



# ADVANCING JUST ENERGY TRANSITION IN THE ASEAN

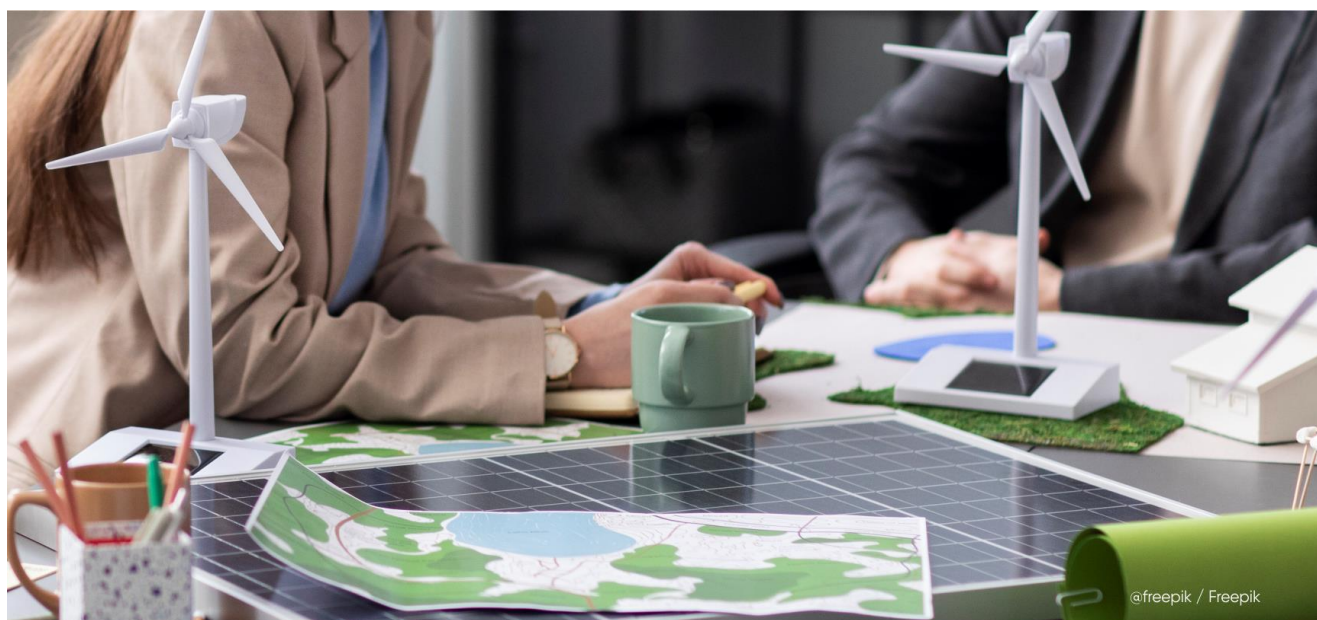
This paper proposes the following recommendations to address the adverse effects of climate change in the ASEAN: decarbonising the ASEAN by accelerating decarbonisation by 2030; promoting market reforms to enable fair and open competition for energy generation; committing to no more new coal and introducing comparable support for renewable energy; and ensuring a human-centered energy transition in the ASEAN toward a community-focused, equal sharing of benefits and risks and the empowerment of community-owned energy systems.

# 1 INTRODUCTION

The economics of energy generation is undergoing a fundamental shift. Renewable energy (RE) is now the cheapest form of electricity in the world,<sup>1</sup> and costs of generation continue to fall. In 2021, 75 percent of all new generation capacity added to the global power system was solar and wind.<sup>2</sup> RE offers all countries access to cheap, modular, and rapidly deployable new generation.<sup>3</sup> As fossil fuel commodity prices rise sharply in response to geopolitical drivers, the extent to which the old fossil fuel power system was vulnerable to risk has been exposed. Decarbonisation is also, therefore, a pathway to energy security.

