COVID-19 STIMULUS AND IMPROVING ENERGY TRANSITION IN MALAYSIA: ANALYSIS AND RECOMMENDATION

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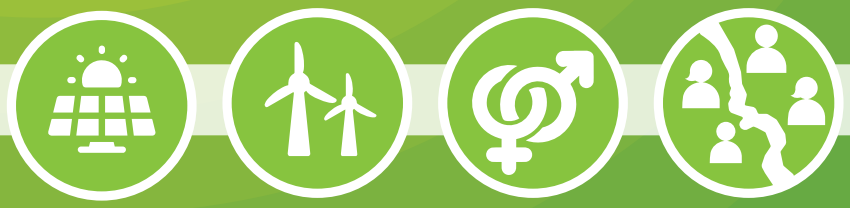

This paper is part of a research series on the energy landscape in Southeast Asia.

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ABSTRACT

The social and economic devastation caused by the COVID-19 pandemic has compelled governments to mount unprecedented fiscal responses to stimulate the economy. Malaysia, for example, has rolled out over MYR 530 billion (USD 128 billion[1]) as of September 2021. While there is a clear imperative for governments to devote sufficient resources to economic recovery, recovery plans that do not adequately factor in measures to reduce greenhouse gas emissions will put nations at greater risk of inadequately addressing a bigger threat – climate change. This research examines Malaysia's COVID-19 economic recovery plans and the extent to which they support a socially just, clean energy transition in the country. Despite government acknowledgement that a sustainable recovery can help transition to a climate resilient economy, provide jobs, and improve productivity, the study finds that the proportion of financing given to green initiatives in Malaysia's pandemic stimulus packages is limited. Moreover, support has been provided to high fossil fuel emitting activities (e.g. through fuel subsidies). The study provides a number of recommendations to support Malaysia achieve the twin ambitions of economic recovery and a low carbon energy transition.

1. Exchange rate: 1 USD = 4.14 MYR as of October 29, 2021

1. INTRODUCTION

The COVID-19 pandemic has brought about devastating health, social and economic impacts. Globally, COVID-19 has caused over 4.7 million deaths (as of September 25, 2021) and it has significantly weakened the global economy, which contracted by 3.2% in 2020, representing the sharpest global decline since 1960 (IMF, 2021). The uneven impacts of the pandemic have exacerbated pre-existing inequalities, with micro and small enterprises as well as informal workers disproportionately affected (ILO, 2021).

Malaysia was not spared from the crisis. In 2020, the COVID pandemic caused the sharpest annual decline in Malaysia's GDP growth since the 1997 Asian Financial Crisis. Small and medium enterprises (SMEs) bore the biggest brunt of GDP contraction (Ikram, 2021). By end of 2020, nearly 100,000 Malaysians had lost their jobs. Malaysia's unemployment rate soared to 5.3%, the highest in three decades (Tan et al., 2020). Pandemic-induced unemployment has disproportionately affected women, low and semi-skilled workers, and those with lower levels of education.

In response to the pandemic, governments across the world have provided an unprecedented level of support to protect people and defend their economies, driving global government indebtedness to historic levels. Malaysia has rolled out over MYR 530 billion (USD 128 billion) as of September 2021 in stimulus measures to cushion the economic impacts of the pandemic. To further stimulate recovery, MYR 322.5 billion (USD 77.8 billion) was allocated for Budget 2021, an increase of 8.6% from the previous year and the biggest ever in the nation's history (Reuters, 2020).

As the world grapples with managing and recovering from the pandemic, an even bigger crisis looms – climate change. How the world reboots after Covid-19 will largely shape our fate and ability to deal with the climate crisis. Transitioning to a low carbon economy must be front and center of global pandemic recovery plans. Failure to adequately factor in measures to reduce greenhouse gas (GHG) emissions will put nations at greater risk of dangerous climate change. A "green recovery" from COVID-19 will not only help slow down climate change but also create opportunities for jobs, income, and more sustainable growth.

Through an update to its Nationally Determined Contribution (NDC) in July 2021, Malaysia has set the target of reducing GHG emissions intensity to its GDP by 45% by 2030 compared to 2005 levels (Government of Malaysia, 2021). A transition to clean energy is crucial to achieve this, as the majority of emissions in Malaysia come from the energy sector.

