

PRAGMATISM IN SECURE, AFFORDABLE AND SUSTAINABLE ENERGY ACCESS FOR ALL

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n 15-16 June 2019, I had an opportunity to attend the G20 Ministerial Meeting on Energy Transition and Global Environment for Sustainable Growth. As reported, the most contentious issue was how to make reference to the Paris Agreement in the G20 Communique. However, more fundamentally, I have observed different p erspectives o n e nergy t ransition a mong c ountries. Some countries put particular focus on renewable energy in the energy transformation. They a re a lso v ery e nthusiastic a bout technologies related to renewable energy, battery and so-called "green hydrogen" produced from renewable while rather skeptical about the role of clean use of fossil fuel, "brown hydrogen" produced from fossil fuels as well as CCUS (carbon capture, utilization and storage) technologies. Other countries emphasize affordable, reliable, and secure energy access utilizing all energy sources and technologies including clean and advanced fossil fuels, renewables, nuclear power while reducing emissions and promoting economic growth, reflecting n ational s pecific circumstances. They a lso e mbrace a ll i nnovative t echnologies including CCUS and various forms of hydrogen. This highlights a marked difference between top-down idealism and bottom-up pragmatism.

Judging from the most recent ERIA's Energy Outlook, the latter school of thought better reflects the energy reality in the ASEAN region. ASEAN's total primary energy supply (TPES) is expected to grow by 143% from 2015 to 2040 under the business-as-usual (BAU) scenario, reflecting e ach c ountry's c urrent g oals a nd action plans. Total power generation will achieve higher growth, at 184% under BAU. Regarding the energy mix of TPES, the share of fossil fuels will grow from 76% (coal 19%, oil 35%, gas 22%) to 86% (coal 31%, oil 36%, gas 19%) under BAU. In the power generation mix, the share of fossil fuels will grow from 83% (coal 33%, oil 3%, gas 47%) to 88% (coal 53%, oil 1%, gas 34%). Even under the alternative policy scenario (APS) assuming higher share of non-fossil fuels such as renewable and nuclear, the share of fossil fuel out of power generation will be still dominant at 73% (coal 39%, oil 1%, gas 33%).

This will pose multiple energy's ecurity and environment challenges due to growing fossil fuel import dependence and GHG emissions. ASEAN countries need to be better prepared for possible oil supply disruption; enhance energy efficiency; reduce oil demand, particularly in the transport sector; clean the use of fossil fuels; promote energy diversification to such sources

as natural gas and renewable energy; alleviate local air pollution; and minimise the growth of CO2 emissions. Most fundamentally, as a basic input for economic and human activities, energy needs to be accessible to all at affordable prices. Some of these challenges could be more efficiently and effectively addressed through regional collaboration including emergency response measures, crosscountry energy interconnections, and harmonization of energy-related standards and a regulatory environment for energy industries. There should also be deeper and cooperative dialogue between energy producing countries and Asian consuming countries.

To this end, mobilizing finance for timely energy related investment is crucial. In the power generation sector alone, ASEAN needs US\$432 billion under the BAU scenario and US\$440 billion under the APS between now and 2040. Fossil fuel accounts for 80% of the necessary investment under the BAU scenario and 42% even under the more ambitious APS.

In this context, we need to be attentive to the on-going debate on "sustainable finance", including identifying investment opportunities that contribute to environmental policy objectives. There is an argument putting particular emphasis on renewable energy while judging that coal and gas fired power generation without CCS will not meet the sustainability threshold. If such perspective becomes global standard in such fora as ISO, it would definitely influence future financial flow to fossil fuel related investment. Financial flow in line with UN SDGs should be encouraged. Climate change is the important objective, but not the supreme one taking precedence to other 16 SDGs. Moreover, priority among 17 SDGs could be different reflecting national specific circumstances. Energy related infrastructure should be evaluated based on not only carbon footprint but also its contribution to energy access, affordability as well as resilience against natural disaster. The debate on sustainable finance should be balanced and flexible capturing 17 SDGs in a holistic manner reflecting such diversity rather than "one size fits all" approach.

Energy producing and consuming countries should raise their voices urging realistic and pragmatic debate on sustainable finance. The IEF would be the perfect fora providing such opportunity. The ERIA will also continuously present policy messages reflecting the energy reality in the EAS region.