PATHWAYS TO ASEAN'S ENERGY FUTURES: FROM NDCS TO NET ZERO

Emi Minghui Gui, ClimateWorks Centre, +61 436521901, emi.gui@climateworkscentre.org
Beni Suryadi, ASEAN Centre for Energy, +62 8118048230, benisuryadi@aseanenergy.org
Zulfikar Yurnaidi, ASEAN Centre for Energy, +62 81384853592, zyurnaidi@aseanenergy.org
Monika Merdekawati, ASEAN Centre for Energy, +62 81287216795, mmerdekawati@aseanenergy.org

Overview

As the world's major economies in succession have firmly aligned themselves behind Net Zero emission goals and the Paris Agreement, their climate leaderships are having cascading effects on political norms, market behaviours and rules, and international capital flows, favouring cleaner and low carbon technologies and opportunities. This has been well understood by ASEAN policy makers and stakeholders, while expectations are strong in that clean energy development and access will become a driver for national and regional economic growth, enhance country competitiveness, attract foreign direct investment, improve public health and quality of life for citizens. However knowledge gaps remain in how these low carbon development opportunities will help to realise the objectives in energy affordability, system reliability, and energy security, and how they can be translated into new economic and industry development opportunities that can yield long term socio-economic benefits and environmental benefits. Limited human capacity and financial resources also mean great challenges in uncovering low carbon industrial and economic development opportunities, and just transition pathways for sectoral and economy-wide transformation.

In the short to medium term, ASEAN's energy pathways will be heavily influenced by policy reforms and implementations for Nationally Determined Contributions (NDCs) under the Paris Agreement, through the implementation of renewable energy and energy efficiency, introduction of carbon pricing, and fuel efficiency improvements, and fuel switching from fossil fuels to clean energy. Challenges are identified in strengthening technical and technological capabilities, institutional capabilities, while many ASEAN Member States (AMS) are yet to find the right balance between the large up-front capital investment required and the longer term benefits they will bring (Gui et al., 2021).

Methods

Well-structured interviews and surveys to key stakeholders in ASEAN, including government officials, industry stakeholders, think tanks, academia, development agencies, financiers and investors revealed the stakeholders' percention and viewpoints on realising NDCs and Net Zero goals. Key factors influencing ASEAN's energy futures and its pathways were investigated, including strategic goals and priorities in energy and climate, longer term aspiration and outlook, challenges and opportunities in energy transition and NDC implementation. Collective perspectives of what is desirable and feasible from different participants in ASEAN were synthesised around key research questions: 1) What are your country's goals and priorities in energy and climate change? What are key criteria for success? 2) What driving factors are the most important in shaping policy environment, action, and change processes directly with key implications for low carbon transformation and net zero goals?