This paper examines if and how Malaysia's COVID-19 recovery policy supports the country's energy transition towards decarbonization. Given Malaysia's stated ambition to increase the share of renewable energy in its installed capacity to 31% by 2025 and 40% by 2035 under its power generation plan (MIDA, 2021), the research examines the extent to which the country's pandemic recovery economic stimulus supports or detracts from this ambition. The study makes a number of policy recommendations that can support the twin goals of economic recovery from the pandemic and a clean energy transition.

This report is structured into four main parts. Following the introduction, Section 2 highlights the opportunities and challenges for post-pandemic recovery to support a socially just, low carbon energy transition. Section 3 analyses whether Malaysia's COVID-19 economic stimulus packages supports such energy transition efforts. Section 4 presents a number of recommendations to ensure recovery policies support Malaysia's clean energy transition.

This article is primarily based on desk research. A wide range of sources were consulted and synthesized, including research reports and policy documents from governments and international organizations, statistical studies, news reports, and academic articles. Policy recommendations are made with reference to comparative examples and best practices described in policy reports and studies. As the COVID-19 pandemic is still ongoing, data on Malaysia's recovery programs and their impacts are still being generated in real time. The conclusions and recommendations in this article are based on data that was publicly available at the time of writing.

2. OPPORTUNITIES AND CHALLENGES FOR POST-PANDEMIC RECOVERY TO SUPPORT A SOCIALLY JUST, LOW CARBON ENERGY TRANSITION

The modern energy transition is driven by the recognition that human activities are largely responsible for the global warming observed in the atmosphere, ocean, and land. The Intergovernmental Panel on Climate Change's 6th report (IPCC, 2021) indicates that each of the last four decades were successively warmer than the last, with the climate warming at a rate not seen in at least 2000 years.

Beyond physical impacts to the environment, climate change is deeply intertwined with global patterns of inequality. Climate change intensifies existing development challenges for poor and marginal communities that are already at high risk. Although poor and vulnerable groups have contributed least to the climate change crisis, they bear the biggest brunt of its impacts. Along a similar vein, climate change mitigation policies that are not designed to be inclusive could end up placing a higher financial burden on the poor. Carley and Konisky (2020) note that energy transition efforts which overlook considerations of equity will lead to certain groups being unable to access the benefits of the transition, or could even be left worse off as a result. Energy transition efforts must therefore consider the implications for poor and vulnerable populations from multiple angles.

Equity considerations in energy transitions can be framed in the context of energy justice. The Initiative for Energy Justice (n.d.) defines energy justice as "the goal of achieving equity in both the social and economic participation in the energy system, while also remediating social, economic, and health burdens on those disproportionately harmed by the energy system." Jenkins et al. (2016) argue that energy justice is a multi-disciplinary principle that applies to all aspects of energy decision-making, including energy policy, production, systems, consumption, security, activism, and political economy. Therefore, each step of energy decision-making processes must be assessed for their equity considerations.

Impacts of climate change will not only affect the physical environment and social systems but also cause significant economic disruptions. The Swiss Re Institute (2021) estimates that global temperature rises will result in negative impacts to GDP globally by 2050 even if countries meet the 2015 Paris Agreement targets, with more severe consequences should temperature increases exceed the 2.0°C Paris Agreement limit. GDP loss from global warming in ASEAN is expected to be among the most significant across all regions (Swiss Re Institute 2021). Against

this backdrop, transitioning to a low carbon economy is urgently needed to limit further global temperature increases and minimize catastrophic impacts of climate change.

While addressing the impacts of climate change is a crisis on its own, the COVID-19 pandemic is a pressing challenge that has captured the immediate attention of governments given its devastating impacts. In Malaysia as elsewhere, its effects stretched well beyond public health. The country experienced four consecutive quarters of economic contraction starting from the second quarter of 2020 before finally registering an increase in GDP of 16.1% in the second quarter of 2021 (DOSM, 2021a). The strong growth for this quarter is deceiving, however, as it is only attributed to the low base recorded in the second quarter of 2020. The pandemic has also resulted in increased unemployment. According to the most recent labor force statistics published by the Department of Statistics Malaysia (DOSM, 2021b), the unemployment rate in June 2021 climbed to 4.8% (approximately 770,000 people).

