyo*" (an exclamation of frustration) have transcended ethnic boundaries, reflecting Penang's harmonious multicultural interactions. However, the use of Tamil as a first language is declining among younger generations. To counter this trend, Tamil schools and cultural associations in Penang continue to promote Tamil literature, music and drama.

MANDARIN'S INCREASING PREVALENCE AMONG CHINESE SPEAKERS

Historically, Hokkien was the primary language of commerce and education. Today, however, Mandarin has taken its place due to changes in education policies and parental preferences.

A neighbour recently asked my 10-year-old niece, "Eh, you know or not, '*kam sia*' means 'thank you' in Hokkien?" She shyly replied, "But I always say 'thank you' or '*xie xie*'." Many Hokkiens today find themselves fluent in Mandarin, but struggle to converse in their dialect. This linguistic proficiency in Mandarin is propelling as it is often seen as a path to success. While this shift reflects global priorities, it also poses a challenge for the preservation of Penang Hokkien.

THE FREQUENT USE OF MANGLISH

English has been a cornerstone of Penang's linguistic identity since its days as a British colony. However, the English spoken in Penang is far from standard. Manglish (Malaysian English), a delightful mix of English with local vernaculars, encapsulates Penang's multicultural spirit. Expressions like "Can *ah*?" (Is it possible?) and *"Paiseh nia!"* (I'm so embarrassed!) blends English with the rhythm and quirks of local dialects.

A humorous example of Manglish's prominence is the 2017 pedestrian crossing sticker in George Town that read, "Press once can already." While the sticker was eventually removed for "vandalism", it showcased how deeply Manglish is woven into Penang's identity.

CHALLENGES AND OPPORTUNITIES

The evolution of Penang's linguistic landscape raises critical questions: Can the state strike a balance between globalisation and preserving its linguistic heritage? Efforts are already underway, leveraging both traditional and modern approaches to ensure these languages endure.

Community initiatives like Penang Hokkien classes and cultural workshops are fostering a renewed appreciation for local dialects. Meanwhile, social media platforms have emerged as unexpected allies in language preservation. Younger Penangites now use Penang Hokkien, Malay and Tamil in memes, videos and posts, making these languages relevant in the digital age.

These linguistic blends are vibrant expressions of the state's history, identity and cultural diversity. By celebrating and encouraging its use, Penangites can ensure their unique linguistic identity endures. Whether through podcasts, community classes or simple conversations, the voices of Penang's past, present and future remain intertwined—alive and thriving.