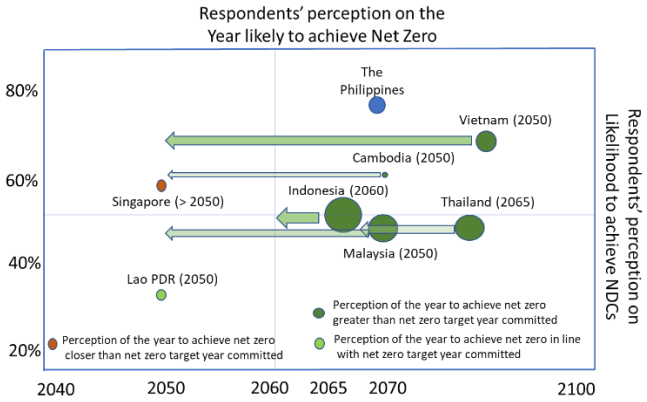
Results

Countries' Goals and Priorities

Possible energy futures are closely linked to national strategic goals and priorities of AMS. Participants have cited economic and political factors such as socio-economic strategy and development, energy security, and international commitment, as most influential in setting energy and climate change policies and programmes. The developing status of many AMS suggests that socio-economic development objectives are often prioritised. Some AMS experiencing major climate change impacts, such The Philippines, have also cited environmental factors and climate adaptation as key considerations. For resource-constrained economies, there is a need to accelerate the clean energy transition to reduce import dependency and increase supply diversity, moderate demand by reducing the energy intensity of the economy and stimulate investment in renewable energy, storage and firming technology. In contrast, countries with large fossil fuel reserves and export potential, are facing declining Reserve to Production ratios of fossil fuel based technologies, higher production costs and subdued global demand, especially for coal. This implies that the transition pathways are likely to be a gradual and path-dependent process in ASEAN, and develop through the interplay of multiple technologies and a network of actors, strongly guided by specific country contexts, market conditions, and socio-economic situations, political aspirations, and policy and national planning strategies.

Implementation Pathways: From NDCs to Net Zero

Most AMS stated that their NDC targets developed were considered as practical targets, instead of aspirational targets. The NDC targets were set taking into consideration the latest national conditions and regional future plans to develop the economy, based on the most realistic projection and expectations. Participants also acknowledged economic, social, political, and environmental benefits of a more ambitious NDC target, including increased international investment potential, and better long term economic growth potential and faster technological advancement. The majority of survey respondents were positive that their countries are likely to enhance their NDC commitments in the next 5-10 years, including Malaysia, Thailand, Myanmar, Lao PDR, and Vietnam. On the other hand, Net Zero was seen as an aspiration and their implementation beyond 2070 by many participants, as Net-Zero targets require significant effort and resources that are not readily available.



Given nine out of ten ASEAN countries (except The Philippines) has now committed to Net Zero goals, coherent planning between NDCs and Net Zero can be achieved by vetting short-term actions against long-term strategies. Large gaps between practical implementation and net zero targets can be reduced through setting up adequate regulatory and policy frameworks, mobilising necessary financial and human resources, and building sufficient capacity through international cooperation and cross-learnings among AMS. Energy sector opportunities exist in boosting RE development through clean technology development, electricity pricing, simplifying the procurement and permitting process, increasing local content, strengthening the grids, and to increase demand for renewable energy, and enhancing non-party stakeholder contribution in mitigation action by implementing carbon pricing.

Policy Recommendations

The ongoing commitment of the government is identified as a key requirement to support the momentum and pace of the low carbon energy transition and net zero goals. As seen with the growth in solar in the region, increasing the economic attractiveness and reducing the risk of investment can rapidly boost the level of investment, increase competition and reduce the cost of capital that is currently a barrier for international developers. An enabling ecosystem, including conducive policy, efficient market, adequate financial incentives, and streamlined processes will encourage project development and investment in mitigation activities and support the clean energy industry development and innovation for the long term. Survey participants highlighted market liberalisation, private sector incentives and investment, right incentive mechanism such as FiT, PPA, policy support for electrification in transport, industry and clean cooking, as well as enhanced RE target, EE standards, building codes to achieve NDC and net zero goals. Despite the importance of contextualised intervention and action, adapted to the characteristics and needs of each AMS, regional cooperation can help to establish regional standards, develop regional best practices, and bring in greater transparency, thus increase resource allocation efficiency, system and economic efficiency to fast track policy, technology, and market development, increase economies of scale and shorten the learning curve for all member states.

Conclusions

The NDC commitments and Net Zero goals will undoubtedly shape ASEAN's energy futures in the decades to come. Their successful implementation calls for an overarching framework that guides sectoral plans and targets development to achieve climate goals and emission reductions, and the development of a coherent process, bringing low carbon development and green growth strategy concepts into the traditional policy making. International support in technical assistance, financing, and the development of sustained and long term capacity through education and training for effective climate change actions, and climate-resilient national and sectoral planning is paramount.

References

Gui, E.M., Yurnaidi, Z., Merdekawati, M., Suryadi, B. (2021) "A Strategic Niche Management perspective on Post-COVID Paris-aligned energy transition in ASEAN". In Proceeding of *1st ASEAN International Conference on Energy and Environment*, Brunei Darussalam (Virtual), Sept 2021.