The social injustices of climate change are likely to be amplified by the impacts of COVID-19. In the context of the two crises, pandemic recovery efforts present an opportunity for countries to rebuild economies and societies through a "green reset" that covers both short term pandemic relief efforts and longer term climate change recovery measures. On the surface, it appears that the pandemic unexpectedly contributed to reducing emissions in 2020 (OECD, 2020a) because of the lockdown measures enforced across the globe. However, there is a high risk that this will only be a temporary drop that does not influence global warming if it is not supported by strong climate action policies that permanently drive down emissions levels. The phenomenon of emissions rebounding to higher levels after a crisis was observed in the aftermath of the 2008-2009 Global Financial Crisis (GFC), with Peters et al. (2012) attributing this rise to significant government investment in fossil fuel-dependent activities to stimulate domestic economies.

While the current focus on navigating the pandemic is understandable, efforts to build back economies and societies risks favoring short term "business as usual" measures that overlook the need to make a low carbon transition during this critical recovery period. This is especially the case given that typical responses by governments and businesses during times of economic uncertainty is to postpone or downsize investments in innovative activities, particularly those with a longer-term maturity period (Baker et al., 2020). This could have significant implications for low carbon energy infrastructure development and research efforts.

Experiences with previous crises highlight the benefits of incorporating green elements into recovery measures. In the aftermath of the GFC of 2008-2009, South Korea introduced a Green New Deal that contributed to "strong economic growth within a year of implementation" (Agrawala et al., 2020). Similarly, green stimulus measures introduced in the European Union post GFC were seen to contribute positively to GDP growth (Agrawala et al., 2020).

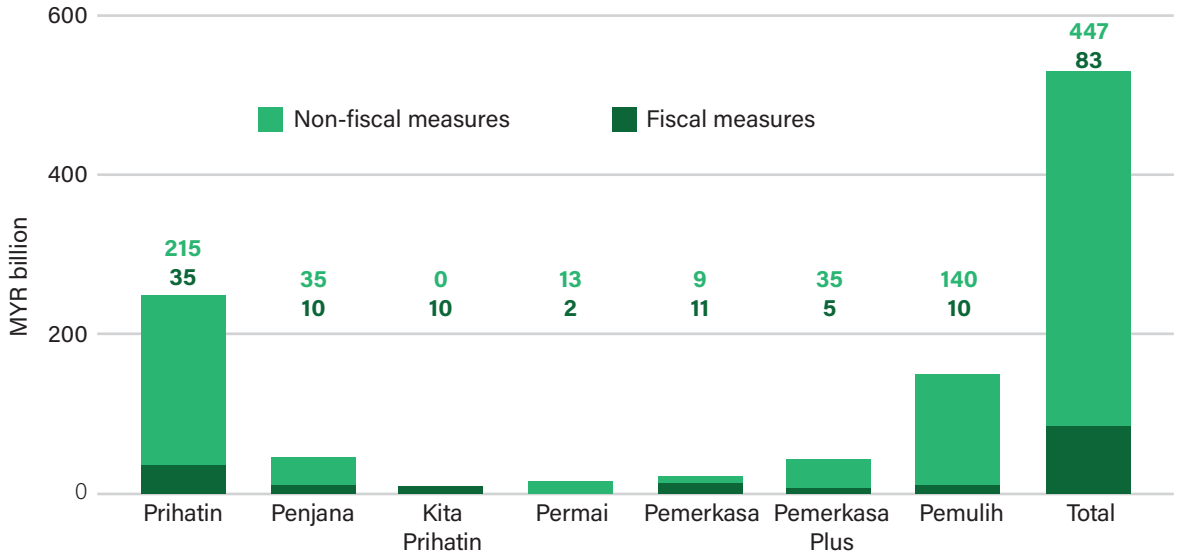
The OECD (2020b) reports that green recovery measures must address the impact of the pandemic on employment, as this is a key focus of post-pandemic recovery measures to date. A green recovery can support job creation. The International Energy Agency (IEA, 2020, p.40) shows that investment in energy efficiency (in buildings and industry), solar PV and grids "create some of the largest number of jobs per unit of investment".

Furthermore, allocating post-pandemic recovery resources to facilitating a clean energy transition is critical as energy infrastructure decisions are difficult to reverse and could result in carbon lock-in (i.e. when carbon-intensive systems perpetuate, delay or prevent the transition to low-carbon energy systems; Sato et al., 2021). This could make it difficult for governments to meet their climate targets and result in an overshoot of the Paris Agreement temperature goal of limiting the temperature increase to 1.5°C above pre-industrial levels.