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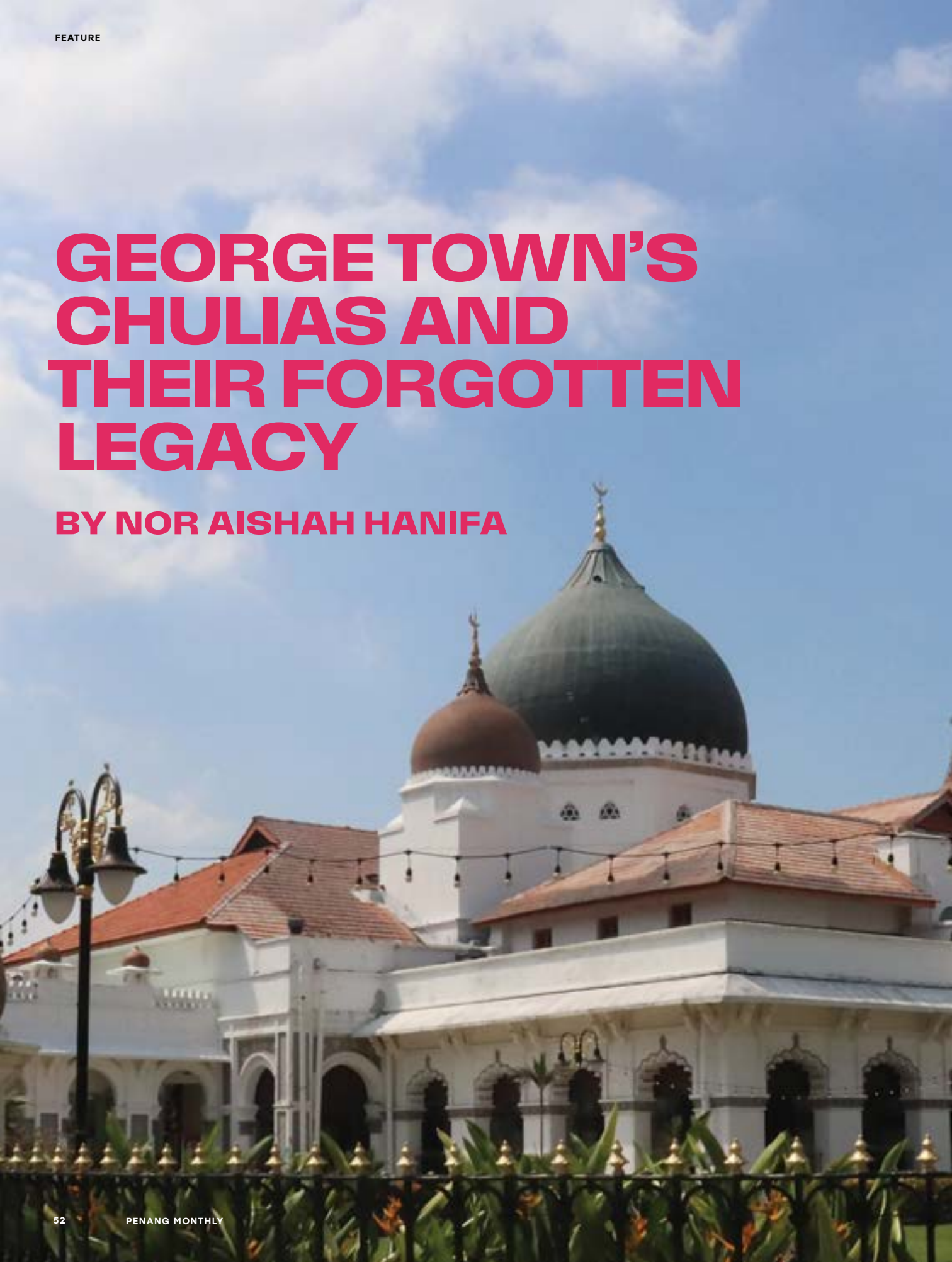
[4] https://catscityhornbillland.blogspot.com/2013/02/malaysia-english-manglish.html

[5] https://www.penangmonthly.com/the-complex-task-of-being-chinese-peranakan-1/

[6] 'Press once can already' sticker at Penang pedestrian crossing stirs 'Manglish' debate, police say act of vandalism | The Straits Times

GEORGE TOWN'S CHULIAS AND THEIR FORGOTTEN LEGACY

BY NOR AISHAH HANIFA



THE TAMIL MUSLIM community in George Town, also known as Chulias, arrived from Kedah, the main destination for Muslim traders coming from the Coromandel Coast of South India. The Chulias conducted an extensive volume of trade across the Indian Ocean, and were seen in many maritime and river ports along the Strait of Malacca. They also held key positions in the Malay Court. By the 18th century, they were handling much of Kedah's trade.

Kedah was known for its Chulia traders, from Port Novo to closely linked ports like Nagor and Nagapattinam. It had one of the most influential Chulias in its royal court—Maharaja Khana Khan, believed to have drafted Kedah's legal code and several treaties for the Sultan. According to historian Sinnappah Arasaratnam, a Chulia merchant named Jamal became advisor to the king with the title Datu Seri Raja. Other Chulia traders were serving as councillors, managers of trade and procurer of arms for the Kedah rulers.

For a long time, the Chulias were trade rivals to the expansion of British interest in Southeast Asia. Their perspective changed when Kedah faced political turmoil in the 1770s. In 1786, when the British settlement began at Fort Cornwallis, the Chulias decided to engage with the British in regional commerce. By then, they were the only Asian commercial interest group left in the Bay of Bengal trading areas.

SETTLING IN GEORGE TOWN

The Chulias started to migrate from Kedah and other west Malayan ports to Penang. Their vessels were regulars at the port—they came from Porto Novo, Nagore. From Penang, they would sail to Mergui, Ujang Selang, Melaka, Aceh and Pedie. Their ships weighed from 100 to 300 tonnes and carried textiles, rice, tobacco and salt from India. On their return journey, they carried pepper, tin, ginger, gambier, lak, betel nuts, rattan, horses and gold dust. All vessels carried heavy guns.

The Chulias started settling in George Town after Francis Light obtained Penang Island from Sultan Abdullah of Kedah, and were allotted the area known as Chulia Street in Light's development plan.

