



# Baseline Study on Clean Energy Finance Initiatives and Challenges of Financial Institutions in the ASEAN Region

## FINAL REPORT

March 4, 2021



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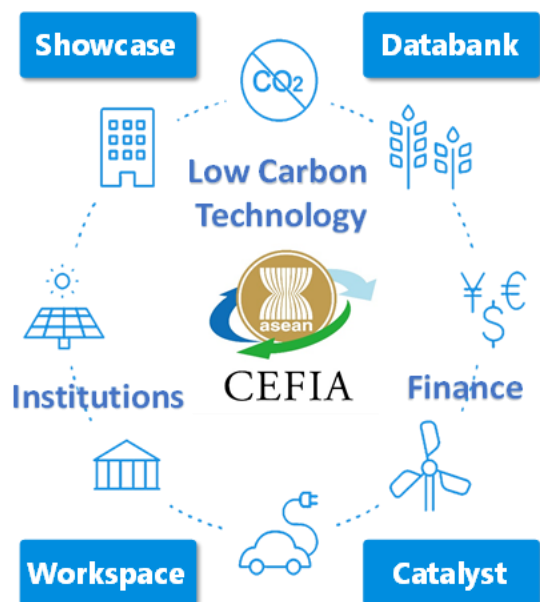
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**The Cleaner Energy Future Initiative for ASEAN (CEFIA)** is a cooperative initiative established at the 16th ASEAN+3 Ministers on Energy Meeting (AMEM+3) held in Bangkok in September 2019 to serve as a platform to facilitate collaboration between public and private sectors in accelerating the utilization of cleaner energy and low carbon technology in the ASEAN region.



The cooperative initiative named **Cleaner Energy Future Initiative for ASEAN (CEFIA)** was created at the 16th ASEAN+3 Ministers on Energy Meeting (AMEM+3) in Bangkok in September 2019, as a platform to facilitate **collaboration between the public and private sectors** for accelerating the deployment of cleaner energy and low carbon technology **in the ASEAN region**.

CEFIA aims to promote the utilization “Business-driven dissemination” of cleaner energy and low carbon technologies in parallel with policy development. Its four functions are:

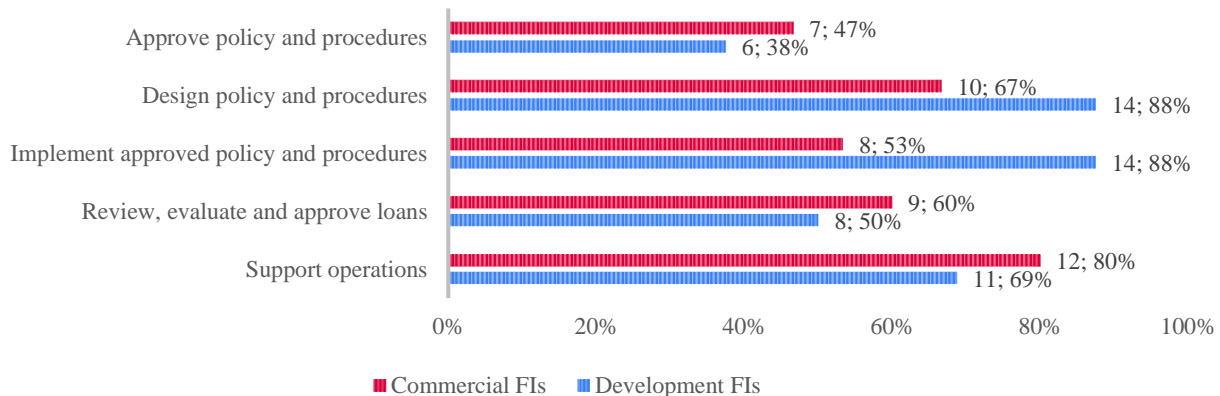
- “Showcase” to share and communicate good practices, challenges and solutions;
- “Workspace” to carry out real cooperative projects and activities (e.g., feasibility study, demonstration projects, capacity building);
- “Databank” to collect information, data and reports; and
- “Catalyst” to facilitate technology development and improve policy and institutional arrangements.

CEFIA commissioned the Association of Development Financing Institutions in Asia and the Pacific (ADFIAP) to conduct a baseline study on the regulatory frameworks and survey of financial institutions aimed at identifying the bottleneck and enablers of cleaner energy finance in the ASEAN region. A survey questionnaire was disseminated to local financial institutions in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines and Vietnam, with supplementary follow-through interviews. This report presents the findings of the baseline study and survey on the current status of cleaner energy finance, specifically in the following areas:

- Legal and regulatory framework in ASEAN countries;
- Initiatives of local Financial Institutions on clean energy finance such as sustainable financial policies, financing, actual status of measurement, evaluation and reporting of energy consumption and CO2 emission reductions; and
- Financial institutions' approach to accelerating clean energy finance in the region (bottleneck and enablers).