3. MALAYSIAN COVID-19 ECONOMIC STIMULUS: DOES IT SUPPORT A CLEAN ENERGY TRANSITION?

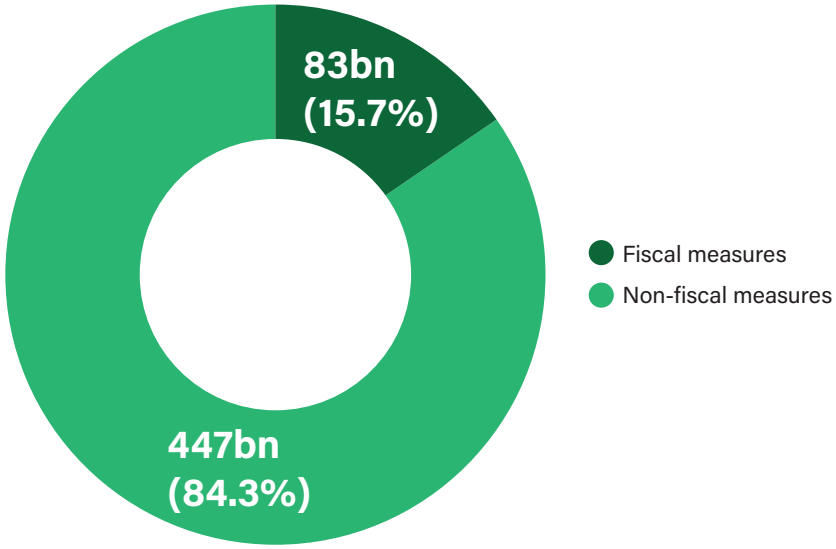
To cushion the economic impacts of the COVID-19 pandemic and stimulate economic recovery, the Malaysian government has pledged a total of MYR 530 billion (USD 128 billion) through a number of stimulus packages (see Figure 1). While this represents around 40% of Malaysia's 2020 GDP, it is crucial to note that only MYR 83 billion (6% of GDP or 15.7% of the total stimulus) represents direct government spending (see Figure 2). Cheng (2021) shows that Malaysia's total fiscal spending measures are relatively low (in GDP terms) compared to major countries in ASEAN, despite having the largest total economic response package size.

Figure 1: Malaysia COVID-19 stimulus packages (2020-2021)



Source: Adapted from Cheng, 2021 (updated by authors)

Figure 2: Malaysia COVID-19 stimulus packages (2020-2021), fiscal vs. non-fiscal measures



Source: Adapted from Cheng, 2021 (updated by authors)

The stimulus packages were mainly introduced to provide immediate relief and assistance to households and businesses affected by the pandemic. A large portion of the non-fiscal measures come in the form of access to mandatory retirement savings as well as loan moratorium and tax relief measures, while a significant portion of the fiscal spending comes in the form of wage subsidies and cash assistance. While these measures have given the affected public some support, many argue that these are not enough given the prolonged movement restrictions that have impacted the economy and caused a spike in retrenchments and business closures (Khalid, 2021).

According to Muhammed Abdul Khalid (2021), there have been bureaucratic problems in delivering these support packages. In his paper, he analyzed data from the Ministry of Finance showing that as of August 21, only 2.5% of SMEs in Malaysia were benefitting from the SME soft loan. The wage subsidy utilization is also rather limited with only 315,987 firms or roughly a third of total SMEs in Malaysia having applied for the program. Similarly, a mere 5% of micro-enterprises in the country have received microcredit loans.

There have only been limited targeted green recovery initiatives in the stimulus packages. They include a MYR 13 billion planned investment by Malaysia's national utilities company Tenaga Nasional Berhad (TNB) for projects such as LED street lights, transmission lines and rooftop solar installations, and an open tender for a 1,400 MW Large Scale Solar (LSS) project which is expected to generate MYR 5 billion in investments and create 25,000 jobs.

While this sounds promising, the LSS project is not a new initiative and does not come from government fiscal spending. Hence, the amount of green spending is very small compared to the total size of the stimulus packages. Excluding the LSS project, which is neither new nor can be counted as government spending, the MYR 13 billion planned investment by TNB represents only 2.5% of the total stimulus or 16% of total fiscal spending.

Meanwhile, the government has provided unconditional support to existing environmentally harmful industries. These include sales tax exemptions for car purchases without electrification or efficiency requirements and a 15% electricity subsidy for the commercial sector. This indirectly subsidizes the fossil fuel industry, which produces 94% of the country's energy supply. The PEMERKASA stimulus package also includes MYR 3 billion in fuel subsidies. On June 12, 2021, the Ministry of Finance (2021a) said the government expects to spend MYR 8 billion on fuel and cooking oil subsidies this year, more than double the MYR 3.78 billion originally allocated. This is more than what the government spent in 2019 (MYR 6.32 billion) and 2020 (MYR 2.16 billion). These initiatives could undermine efforts for a renewable energy transition.

