

EXECUTIVE SUMMARY

The transition toward clean energy has gained momentum across the power sectors in Southeast Asia, with countries in the region scaling up their support to shift away from coal power and embrace cleaner alternatives. The Asia Society Policy Institute (ASPI) has partnered with Energy Foundation China (EFC) to develop a project aimed at understanding how China could support this transition. The project included a sequential series of three consecutive convenings with industry leaders on the topic of clean energy investment, along with expert consultations and desk research.

Increased private sector investment is crucial for turning Southeast Asia's ambitions for a cleaner electricity future into actual outcomes. To achieve net zero energy emissions by 2050, the region would need an average annual investment of US\$92 billion to expand the clean power supply in the years leading up to 2030. This investment requirement surpasses the capacity of the region's public sector, which has funded most past power projects. This is especially so when the governments in Southeast Asia are trying to control public debt and spending after COVID-19 while dealing with food and energy stress on government budgets.

Mobilizing sufficient private investment to support renewable energy projects in Southeast Asian countries, as in many other developing countries, is affected by a wide range of project-specific issues. Such key issues include insufficient grid infrastructure, difficulty in land acquisition, regulatory complexity and uncertainty for project development, lack of commercial arrangements (e.g., power purchase agreements) that provide sufficient and predictable revenues for capital-intensive investments, the presence of multiple public agencies in the governance of renewable energy projects with overlapping and sometimes unclearly defined roles and responsibilities, and concerns about the financial health of national electric utilities and their ability to fulfill payment obligations.

The project-specific issues are often compounded by macroeconomic challenges, undermining risk-adjusted returns for investors and hence limiting the availability of bankable projects. These challenges include, for example, restrictions on foreign direct investment, currency risks, and weaknesses in local banking systems and capital markets.

Given these conditions, private investors tend to prioritize renewable energy projects in lower-risk, mature economies, presenting a significant challenge to Southeast Asian countries as they seek sufficient funding to achieve their climate aspirations. This challenge becomes apparent when considering that despite a global surge in renewable energy investment in recent years, much of the increased investment has been concentrated in advanced economies and China. In contrast, the rest of the world, including Southeast Asia, has contributed only 3% to the overall increase in renewable energy investment since 2019.

The three convenings held between February and November 2023 provided valuable insights into how to rectify the situation, particularly through enhanced cooperation with China. Key points emerging from these convenings are summarized as follows:

- **Deeper local reforms are essential for fostering a conducive environment for renewable energy investment in Southeast Asia.** These include standardizing power purchase agreements, ensuring clear procurement processes, rationalizing electricity subsidies, eliminating fossil fuel subsidies, and advancing grid augmentation. Additionally, establishing a clear policy framework, underpinned by short-, medium-, and long-term targets, is vital to investors, promoting renewable energy project prioritization.

- **To ensure a successful clean electricity transition in Southeast Asia, a broader agenda that goes beyond investment mobilization needs to be developed and implemented.** This agenda should include addressing energy security and affordability, industry decarbonization, long-term economic development, and equitable social prosperity.
- **An integrated, multidimensional solution package to support Southeast Asia's clean electricity transition should be planned and offered.** Key aspects of this solution package include (1) providing access to technology, including floating solar; offshore wind; energy storage; carbon capture, utilization, and storage (CCUS); smart grid technology; and so on; (2) ensuring industrial development that promotes domestic production rather than relying excessively on imports for these technologies; (3) offering a suite of policy supports through the promotion of best practices on, for example, tax policy, carbon pricing, and incentives for investors; and (4) creating partnerships between public agencies, energy companies, project developers, local banks, and multilateral development banks (MDBs).
- **Practical opportunities for implementing such an integrated approach should be prioritized.** These include establishing joint green industrial parks between China and Southeast Asia, integrating renewable energy projects with industrial policies, and leveraging the Regional Comprehensive Economic Partnership (RCEP) to facilitate the free trade of green products. In Indonesia, for example, these initiatives can support the phasedown of captive coal power and the progressive deployment of co-located renewable energy and storage at industrial sites. Another example is the development of offshore wind zones integrated with onshore green hydrogen industries or grid extensions.

Building on the insights provided above, some further reflections on how China can support Southeast Asia's clean energy transition are presented as follows:

- **Facilitating large-scale investment in renewable energy projects in Southeast Asia requires major reforms aimed at improving the power sector's foundational architecture to lower the risks and costs of renewable energy projects.** Such reforms go beyond standard business and financial strategies, requiring major changes across various areas including planning practices, permitting processes, regulatory frameworks, governance structures, financial mechanisms, and others.
- **The implementation of these reforms is not easy, requiring a strong policy commitment.** This is especially so when the reforms encroach into politically sensitive policy areas.
- **This situation may lead to a “chicken and egg” dilemma.** Southeast Asian governments may prefer immediate outcomes, such as increased investment and more jobs, before fully embracing broader reforms. Achieving these positive outcomes would create a more favorable environment for making difficult policy decisions. In the absence of major reforms, however, private investors might opt for a “wait-and-see” approach until a more favorable investment environment emerges, or they might seek financial terms unattractive to Southeast Asian countries.
- **To address this dilemma, China could collaborate with Southeast Asian countries in developing strategic pilot projects, using them as leverage for greater impact.** These project-oriented initiatives should aim to support a rapid deployment of renewable energy projects, customized to local contexts, and seize the opportunities these projects present for local

clean industry development. These initiatives are relatively easy to implement, bypassing the difficulties often associated with deeper reforms. Their implementation can bring immediate socioeconomic benefits, thereby creating a more favorable environment for deeper reforms.

