

## Implications of the COVID-19 Crisis for the Energy Sector and Climate Change in ASEAN

### Key Messages:

- **The spread of the coronavirus disease (COVID-19)** and the resulting reduction in demand for products and services will likely cut total annual carbon dioxide (CO<sub>2</sub>) emissions, but this will be temporary. While public health and economic rescue packages dominate the headlines, climate action is in danger of suffering a setback.
- **Low oil prices** could make clean energy sources, such as renewables, less competitive and disincentivise the transition to clean energy.
- **Ongoing behavioural changes**, such as working from home, could alter energy consumption patterns after the pandemic and facilitate a low-carbon future.
- **Energy prices** should be made affordable during the faltering economic recovery, as they affect industrial competitiveness.
- **The Association of Southeast Asian Nations (ASEAN) should seize new investment opportunities** with stimulus packages for enhancing regional energy security, resilience, and climate change objectives (e.g. expanding the electricity network and increasing oil stockpiling).

### Economic Research Institute for ASEAN and East Asia\*

### CO<sub>2</sub> Emissions will Fall but Rebound

The coronavirus disease (COVID-19) will have multiple implications for the global energy situation and the endeavour to combat environmental problems – most notably, climate change.

The global economy is being pushed into a recession by the COVID-19 pandemic as a result of the preventive behaviour of individuals and governments' containment policies (e.g. lockdowns, travel restrictions, social distancing, and working from home). Manufacturing output is slowing down sharply in many countries, reflecting drops in external demand and growing expectations of declining domestic demand.

Such an economic downturn is contracting overall energy demand and energy-related carbon dioxide (CO<sub>2</sub>) emissions as well as emissions of sulphur oxides (SOX) and nitrogen oxides (NOX), while the situation differs across sectors (e.g. increased power use in the residential segment against a drop in educational and commercial buildings). An analysis by Carbon Brief estimated that China's CO<sub>2</sub> emissions dropped by 25% over a 4-week period since the outbreak (Mylyvirta, 2020). Countries currently struggling with COVID-19 will see similar reductions.

However, such environmental gains will be temporary. For example, coal consumption at six major power firms in China has started to increase again in accordance with the economic recovery (Figure 1). This will cause a rebound in CO<sub>2</sub> emissions.

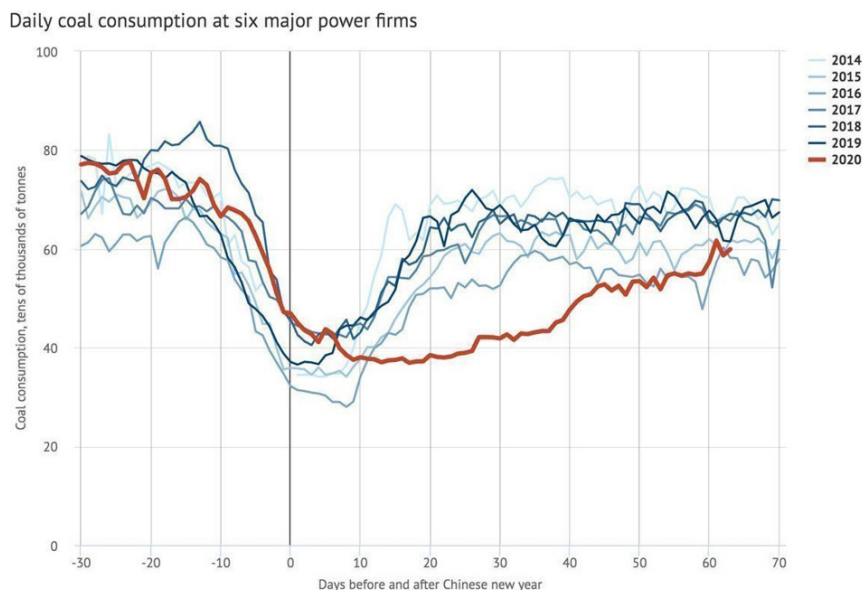
Daily satellite data also shows that the NOX concentration in China increased from February to March 2020 due to the relaxation of strict containment measures.

### Climate Action Could Witness a Setback

COVID-19 could cause a setback to climate action. In the United Nations' My World 2030 Survey (United Nations, n.d.), which asked respondents to prioritise the issues dealt with by the 17 Sustainable Development Goals (SDGs), respondents put the highest priority on public health and people's well-being (SDG 3), decent work and economic growth (SDG 8), and quality education (SDG 4), while climate action (SDG 13) lagged far behind – even before the COVID-19 outbreak.

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**Figure 1: China's Daily Coal Consumption at Six Major Power Firms**



Source: Myllyvirta, L. (2020), 'Analysis: Coronavirus Temporarily Reduced China's CO2 Emissions by a Quarter', Carbon Brief, 19 February. <https://www.carbonbrief.org/analysis-coronavirus-has-temporarily-reduced-chinas-co2-emissions-by-a-quarter> (accessed 10 April 2020).

Given that the current pandemic directly threatens people's physical and economic health, it is not surprising that the attention of governments and people has shifted further away from climate change. The postponement of the 2020 United Nations Climate Change Conference (COP26) to 2021 is regarded as a major setback for global action aiming at new pledges to meet the Paris Agreement goal. Furthermore, if the ongoing crisis results in a surge in nationalism and the retreat of globalism, national regional and global endeavours for tackling climate change could be significantly affected.