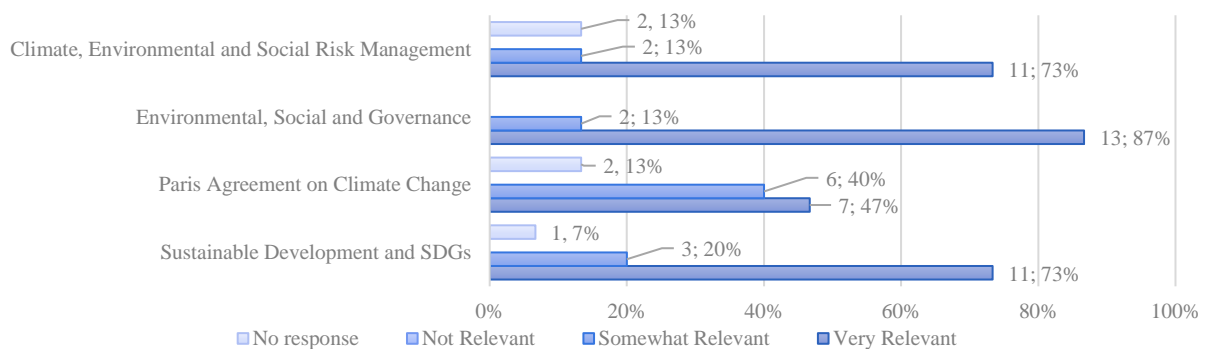
## Respondent Profile

The respondents are representatives from development financial institutions (DFIs) and commercial banks, collectively referred to in this report as Financial Institutions (FIs). Most respondents from DFIs are involved in the design and implementation of policies and procedures while for commercial banks, most respondents are involved in design of policy and procedures and support operations.



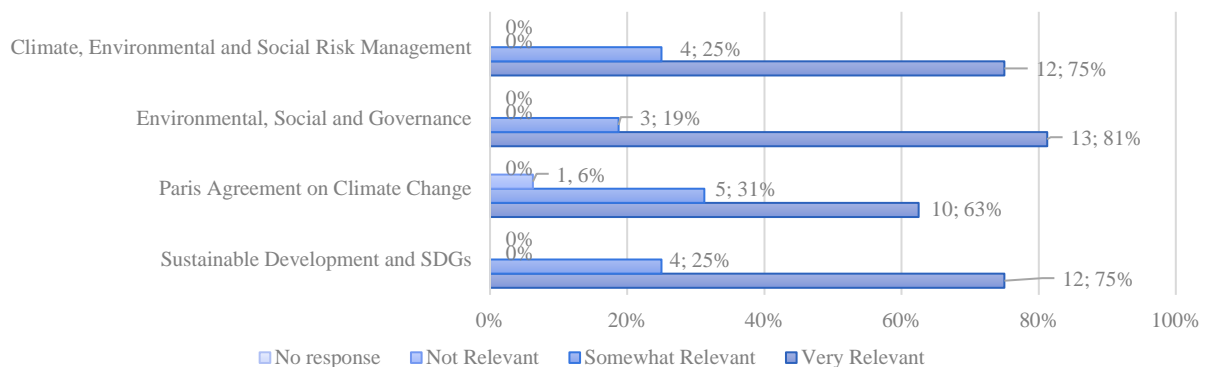
## Areas Relevant to Sustainable Business Operations (Commercial FI)

Commercial FIs identified four areas that are relevant to their sustainable business operations: (1) Environmental and Social Governance (ESG); (2) Sustainable Development and Sustainable Development Goals (SDG); (3) Climate, Environmental and Social Risk Management, and (4) Paris Agreement on Climate Change.



## Areas Relevant to Sustainable Business Operations (DFIs)

For DFIs, ESG is the area most relevant to their business operations followed by Sustainable Development and SDGs, Climate, Environmental and Social Risk Management, and the Paris Agreement on Climate Change.





## 1. Background

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Climate change is driven by the emission of carbon dioxide and other greenhouse gases (GHG). Energy consumption from fossil fuels is the main source of greenhouse gas emissions. In 2015, countries were called to contribute to GHG emission reduction through their nationally determined contributions under the Paris Agreement. In the same year, the United Nations General Assembly adopted the Sustainable Development Goals (SDG) that are intended to be achieved by 2030. One of the goals is climate action, which targets climate finance, adaptation, and mitigation. The Paris Agreement and the SDG help accelerate the transition towards clean energy and low-carbon economy.

**The Cleaner Energy Future Initiative for ASEAN (CEFIA)** commissioned the Association of Development Finance Institution (ADFIAP) Finance and Investment Center (AFIC), through the Mitsubishi Research Institute (MRI) on behalf of Japan's Ministry of Economy Trade and Industry (METI) to conduct the baseline study. In addition, the distribution of questionnaires to commercial banks was carried out with the great cooperation of the ASEAN Bankers Association (ABA).