The government has acknowledged that a green recovery plan can provide jobs, improve productivity and help Malaysia transition to a low carbon, climate resilient economy. The Prime Minister even provided assurances that Malaysia would take a "green recovery pathway". Despite this, the number and value of green initiatives in Malaysia's COVID-19 stimulus packages have remained painstakingly low, especially when compared with other recovery plans such as those of the EU, which devotes 30% of its stimulus towards a green recovery. There are some encouraging signs in Malaysia's 2021 Budget and 12th Malaysia Plan that outlines some policy directions including a comprehensive single energy policy that would provide some direction for a renewable energy transition. However, a good plan will remain just that without solid execution and a commitment of funds. More needs to be done to push Malaysia forward towards a clean energy transition.

There are a number of factors holding Malaysia back from moving towards greener and more inclusive recovery policies. Malaysia's abundance of fossil fuel resources makes its production a key economic activity for the country. As of end of 2020, Malaysia is the third largest natural gas producer and fourth largest oil producer in the Asia Pacific (BP, 2021). It ranks fourth and fifth in Asia Pacific in terms of proven reserves of natural gas and oil. Malaysia's national energy company, PETRONAS, is wholly owned by the Government of Malaysia and acts as the custodian of the country's petroleum resources (PETRONAS, 2021). PETRONAS holds exclusive rights to exploit Malaysia's petroleum resources, either directly through its own operations or indirectly by awarding licenses to other oil and gas companies for exploitation.

In 2020, PETRONAS (2020a) reported making a MYR 61.2 billion contribution to the Malaysian federal government, which represents 26.9% of the federal government revenue in 2020 (Ministry of Finance, 2021b). Given the significance of fossil fuels to Malaysia's economy, a green energy transition that decreases dependence on this sector will be challenging, particularly if the returns generated from renewable energy sources are insufficient to replace one of Malaysia's largest existing single revenue bases. Making the economic case for a green energy transition will thus require clear articulations of the economic value generated from renewable energy sources.

While the fossil fuel industry contributes significantly to Malaysia's economy, there is growing recognition in Malaysia of the fragility of depending too much on a single source of revenue, particularly given the twin impacts of a global pandemic and oil price shocks that took place in 2020 (Zainuddin, 2020). OECD (2020c) highlights that dependency of oil-producing/exporting countries on a single commodity renders them vulnerable to market volatility. This concern was raised in the Malaysian Parliament in September 2021 (Kaur, 2021), signaling some political awareness of the matter. Diversifying the government's revenue and tax base will not only support a transition away from fossil fuels, it will also ensure that government revenues are not highly dependent on the volatility of commodity prices, which greatly influence the business performance of the fossil fuel industry and consequently government revenues.

Putting the right price on carbon is central to achieving a renewable energy transition. Carbon taxes, the removal of fossil fuel subsidies, and redirecting these funds to renewable energy appears to be a straightforward solution. Yet, political leaders have proven unwilling to action them. In the last election, political parties campaigned heavily to reintroduce fuel subsidies, keep automobile prices low, and abolish highway tolls.

There is political resistance to a significant divestment away from fossil fuels. The state governments of Sarawak and Sabah in recent years have lobbied for increased participation in Malaysia's petroleum industry by way of taking direct control over petroleum resources within their own states and collecting state sales tax on petroleum products (Tawie, 2020; PETRONAS, 2020b). It will be challenging to convince these states to give up a newly acquired revenue base.

Furthermore, public awareness of climate change and the need to decarbonize the energy system is still nascent. Malaysians are concerned about the potential increase in electricity rates and living costs, and are not keen on paying more. Polluting industries, meanwhile, continuously emphasize the need for economic growth and the important

role they play in powering such growth. Consequently, economic concerns are often prioritized over environmental considerations. Malaysia's energy policies prioritize affordability, reliability, and sustainability, in that order (Susskind et al., 2020). Elections in Malaysia are already increasingly competitive, and going forward, politicians will be increasingly pressured to accede to demands that may be key to winning and retaining government (Lima de Olivera, 2018).