There were several groups of Chulias in Penang. The first were shipping agents who consigned and assembled goods for return journeys. Then, there are the pedlars who brought small quantities of goods and capital, residing for one or more seasons before returning; as semi-permanent settlers, they became shopkeepers selling supplies and provisions to ships. Another group consisted of labourers, lending services to ship owners. Francis Light documented in 1794 that Chulia vessels brought 1,500 to 2,000 men annually to work as labourers. Many settled in Penang, starting families. Independent historian Ranjit Singh Malhi notes that based on the 1833 census, there were 7,886 Chulias in Penang, and many Chulias intermarried with local Malay women and assimilated into the Malay Society.

The Chulias also contributed towards the development of early mosques on the island. Based on a 1791 map, there were two mosques at the south of Chulier Street (now Chulia Street)—the Kapitan Keling Mosque and the Chulier Mosque at the end of Queen Street. The Chulia community also built the Nagore Dargah on the land granted by the East India Company as a tradition to cherish the Sufi saint in early 1800. The mosque-building traditions of the Chulias in George Town influenced mosque architecture and development throughout Penang and other Malay states, alongside contributions from Chinese and Arab traders.

During the time of the British in Penang, Chulia traders enjoyed remarkable status and role. One of them was Cauder Mohuddeen, from the Marakkayar class, also known as Merican. He migrated to Penang with Francis Light and influenced the Kedah-based Chulia traders to relocate to the new settlement. He was appointed as the first Kapitan Keling in 1801, and according to the General Report on the Moslem Trusts and Foundations in Penang (1904), it was he who built the Kapitan Keling Mosque. He introduced the concept of family wills and endowments (waqf), likely influenced by practices from the Coromandel Coast. This may have laid the groundwork for the establishment of waqf systems in the Malay states.

PRESS AND POLITICS

At the end of the 19th century, the Jawi Peranakan and Chulias (Tamil Muslims or Indian Muslims, as they are now known) in Penang were involved in Malay Language print media. The first Malay newspaper was *Tanjong Penegeri*. The proprietor cum editor was S.P.S.K. Kader Sahib. Other Malay language papers included *Pemimpin Wira*, *Lengkongan Bulan*, *Bintang Timor* and *Cahya Pulau Pinang*, which ran from the end of the 19th century to the early 20th century, spurred by the Jawi Peranakans and Tamil Muslims. This became the prelude to Malay press such as *Utusan Melayu* in 1907 and *Al Imam* in 1908.

At the turn of the 20th century, urban foreign educated Muslim intellectuals were organised under the banner of "Kaum Muda". Many of them who were prominent Indian Muslims and Arab Muslims fostered Muslim solidarity and brotherhood in Penang, Singapore and Melaka. This effort was eclipsed in the 1930s with the rise of Malay nationalist political parties like Parti Kebangsaan Melayu Malaya.

Persatuan Melayu Pulau Pinang (PEMENANG) was formed in 1927 by a coalition of Tamil Muslim and Malay elites, the Jawi Peranakans uniting all Malay associations in Penang and Seberang Perai. PEMENANG bought a piece of land in Kampung Melayu, which became the first Malay reserve land in the Straits Settlements.

Furthermore, during the Japanese occupation, PEMENANG was appointed as the Malay representative in Penang to discuss Malay affairs. It was called "Malai San Koi Kai" or the Malay Welfare Association.

When the British suggested the formation of the Malayan Union, PEMENANG prepared a memorandum to oppose it. This was sent to the United Nations, London and Moscow. When Onn Jaafar held the first Malay Congress in KL on 4 March 1946 that led to the formation of the United Malay National Organisation (UMNO), PEMENANG representatives were present, and the organisation is recognised as one of the founding associations of UMNO.

Unfortunately, contributions by the Tamil Muslim community were not well recognised in Malay communal politics. In the age of ethno-nationalism, Tamil Muslims were caught between two identities—Indian and Malay—marking their social and political dilemma in Malaysia. They found themselves confused by legal concepts of "Melayu" and "Bumiputera". This has led to a continuous search for identity among Indian Muslim political movements.

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FADED LANDSCAPES:

ALEX FACE'S JOURNEY ACROSS FLEETING TIME

1

BY IVAN GABRIEL

ALEX FACE (Patcharapon Tangruen) is a Thai artist whose name has become synonymous with street art, along with deep reflections on childhood, innocence and societal change. Alex's journey began on the streets of Bangkok, where he used abandoned buildings as his canvas. For two decades, his graffiti art challenged the urban spaces of cities across Southeast Asia and beyond. His works exude rawness and playfulness, while conveying contemporary themes that reflect the fragility of childhood and the unpredictable nature of the world.