However, global progress has not been uniform. ASEAN remains a region where fossil fuels are particularly entrenched; progress has been slow and prospects for future decarbonisation remain dim, even as ASEAN's importance to the global economy continues to grow. ASEAN's population is projected to reach 770 million by 2040, and the region will become the world's fourth largest economy by 2030.<sup>4</sup> Between 2020 and 2030, the installed capacity of fossil fuel power stations will double and carbon dioxide (CO<sub>2</sub>) emissions will increase by 72 percent.<sup>5</sup> By 2040, the ASEAN Centre for Energy (ACE) estimates CO<sub>2</sub> emissions could increase by as much as 147 percent compared to 2017 levels.<sup>6</sup>

At the same time, ASEAN is a region at the forefront of climate risks, as it is home to three of the world's most-at-risk countries (Myanmar, Philippines, and Thailand).<sup>7</sup> Indonesia, Malaysia, the Philippines, Singapore, and Thailand would lose economic output totalling more than seven times their gross domestic product (GDP) by 2050, and ASEAN as a region could lose 37.4 percent of its current GDP by 2048 if climate change mitigation is not undertaken.<sup>8</sup> This makes the ASEAN market among the most vulnerable in the Asian region to climate change.<sup>9</sup>



## 2 ASEAN AGENDA FOR ACCELERATING THE ENERGY TRANSITION

In the Joint Ministerial Statement of the 40th ASEAN Ministers on Energy Meeting (AMEM), Prime Minister Hun Sen of the Royal Government Cambodia and Chair of the 40th and 41st ASEAN summit emphasised that "...ASEAN must focus on energy transition... by promoting participation, strengthening cooperation, and increasing attention to accelerating energy transition" and to further support the implementation of "... policies, laws, and regulations on clean energy, environmental protection and energy resource management to contribute to climate change mitigation and move towards future carbon neutrality..."<sup>10</sup>

Toward this commitment, it will be necessary to consider the socio-ecological and political-economy implications of shifting generation technology to clean, sustainable, and cheap renewables. This can be ensured through a negotiated common vision and dialogue with stakeholders following a set of guiding principles that aims to shift practices in both energy production and consumption to an affordable, reliable, and decarbonised electricity for all in the ASEAN.<sup>11</sup>

Realizing a just energy transition in the ASEAN will require the consideration of two important elements:

- Decarbonisation that reduces dangerous CO<sub>2</sub> pollution from the ASEAN power sector without compromising the socio-ecological systems upon which ASEAN societies are based, and
- A human-centered transition for the power sector that leverages the opportunity of technology transformation by electricity systems to improve equity and inclusivity of electricity service provision, so that access to reliable electricity forms the basis of peace and prosperity for all people in ASEAN.

## 3 DECARBONISING THE ASEAN

As the economies of ASEAN member-states continue to grow, the region and its power sector are also emerging as major contributors to environmental damage from the CO<sub>2</sub> emissions of fossil fuel-dependent power plants. This further puts at risk the ASEAN's densely populated urbanizing cities and rural agricultural areas that are already among the

most vulnerable to climate change (i.e., droughts, floods, water scarcity). It is therefore imperative to consider a change in the ASEAN's power generation mix as an essential component for a just energy transition. For this purpose, the following action points are proposed:

1. **Accelerate decarbonisation by 2030.** Most ASEAN member-states have committed to some form of net-zero emission within the next 30 to 40 years. Of the 10 ASEAN member-states, eight have announced national targets to achieve net-zero GHG emissions or to become carbon neutral by 2050, which corresponds to the 1.5°C target set by the Intergovernmental Panel on Climate Change (IPCC). The exceptions are Indonesia, which committed to net-zero emission by 2060, and the Philippines, which is the only member-state that has not committed to a net-zero target.

However, the majority of actions under these commitments are critically insufficient to achieve long term net zero goals. Science and the IPCC have confirmed that the coming years are most critical in keeping global warming below 1.5°C. Therefore, ASEAN member-states must establish a road map for implementing their net-zero commitments that emphasize practical and tangible efforts to bring peak emissions forward and decarbonise their power sectors before 2030. Short-term progress within this decade will be essential for the long-term prosperity of ASEAN economies.

2. **Enabling regulated market leadership.** Non-market forces dominate the development and planning of energy generation in the ASEAN. Typically, the ASEAN's most polluting power sectors are also those with weaker market structures and significantly influenced by large state-owned enterprises (SOEs). Historically, these non-market influences played an important role in advancing universal electricity access in some of the ASEAN member-states. Currently, however, the same SOEs have prevented ASEAN member-states in harnessing the full benefits of clean energy. The ASEAN and its member-states should promote market reforms that will enable fair and open competition for energy generation. This will create an even playing field for renewables and will be a powerful driver in accelerating decarbonisation, with government regulation of competitive electricity markets to ensure the equal distribution of benefits and protect energy consumers.