Another factor that could be holding Malaysia back from developing and implementing effective green and inclusive recovery policies is lack of ministerial alignment. Malaysia currently has a large cabinet with portfolios split among multiple ministries. For instance, the energy transition and climate change portfolio that was previously under the purview of a single ministry, the Ministry of Energy, Science, Technology, and Climate Change (MESTECC), has since been divided into three different ministries: Ministry of Energy and Natural Resources (KeTSA), Ministry of Science, Technology and Innovation (MoSTI), and Ministry of Environment and Water (KASA). The division of the energy transition and climate change portfolio into multiple ministries increases the level of complexity in formulating and administering policies in this field. The increased bureaucratic complexity could end up hindering efforts to include and implement energy transition considerations into pandemic recovery plans. Having multiple ministries with overlapping responsibilities for energy transition also increases the likelihood of turf wars among bureaucrats responsible for formulating and implementing policies.

Finally, there is political competition among the parties that are part of the governing coalition. Despite being governing coalition partners, the United Malays National Organisation (UMNO) and Malaysian United Indigenous Party (BERSATU) have been at loggerheads for some time as they are both competing for the same pool of voters (Liow & Tan, 2021). Such intra-governmental political competition likely hinders inter-ministerial alignment and coordination, and is a possible obstacle towards the formulation and implementation of coherent policies including on a green post-pandemic economic recovery.

4. POLICY RECOMMENDATIONS

While it is crucial to provide immediate assistance to households and businesses affected by the pandemic to protect lives and livelihoods, Malaysia cannot afford to lose sight of the climate crisis. Returning to "business as usual" will not deliver sustained long-term economic recovery that also improves people's well-being and reduces inequality.

As massive stimulus packages are being unveiled around the world, there is a responsibility and interest to not only provide short-term measures that protect livelihoods and employment, but also to reflect on the driving forces leading to the current crisis. Economic stimulus packages that support decarbonization and energy transition will create a new model for sustainable growth. Policies that the Malaysian government can introduce to enable a socially just, clean energy transition include:

Support green, rather than brown activities

Stimulus packages and other fiscal spending should directly or indirectly support measures to reduce carbon emissions. Any infrastructure-related stimulus and spending should be focused on decarbonizing the economy (e.g. renewable energy, public transport, digital infrastructure, and supporting adaptation). Grants, debt guarantees, and other support could prioritize activities to encourage the transition towards a green economy.

Support for carbon-intensive industries should be made conditional on commitments to emissions reduction targets and/or ensuring an equitable transition to a low-carbon economy (e.g. sales shares for zero-emission vehicles/products or providing early retirement and re-training workers to prepare for a transition to a green economy). Firms that receive government support should be required to disclose their environmental and social impacts, carbon footprints, and climate commitments to ensure transparency.

The Ministry of Environment and Water is reportedly developing a Low Carbon Mobility Blueprint for 2021-2030, which aims to encourage a shift towards electric and hybrid vehicles (Cheah, 2021). The details of this blueprint must be aligned to the latest National Automotive Policy launched in 2020, which aims to develop a competitive domestic automotive industry and make Malaysia a regional automotive hub for Energy Efficient Vehicles (Ministry of International Trade & Industry, 2020). These should be analyzed together with the upcoming National Energy Policy (NEP) for 2021-2040, which (at the time of writing) is being drafted together with key stakeholders (The Sun Daily, 2021).

With the multiple threats of the pandemic, economic crisis and climate change, addressing underlying causes of vulnerability, supporting risk reduction and building resilience has never been more urgent. As the world emerges from the pandemic, the Malaysian government should continue to build resilience into its plans and budgets, protect people from future disasters, and stimulate the economy. Integrating climate risks and adaptation into its decision-making processes is critical.