The regional impact he made has been significant; his work can be found on the streets of Bangkok, Jakarta, Penang, Taiwan and even Los Angeles, Chicago and New York—not only as graffiti, but also within gallery spaces. The transition from street to gallery was a natural progression for Alex, whose distinct visual language, often seen in his larger-than-life murals, also translated into more intimate, thought-provoking works for exhibitions. His ability to engage with both public and private spaces allowed him to maintain an authentic connection with diverse audiences.

Alex's latest exhibition, Faded Landscapes, running from 15 March to 18 May 2025 at Cultprint, marks a new and deeply personal chapter in his creative evolution. The exhibition is a direct result of Alex's 1,200km cycling journey from Bangkok to Penang, a voyage of a lifetime that redefined not only his artistic practice, but also his understanding of life and time. As Alex explains, this experience was more than just a physical challenge, it was an opportunity to reconnect with nature, revisit his roots, and engage with his work in a way that was raw and spontaneous. "Each stop was a new chapter," he shares, "I'd set up my portable canvas, and wherever I was, whatever I was feeling, that moment would be captured on the spot."

Throughout his journey, Alex endured the blistering equatorial heat, physical exhaustion and hidden dangers on the road, but he embraced these challenges as integral parts of the creative process. "I've always wanted to do this," he explains. "The opportunity came when Ernest [Zacharevic] asked me if I wanted to do a show in Penang."

As he cycled through rural towns, bustling cities and quiet villages, Alex was confronted with the fleeting nature of time and the fast-changing environments. With each painting he created along the way, he was capturing fleeting moments, deeply aware of how transitory life itself is. "Sometimes I felt like I was racing against time, as if everything around me was fading," he reflects. "But that's also what made it so meaningful. These moments—just like the landscapes—are gone so quickly, and that's the beauty of it."

Alex and his cycling companion aimed to cover 100km every day. His first artwork was of his Phutthamonthon home in Bangkok. Along the way, he also captured Hua Hin, Chumphon and Songkhla, among others. In Malaysia, he stopped at a rice field in Alor Setar, went up Gunung Jerai and finally, painted the sun setting behind the island of Penang from Butterworth.

3

4

CAPTIONS

1. Suan Kong Beach, Chana, Songkhla (2025). Spray, oil on linen.

2. Phutthamonthon Home, Bangkok (2025). Spray, oil on linen.

3. The bicycle that took him from Bangkok to Penang.

4. The artist, Alex Face, during a private viewing of his exhibition at Cultprint.

5. Several of Alex's works displayed at Cultprint.

5

FACE'S ICONIC CHARACTER

One of the most striking aspects of Alex Face's artistic oeuvre is his deep connection to the iconic character (a three-eyed, bunny-eared figure) whom he called Mardi, that first emerged as a reflection of his fatherhood. However, over time, it has become a symbol of the innocence and vulnerability of children, infused with the complex and often harsh realities they face as they grow up. "I don't have a name for it now, my daughter wants her name back," he chuckles.

"When I first saw my daughter, she looked at me with an expression that made me wonder—how do we experience the world as children? What do we carry with us, and what gets lost along the way?" For Alex, the third eye, drawn from Thai spiritual beliefs, symbolises a deeper awareness, an ability to perceive the world with clarity and sensitivity. This introspective understanding is something he hopes to impart through his work, to encourage us to reflect on our own experiences and perceptions.

When asked about what this character might want to convey to the people of Penang, Alex shares his belief in the importance of accepting difference. His character's eyes, which are often depicted in blue and red, carry dual meanings depending on the cultural context. As Alex explains, "Some cultures see these eyes, especially the third, as evil." However, he also notes that in other places, the eyes are seen as symbols of wisdom and enlightenment. This dichotomy, Alex believes, is representative of how difference is perceived across the world—sometimes feared, sometimes celebrated. His message is clear: "We are different. I believe we're the same, and at the same time, we need to accept that we are different—and we can live together."