Recommendations: A Clean Prosperity Plan as a leverage for more ambition

This report lays out a specific package of recommendations entitled the Clean Prosperity Plan (CPP). The CPP is an integrated, project-oriented solution for socioeconomic prosperity and climate security in Southeast Asia. It prioritizes joint efforts between China and Southeast Asia, leveraging industrial demand for clean electricity and emphasizing the implementation of green industrialization and renewable energy projects that are immediately viable with project-specific policy support and international assistance.

The CPP represents a leverage point for greater impact.

Following the principle of “starting with the easy tasks and then gradually proceeding to the difficult ones” (先易后难), the Clean Prosperity Plan can circumvent the complexities and delays often associated with comprehensive top-down planning. As a result, it has the potential to bring immediate outcomes, such as job creation, industrial upgrading, and sustainable economic growth.

These positive outcomes become greater if replicated by many other localities, creating the effect of “using a point to bring out the whole” (以点带面).

These outcomes could also help the governments in Southeast Asian countries legitimize the implementation of deeper reforms to mitigate the risks of renewable energy projects, especially in sensitive policy areas. This approach can create a more stable and attractive environment for investment, thus complementing Just Energy Transition Partnerships (JETP) and other regional initiatives, achieving synergistic outcomes where “1 plus 1 is greater than 2” (1加1大于2).

Details of the CPP are presented in Table I. While the CPP outlined here focuses on industrial parks, there are additional practical opportunities for implementing such a plan.

TABLE I: CLEAN PROSPERITY PLAN – KEY LEVERS, RATIONALES, SPECIFIC RECOMMENDATIONS, AND TARGETED AUDIENCES			
KEY LEVERS	RATIONALES	SPECIFIC RECOMMENDATIONS	TARGETED AUDIENCES
Repower: Cleaning the industrial sector via green electrification	Large potential consumer of clean power: The region's industrial sector accounts for almost half of the region's final energy consumption, currently relying on fossil fuels and captive coal power. Ease of implementation <ul style="list-style-type: none">▪ Fewer complications in land acquisition around industrial parks.▪ Ability to circumvent complexities in the expansion of on-grid clean electricity supply.	1. Support the development and extension of carbon pricing mechanisms to cover the industrial sector, including captive coal power.	Public agencies responsible for the design and implementation of carbon pricing.
		2. Develop technology solutions tailored to local contexts. <ul style="list-style-type: none">▪ Offshore floating wind, for example, between the Philippines and Vietnam, combined with onshore hydrogen and/or grid connectivity.▪ Floating solar in Vietnam, Thailand, and Indonesia.▪ Energy storage, smart grid, etc.	China-ASEAN Clean Energy Cooperation Centre, jointly hosted by the China Renewable Energy Engineering Institute and the ASEAN Centre for Energy.
		3. Establish a dedicated facility for financing the technology solutions, including project preparation support, corporate power purchase agreements (PPAs), and project aggregation platforms.	Stakeholders involved in the Green Investment and Finance Partnership.
		4. Develop a plan for phasing down captive coal power owned by Chinese investors.	Energy and industry ministries in China and Indonesia.
Rebuild: Promoting green industrialization	Large potential for green industrialization: Large reserves of critical minerals, widely used in clean technologies, and local projects providing opportunities for domestic manufacturing. Value added to local and regional economies: Creating local jobs and growth and unlocking opportunities for Chinese and foreign investors.	1. Accelerate the establishment of ASEAN-China Industry Ministerial Policy Dialogue Mechanisms.	Relevant ministries from both China (e.g., Ministry of Industry and Information Technology) and Southeast Asia responsible for the development of clean industries.
		2. Scale up successful models for clean industry development—e.g., Thailand's Eastern Economic Corridor, China-Egypt TEDA Suez Economic and Trade Cooperation Zone.	
		3. Promote green industrialization through financial (e.g., subsidies and tax breaks) and nonfinancial incentives (e.g., preferential procurement).	
Revamp: Deepening local capital markets	Large potential in local capital markets: Green, social, sustainability and sustainability-linked (GSSS) bonds only account for 2% of the world's total. Attractive for Chinese investors, due to its proximity to China, stable political relations, and large growth prospects.	1. Conduct surveys to understand the needs of Chinese institutional investors.	Chinese financial institutions: Conduct surveys and collaborate with Southeast Asia stakeholders to develop more attractive financial products for Chinese investors. Ministries of Finance from both China and Southeast Asia to provide more effective dialogue platforms and data disclosure mechanisms.
		2. Information sharing with Chinese investors: <ul style="list-style-type: none">▪ Regular updates on clean project opportunities.▪ More standardized data disclosure and reporting mechanisms.	
		3. Conduct regular dialogues between Chinese investors and financial institutes in Southeast Asia, to facilitate mutual understanding.	