Executive Summary

- **As Malaysia plans the next phase of its energy policy it will need to increase the share of sustainable energy whilst trying to balance other demands of access, affordability, and job creation.**

- Following several periods of energy development **Malaysia has developed a diversified energy mix.** However, in recent years this has included **substantial growth in coal consumption,** driven by demand in the power generation sector. Indeed, Malaysia is in an almost unique position of being a major importer of coal, whilst being a major producer and exporter of natural gas.

- **Malaysia has made progress towards delivering its carbon emission commitments** under the international Paris Agreement and has made progress in increasing the share of renewables, in particular through successful solar auctions.

- **Despite this progress, current policies are not on track to achieve the ambitious targets.** Moreover, while the Covid-19 pandemic is likely to result in a reduction of GHG emissions in the short term, the trajectory will likely revert to the previous situation unless significant further action is taken.

- **The energy transition in Malaysia still faces a number of broader challenges.** The cost of solar power has fallen dramatically but solar generation remains variable and intermittent until low cost storage options become viable. Malaysia's options for dispatchable renewables are hampered by lack of infrastructure, which will take some time to address.

- Therefore, while renewable capacity is growing steadily and is expected to reach 12-13 GW grid installed capacity by 2030, **conventional energy will still play a significant role in Malaysia's energy supply for the coming decades.** However, as Malaysia moves towards a renewable energy future the role of conventional energy will change from supplying baseload to ensuring supply stability, by smoothing the inherently variable nature of most renewables with a dispatchable source.

- **The choice of conventional, dispatchable fuel is essentially a choice between coal and natural gas.** Whilst coal is generally more affordable than natural gas, it is nearly twice as polluting. Moreover, natural gas is better suited to play the supporting role to intermittent renewables since it is generally cheaper to cycle combined-cycle gas power plants than coal-fired plants of similar scale, and gas can also be used to power smaller combustion engines, specifically designed for flexibility and peak demand.

- **In light of this, replacing coal with gas is a low hanging fruit for Malaysia.** Since natural gas is also a domestically available natural resource, the extraction and production is associated with significant economic benefits, when compared to coal, which is mostly imported. The natural gas industry contributes to jobs and economic growth, in addition to proving a supplementary source of fiscal revenue. The domestic availability of natural gas can also ensure security of supply, which can be complemented by the growing global offer of LNG cargoes.

- **However, substitution of coal for natural gas alone will not be sufficient to ensure Malaysia mitigates the risks and capitalises on the opportunities of the global energy transition**. The government will also need to put in place policies to ensure that Malaysia can adapt, including reducing dependencies on fiscal revenues, and seize new opportunities of new technologies.

- As the government plans for the next phase of energy policy in Malaysia, it should consider the widest range of factors, including environmental and economic externalities. **Replacing coal with gas is the low hanging fruit and beyond that the government should develop polices to adapt to and seize the opportunities of the energy transition.**