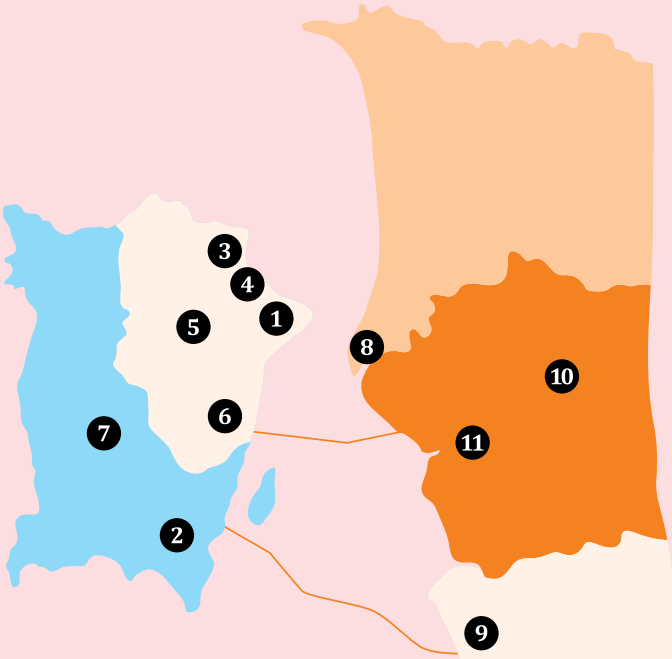
This notion of "accepting difference" and finding common ground runs through much of Alex's work, playing a pivotal role in his exploration of identity, society and humanity, alongside the social and political contexts that inform his creations. His character—with its eyes—serves as a powerful representation of how we, despite apparent differences, share the same fundamental experiences and emotions, and the potential for connection.

Faded Landscapes is more than just a collection of Impressionist-like paintings; it is a visual diary of a journey, a series of intimate encounters with a world that will never be the same again. Each application on the canvas represents a moment, a place and a feeling; a moment that, in its transience, is beautiful in its own right.

By painting along his journey, at rest stops, on roadsides, in the heart of cities, Alex has captured the present as it was. "Life is fleeting, and sometimes we don't realise how quickly things pass us by. But when we're present, truly present, we can create something meaningful," he reflects.

IVAN GABRIEL is a curator with a curatorial approach committed to making art accessible to diverse audiences. He views each showcase as a chance for inadvertent education, using art as a powerful platform to initiate conversations about contemporary issues, provoking audiences to think and reflect.

HERE'S WHERE YOU CAN FIND PENANG MONTHLY



PICK-UP SPOTS
KL/SELANGOR

◯ Kuala Lumpur
Hubba Hubba Mont Kiara
The Godown Arts Centre

◯ Petaling Jaya
Temu House
Yin's Sourdough Bakery and Café

◯ Subang Jaya
Sunway University
(Students Study Area)

PICK-UP SPOTS
PENANG

1 George Town
Areca Books
Book Island @ COEX
Infinity 8,
Black Kettle
BookXcess Gurney Paragon
ChinaHouse
Cheong Fatt Tze Mansion
(Blue Mansion)
Gerakbudaya Bookshop
@ Hikayat
Gurney Plaza
(Information Counter)
Hin Bus Depot Art Centre
Huey & Wah Café
Le Petit Four Patisserie
More by Arang Coffee
Penang Institute
Penang Island City Council
(Komtar Level 3)
Penang Island Municipal Council
Pusat Harmoni
(Harmonico)—Reception
Ren I Tang Heritage Inn
Sin Seh Kai Artisan Bakery
Tourist Information Centre
32 Mansion

2 Bayan Lepas
Arang Coffee
InvestPenang
Penang Development
Corporation (PDC)
Penang Skills
Development Centre (PSDC)
Spices by Yin's
Urban Republic

3 Tanjung Bungah
Gusto Café
Straits Mini Mart
Tenby International School
Yin's WholeFood Manufactory
(Lembah Permai)

4 Tanjung Tokong
Blue Reef Straits Quay

5 Air Itam
Coffee Elements
Penang Hill—Lower Station

6 Gelugor
E-Gate (Security Desk
located at the building's
middle span)
Penang Youth
Development Corporation
(PYDC)
Universiti Sains Malaysia,
Hamzah Sendut Library 1
(Main Entrance Foyer)

9 Batu Kawan
IKEA Batu Kawan

10 Bukit Mertajam
Seberang Perai Municipal Council

11 Juru
AUTO CITY
Shop-In D'Park

READING SPOTS
PENANG

1 George Town
Bricklin Café Bar
Consumers' Association
of Penang
Forward College
G Hotel
Kim Haus
Komichi Tea House
Mugshot Café
Narrow Marrow
Penang Public Library
USM Library
Wheeler's Café

4 Tanjung Tokong
Leo Books

7 Balik Pulau
Botanica Mansion
Nada Natural Farming

8 Butterworth
Artichoke Café

9 Batu Kawan
Peninsula College

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