3. **No more new coal.** The ASEAN has a history of coal dependency. In the 21st century, 90 percent of all installed coal capacity was built in Asia including 880 gigawatts (GW) in China, 173GW in India, and 63GW in Southeast Asia, with an average age of only 12 years in 2019.<sup>12</sup> The rise of coal has been driven by its abundance in the region and the externalization of environmental and social costs its accompanying technology entails. However, the Russian invasion of Ukraine has triggered three record peaks in international coal prices,<sup>13</sup> exposing the vulnerability of the ASEAN's power sector to highly volatile fossil fuel commodity prices. Existing coal projects will continue to drive emission trajectories for the ASEAN in the coming decade with its reliance on expensive and volatile energy sources. Taking this into account, the ASEAN's net-zero pledges should

include a commitment to break this dependency on coal by ensuring that national power development plans will not build additional coal power stations.

4. **Comparable support for RE.** Fuel and electricity subsidies are vital in supporting affordable access to power across the ASEAN, with the region's progress on the Sustainable Development Goals (SDGs) substantially attributed to the economic benefits of this support. However, these subsidies skew the electricity market and unfairly favor polluting technologies like fossil fuel and large hydropower plants that have a long list of social impacts. Removing these subsidies too soon could adversely affect the poor and undo SDG progress. The ASEAN and its member-states, with support from their development partners, can introduce similar subsidy and support for renewables in order to level the playing field for electricity developers and accelerate the deployment of RE technologies. The specific instruments will vary based on unique country contexts, and a possible source is a carbon tax.



## 4 A HUMAN-CENTERED ENERGY TRANSITION

For rapidly developing societies, the energy sector plays an important role in shaping opportunity and prosperity. The current electricity system has been vital in supporting economic growth of ASEAN member-states, but the distribution of the costs and benefits has not been equal. Rural communities and urban informal settlements remain areas of entrenched poverty, with unreliable or no access to electricity. In the highlands and islands of Southeast Asia, ethnic minorities are particularly vulnerable to

the adverse socio-environmental impacts of climate change. Women, in particular, have often been disadvantaged by fossil fuel-dependent and large hydro-based electricity systems, and are inadequately represented in the energy sector.

A just energy transition is not only a shift in technology and infrastructure choices but also a recentering of energy as the basis for human prosperity. To be just, energy transition must include and empower women, and address the barriers that prevent their substantial participation in the energy sector.

- **Ensure community focus and equal sharing of benefits and risks.**

Just transition is typically considered within the frame of international relations—a fair transition for developed and developing nations, North and South, G7 and G20. There is, therefore, a legitimate need to ensure that developing countries are not disadvantaged and that pressure remains on developed countries who are historically responsible for emissions<sup>14</sup> to lead the decarbonisation agenda. However, this narrative missed the key focus of the energy transition, which is to reduce inequality between communities and to balance the benefits and adverse impacts felt at the community level.

The legacy of fossil fuels and large hydropower plants in the ASEAN includes a range of social and environmental impacts that degrade livelihoods, increase inequality, foster gender inequality, and erode the ecological foundations of ASEAN society. A just energy transition should harness the opportunity of technology change to improve the balance of inter-community benefits, minimize the concentration of adverse impacts on marginal and vulnerable communities, and consider the full life-cycle environmental impacts of each technology option. Clean energy can improve access to education and healthcare, open new economic opportunities, and reduce unpaid care and domestic work, and address gender-based violence, which, in turn, will benefit women and their communities.

- **Empower community-owned energy systems.** Community energy projects are electricity systems that are owned and/or managed by local communities. Developed countries like Denmark, UK, Australia, Japan, and Canada have registered a rapid rise in the deployment of community RE projects that allow communities to generate an income by selling electricity to the grid. The ASEAN also has a rich tradition of community energy projects with community solar and run-of-river hydropower being deployed for more than 40 years in Myanmar, Indonesia, Cambodia, Laos, and Vietnam.<sup>15</sup> However, these projects are designed to provide electricity access for remote communities and not to generate revenue.

The ASEAN and its member-states should harness the potential of community renewable energy microgrids and support viable business models that enable microgrids with some level of community ownership. Microgrids will be the fastest mechanism to ensure universal and reliable electricity access for all, and involving communities in the ownership and management of these systems by using proven models will ensure the sustainability of these systems, as well as deliver more value to communities through employment

generation, promotion of women's stewardship, and economic opportunities on top of the benefit of electricity access.

- **Substantial community inclusion in the renewable energy industry.** The size of the ASEAN economy and its increasing energy demand require a significant capital investment in new electricity generation. While the private sector has emerged as a dominant investor in ASEAN electricity generation, development partners and governments play an important catalytic role by providing concessionary financing, underwriting, and product guarantee for energy developers. Although development partners and Asian governments have already reduced financial support to new fossil fuel projects with governments committing not to support new coal power stations, climate finance in Asia is woefully inadequate relative to the need.<sup>16</sup> The ASEAN should therefore encourage its development partners to support financial products for renewable energy projects with a level of ownership by communities.