## Low Oil Prices Could Discourage the Energy Transition

Extremely low oil prices, triggered by weak demand and rivalry between Saudi Arabia and the Russian Federation over oil production, will further delay the pace of the energy transition (Figure 2).

Low oil prices reduce the incentive for achieving energy efficiency. They could slow down consumers' uptake of fuel-efficient vehicles, biofuels, and electric vehicles. Liquefied natural gas (LNG) prices are also falling because of a supply surplus and low oil prices. This could make fuel switching from coal to gas easier, but low oil prices also reduce the sales price of domestic coal. Cheaper fossil fuels will make renewable energy less competitive. The availability of clean energy related products, including cheap solar modules and batteries, could be adversely affected by strong supply chain integration with China. Current investments in small and large energy infrastructure, including ongoing energy conservation programmes, may be delayed or suspended. As governments prioritise public expenditure on fighting the pandemic and

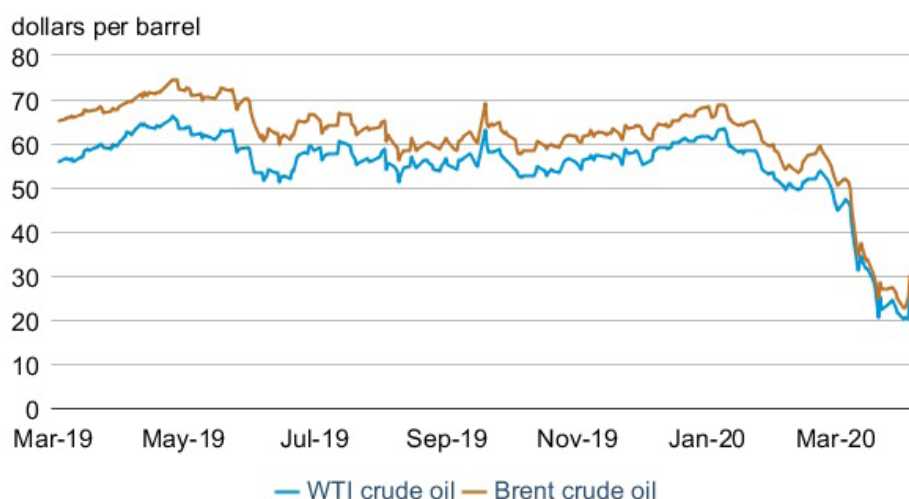
rescuing affected families and small businesses, the financial resources available for clean energy investment or subsidies could become extremely limited. Since cheap energy would be an even higher priority during a recession, reliance on fossil fuels (including domestic coal) could last longer than expected before the pandemic.

## ASEAN Region Should Seize the Opportunity

Despite these challenges, the Association of Southeast Asian Nations (ASEAN) region should seize the opportunities the pandemic has created. Ongoing practices – such as moving almost all activities to the Internet (e.g. meetings, work, and shopping); modal shifts from mass to private transport; the prioritisation of freight movement; and the avoidance of long-distance air travel – are changing energy consumption patterns. This could be regarded as a large social experiment of digitalisation, unexpectedly triggered by COVID-19. Urban residents may appreciate less polluted and quieter urban environments. If proven to be efficient and convenient, some of these practices could be sustained after the pandemic. This would not only lessen the rebound in energy demand, air pollution, and CO2 emissions, but also contribute to a low-carbon future.

The ASEAN region could exploit the current low fossil fuel price environment to begin to phase out pervasive subsidies wasting precious government resources. After the pandemic, governments could institute well-targeted subsidy reforms to benefit those who really need energy for their basic cooking, lighting, and transportation needs. Savings from reduced subsidies would release government funds for other priorities and facilitate the clean energy transition.

Figure 2: Crude Oil Front Month Futures Prices



Source: US Energy Information Administration (EIA) (2020), *Short-Term Energy Outlook (STEO)-Forecast highlights*. 7 April 2020. <https://www.eia.gov/outlooks/steo/marketreview/crude.php> (accessed 10 April 2020)

Following the emergency economic rescue packages, ASEAN Member States will embark on stimulus plans when the pandemic ends. This could offer opportunities for major energy infrastructure investment and improve energy efficiency. The ASEAN region should seize this opportunity for transformative change in terms of both energy security and climate change mitigation. Expanding domestic and cross-border electricity networks could be promising candidates. This could serve as a public good, overcoming the inward-looking tendency and ensuring a stable supply of electricity as well as facilitating more renewable energy penetration in the region.

Low oil prices could also offer opportunities for building up emergency oil stocks. Low oil prices are damaging many small producers, including shale producers in the United States. If this results in stronger dominance of Middle Eastern oil, the ASEAN region could be more vulnerable to geopolitical risks. Oil stockpiling would enhance its preparedness in coping with such risks.

The resilience of the energy sector should be given priority during the recovery. The ASEAN region should also explore risks associated with lean supply chains, wherein a huge share of the region's solar panels, wind turbines, and lithium-ion batteries are produced by a single supply source. The diversification of supply chains, together with enhancing domestic production capacity, warrants serious consideration as part of the economic stimulus packages.

Since the public and private sectors will face economic fallout from the financial resources spent or lost during the crisis, the importance of reliable and affordable energy supply is particularly crucial during the economic recovery. While higher energy prices may be deemed necessary for raising the level of ambition in terms of climate change mitigation, such policy intervention is not warranted during a period of recovery from recession.

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