Put the right price on carbon: fuel subsidy reform and carbon tax

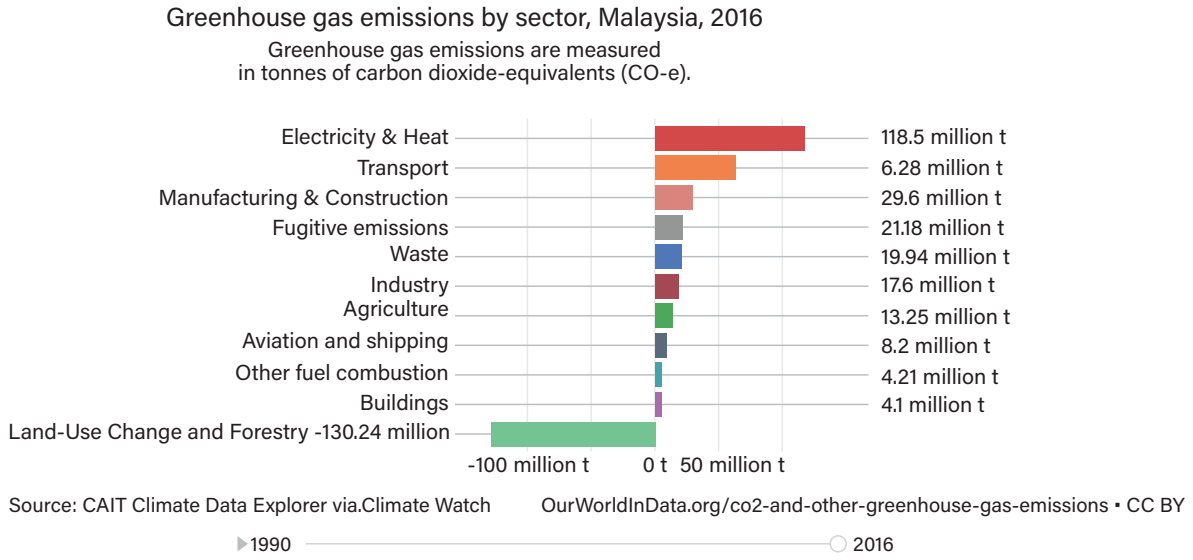
Putting a price on carbon is an effective way of facilitating a clean energy transition as it raises the costs of carbon emitting activities which pushes industries toward cheaper and less carbon intensive energy sources.

The need to rebuild fiscal positions amidst the ballooning of government debt supports the case for implementing a carbon tax as an additional source of revenue. Furthermore, as part of the NEP 2021-2040 discussions, the government's Economic Planning Unit (EPU) is revisiting the rationale for maintaining oil subsidies with due consideration of consumers' interests (The Sun Daily, 2021).

Under a carbon tax framework, the government will institute taxation that emitters must pay for GHGs, typically measured as a tax amount per ton of carbon dioxide emissions. The aim is to raise the cost of carbon emitting activities to the point where businesses and consumers are incentivized to switch to cheaper low carbon alternatives.

According to Malaysia's Third Biennial Update Report to the UNFCCC (Ministry of Environment and Water, 2021), Malaysia's major sources of emissions in 2016 were electricity and heat, transport, and manufacturing, and construction (see Figure 3). Hence, targeting carbon tax implementation in these sectors is a good starting point.

Figure 3: Malaysia's GHG emissions by sector, 2016



Source: OurWorldInData.org

Due consideration of the distributional impacts of such reforms is important. Reforms must be designed to minimize the burden of carbon pricing initiatives on low-income groups in order to prevent widening inequalities (Joshi, 2019). The latest information from the Department of Statistics Malaysia for 2019 (DOSM, 2020) shows that Malaysia's Gini Coefficient, a number used to reflect income inequality within a population, increased from 0.391 in 2016 to 0.393 in 2019 (a higher Gini Coefficient indicates greater inequality).

Any potential reform of fossil-fuel subsidies and implementation of a carbon tax should be accompanied by targeted and time-limited transition support for industries, communities, regions, and vulnerable consumers. The Penang Institute recommends the introduction of carbon rebates to the "B40" or "Bottom 40" communities (i.e. households earning less than MYR 4,849 or USD 1,171 per month) to minimize the impact of these efforts (Joshi, 2019). A survey carried out by the Department of Statistics Malaysia shows that 40% of Malaysian households fall into this category (DOSM, 2020).

In tandem with the implementation of a carbon tax, adequate financing must be provided to developing and scaling-up renewable energy in Malaysia's power generation mix (31% renewable energy in installed capacity by 2025 and 40% by 2035 as targeted by the Minister of Energy and Natural Resources). A lack of viable low carbon alternatives to carbon emitting activities will result in carbon taxes only serving to increase the financial burden on businesses and consumers. This can have particularly significant impacts in the top two emitting sectors as affordable electricity, heat, and transport is critical for day-to-day activities.

The government is also developing a domestic emissions trading scheme (DETS) in phases, in preparation for businesses to adapt to carbon control mechanisms through international trade such as the Carbon Border Adjustment Mechanism (CBAM) by the European Union in 2023. This should be properly implemented to ensure the costs of carbon are firmly embedded in business decision-making processes.

Green bonds

Globally, green bonds and loan issuance has increased from USD 171 billion in 2018 to USD 269.5 billion in 2020, on the back of strong interest by investors in green projects (Climate Bonds Initiative, 2021).