# 5 ENABLING A JUST ENERGY TRANSITION IN THE ASEAN

The Joint Ministerial Statement of the 40th AMEM's emphasis on energy transition is encouraging. However, to ensure that such transition will be fair, equitable, and will leave no one behind, the AMEM is urged to also consider the recommendations on escalating the decarbonisation of the ASEAN and ensuring a human-centered energy transition. Reflecting on the success of the ASEAN in fostering cooperation, the following are further proposed to the AMEM to consider in its 41st Meeting:

- **A coherent, urgent vision and framework for just energy transition.** As the regional coordination mechanism for energy in the ASEAN, the AMEM is urged to leverage the ASEAN's proven modalities for deliberation to lead in enabling a path toward just energy transition in the region that will deliver tangible and practical progress by 2030.
- **A vision, pathway, and platforms for decarbonisation for ASEAN member-states.** The process of just energy transition is complex and understanding the social, economic, and technological changes that energy transition requires is challenging for governments. The AMEM can support its member-states to appreciate practical and proven strategies for decarbonisation by serving as a knowledge repository and broker for region. The ACE produces an Annual Energy Outlook for ASEAN that reflects the current status and commitments of member-states, but it does not raise the ambition for the region by reporting on a zero carbon or 1.5°C scenario. Structured just energy transition scenarios will help ASEAN member-states in understanding the potential and feasibility of ambitious national level planning. In addition, dialogue and stakeholder inclusion are central tenements of the just energy transition. As a respected regional institution, the ASEAN is in a position to promote multi-stakeholder dialogues where civil society organizations and vulnerable communities can contribute on just energy transition plans at national and regional levels.
- **Establish a publicly funded ASEAN decommissioning fund.** The private sector has proposed a number of privately owned investment funds that aim to attract sufficient concessionary investments in buying up coal generation plants. This and optimizing cheaper concessionary capital will deliver market rate returns and retire coal power stations earlier than scheduled. In the short term, these funds can create a profit for investors and will reduce CO<sub>2</sub> emissions in the long term. This approach has been widely promoted as the strategy in weaning ASEAN from coal, and comes with adverse impacts such as creating misaligned incentives for coal closure and over-compensating coal plants.<sup>17</sup> As an alternative, the ASEAN with its member-states

and developments partners can establish a Just Transition Transaction for the ASEAN (ASEAN JTT)<sup>18</sup> that will be supported by public funds, which can provide concessionary loans in refinancing the power sector, writing-off coal assessments, and support a just transition. As recommended, the loan rates would be concessionary and commensurate to the level of emission reductions the investment would induce. As such, the loan accepts avoided social and environmental costs as partial remuneration.<sup>19</sup>

- **Extend the ASEAN's energy efficiency standards to include environmental and social impact standards.** The ASEAN has been a leading voice in advancing energy efficiency among its member-states through knowledge sharing and standard setting. This demonstrates the leverage ASEAN has in setting targets and supporting national efforts to advance those targets. Electricity generation in the ASEAN has unintended environmental and social impacts that can undermine the sustainability of the energy sector. Fossil fuel technology (coal and gas) produces environmental pollution in the form of CO<sub>2</sub> and other atmospheric pollutants; large hydropower plants fragment and regulate productive river systems with adverse impacts on water availability, flooding, sediment transport, fisheries, floodplain fertility, bank erosion, and village resettlement; solar photovoltaic technology requires land for solar farms that can potentially lead to land and land use conflicts. ASEAN through AMEM is urged to develop and promote standards for sustainable power generation technology that promote options with minimal social and environmental impacts.

# NOTES

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- <sup>10</sup> ASEAN. (2022). Joint Ministerial Statement of the 40th ASEAN Ministers on Energy Meeting, 15th September 2022. <https://asean.org/joint-ministerial-statement-of-the-40th-asean-ministers-on-energy-meeting/>.
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- <sup>13</sup> International Energy Agency (IEA). (2022). Coal Market Update – July 2022. <https://www.iea.org/reports/coal-market-update-july-2022/prices>.
- <sup>14</sup> Twenty-three of the world's richest nations are responsible for half of all historic CO<sub>2</sub> emissions, as noted in <https://www.nytimes.com/interactive/2021/11/12/climate/cop26-emissions-compensation.html>.
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- <sup>19</sup> Ibid.

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