The 2020 Global Infrastructure Outlook forecasts that Malaysia has a USD 77 billion investment gap between acquired and required funds for infrastructure investment between 2020-2040. The government can ensure the sustainability of climate finance in Malaysia by lowering interest rates specifically for climate financing and issuing "green" government bonds.

At a federal government level, this is already being implemented through Malaysia's Socially Responsible Investment (SRI) Sukuk and Bond Grant Scheme (Securities Commission Malaysia, 2021). This scheme aims to incentivize financing of green, social, and sustainable projects through Sukuk issuance under Security Commission Malaysia's SRI Sukuk Framework or bonds issued in Malaysia under the ASEAN Green, Social, and Sustainability Bond Standards.

As of December 2020, MYR 5.4 billion SRI Sukuk have been issued under the scheme. Additionally, Malaysia's Budget 2021 will include income tax exemptions for recipients of the Sukuk and Bond Grant Scheme for five years until 2025. This scheme is a welcome means to incentivize green financing in Malaysia. It can be expanded to state/local government level, as has been recommended for Indonesia (Muhammad Ery Wijaya et al., 2021).

Reskilling and training for the energy transition

The government should provide specific support for reskilling and training to industries affected by the pandemic and longer-term decarbonization.

Social investments are also needed to avoid communities being left behind by the green transition, including targeted measures to strengthen social dialogue and protection. In addition, social security guarantees and entitlements may need to be adapted in the context of transition to new employment and types of work.

In tandem with efforts to increase the level of climate finance in Malaysia, the government needs to ensure there is a suitable labor force for these projects by introducing upskilling and educational programs in the green sector.

Upskilling can be done through apprenticeships and training programs in collaboration with private sector entities. Tax incentives can also be offered to developers within the green infrastructure sector to hire locally. This would be a timely policy measure given the tremendous potential for green infrastructure development in Malaysia. It would provide crucial support for Malaysia's labor force at a time when unemployment is high following the pandemic (DOSM 2021b). In the context of high unemployment, erosion of household incomes, and limited stimulus allocation for green activities, an emphasis on green upskilling and job creation can be a potent catalyst for an energy transition that simultaneously addresses the heightened socioeconomic challenges due to the pandemic.

In its Second Biennial Update Report to the UNFCCC, Malaysia outlined several training/capacity-building requirements to support its climate change mitigation and adaptation efforts (MESTECC, 2018, pp.126, 151, 153, 219). Funding these efforts are key to ensure they are implemented effectively.

Just Transition Mechanism

The government should consider including a Just Transition Mechanism modeled after the European Green Deal into its pandemic recovery plans to ensure that a post-pandemic green transformation is also socially just.

A Just Transition Mechanism that provides targeted support to those who are most vulnerable will ensure that no one is left behind in the COVID recovery and post-COVID green transformation. Such a mechanism is especially necessary since the pandemic has deepened inequalities in Malaysian society including between states and regions in the country.

A Just Transition Mechanism could support vulnerable people by, for example, improving energy efficient housing in low-income communities to reduce the cost of electricity bills. The Mechanism could also invest in the creation of new green SMEs that could help stimulate local economies and generate income in states that have high incidences of poverty such as Kelantan and Sabah. The Mechanism could also provide technical support to entrepreneurs to ensure that newly created green SMEs are viable and sustainable.

5. CONCLUSION

The pandemic has significantly impacted Malaysian society and economy. Extensive stimulus measures were needed to address the pandemic crisis and help the country recover. As disruptive as the pandemic crisis has been, Malaysia faces a looming climate crisis that is even graver in its consequences. Malaysia should therefore seize the opportunity presented through COVID-19 recovery measures to invest in transforming the country's energy system, economy and society to become more resilient in the face of climate change. This transformation should, moreover, be socially just and inclusive and leave no one behind. This paper has highlighted the importance of a just energy transition and of ensuring the post-pandemic recovery does not detract from, but rather strengthens, Malaysia's clean energy transition ambitions, while achieving sustainable and more equitable growth.

To achieve this, several policy measures have been recommended for consideration. Malaysia can draw from COVID-19 recovery plans and efforts elsewhere that incorporate environmental and social justice considerations and adopt successful and relevant elements to the Malaysian context. The 12th Malaysia Plan and Budget 2022 offer an opportunity to do so, which can help Malaysia achieve its Shared Prosperity Vision by 2030 in a manner that is more inclusive, environmentally sustainable, and resilient to climate change.

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