**The Baseline Study covers six (6) identified priority countries of CEFIA namely, Cambodia, Indonesia, Malaysia, Myanmar, the Philippines and Vietnam**, and focused on the following priority themes: a) energy-efficient zero energy building; b) renewable energy microgrid; c) renewable energy distributed; d) energy efficiency in manufacturing facilities; and e) smart cities and communities for low-carbon and decarbonizing development. However, the survey responses came only from Cambodia, Indonesia, Malaysia, the Philippines and Vietnam.

This study presents the status of clean energy financing initiatives of FIs in the ASEAN region based on the survey conducted, review of the regulatory framework and enabling environments of each country, and case studies on clean energy financing programs of Development Bank of the Philippines and Bank of the Philippine Islands. It also provides the basis for setting CEFIA's direction, priorities and activities.

## 2. Regulatory Framework for Cleaner Energy Finance in ASEAN

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An enabling regulatory framework is critical in accelerating financing and investments in clean energy and sustainable development. Regulations and policies facilitate access to financing for projects that are climate-friendly or promote renewable energy and energy efficiency. This study looks into the initiatives of the central banks of Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, and Vietnam as well as their relevant national policies and regulations.

The central banks or the financial authorities of Indonesia, Malaysia, the Philippines and Vietnam have been at the forefront of sustainable finance, taking concrete steps in launching national policies, principles and guidelines. The key policy thrusts include (1) development of national green taxonomies, (2) financing sustainability through green, climate bonds, social and sustainability bonds, and other financial instruments; (3) Environmental, Social and Governance (ESG) investing in the broader financial sector including capital market, pensions, insurance and asset management; (4) understanding and managing ESG risks including environmental, social and climate risks, and; (5) sustainability reporting and ESG disclosure.

### Role of Central Banks

Central Banks provide the enabling regulatory framework to accelerate financing and investments in clean energy finance. They join networks to gain access to best practices and knowledge exchange platforms. .

These networks include:

- Sustainable Banking Network (SBN), an international knowledge sharing platform on sustainable finance that supports behavior change of banks through market-based actions with policy leadership, knowledge sharing and capacity building; and
- Network on Greening of Financial Services (NGFS), a platform for central banks and

supervisors to share and contribute to the development of climate risk management practices in the financial sector and mobilizing mainstream finance to support the transition towards a sustainable economy.

Central banks of Indonesia, the Philippines and Vietnam are members of SBN, while central banks of Cambodia, Indonesia, Malaysia and the Philippines are members of NGFS.

### Enabling Policies and Initiatives

Central Banks are the national authorities for clean energy finance and investment policies and initiatives. Other national agencies support sustainable finance through the issuance of guidelines.

#### 1) Cambodia

Cambodia adopted a voluntary approach, with the Association of Banks in Cambodia (ABC) playing an active and vital role. ABC, a member of the SBN, launched the Cambodian Sustainable Finance Initiative with the support from the Central Bank of Cambodia. This led to the development and adoption of the Cambodian Sustainable Finance Principles and the issuance of the Sustainable Finance Principles Implementation Guidelines. The sustainable finance initiative operates under the Cambodia Climate Change Strategic Plan 2014-2023, which aims for national development towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based economy.

#### 2) Indonesia

Indonesia's Financial Services Authority or the Otoritas Jasa Keuangan (OJK) promoted an enabling environment to support sustainable finance. OJK developed the Roadmap for Sustainable Finance in Indonesia 2015-2019. It has since issued related documents such as the Clean Energy Handbook for Financial Service Institutions in 2015, the Framework and Regulation for Green Bond Issuance in Indonesia

in 2017 and the Regulation on the Application of Sustainable Finance for Financial Services Companies, Issuers and Publicly Listed Companies in 2018. Indonesia also passed laws that support the acceleration of clean energy finance such as GhG emission reduction, climate change, sustainable development, environmental preservation and energy resilience in national energy management.

### **3) Malaysia**

The Bank Negara Malaysia (BNM) plays a strong role in the sustainable finance space. Its Strategy Paper in 2018 engaged practitioners of Value-Based Intermediation (VBI) to deliver the intended outcomes of Shariah through practices, conduct and offerings that generate positive and sustainable impact to the economy, community and environment, consistent with the shareholders' sustainable returns and long-term interests. BNM next introduced the VBI Financing and Investment Impact Assessment Framework as a guide for Islamic and other FIs seeking to incorporate ESG considerations in their financing and investment decisions. BNM also prepared a Climate Change and Principle-based Taxonomy Discussion Paper on a common framework for identifying the impact of economic activities on climate change and helping to facilitate financial flows towards activities that would support the transition to a low-carbon economy.

### **4) Myanmar**

The Central Bank of Myanmar (CBM) is the regulator and supervisor of the banking sector. To regulate the activities of banks and non-bank financial institutions in the financial and securities market, CBM enacted the Foreign Exchange Management Law (2012), the revised Central Bank of Myanmar Law (2013), the Myanmar Investment Law (2016) and the Financial Institutions Law (2016). The environment and climate-related policies have been enacted in 2017 and 2019 respectively. However, since the recent news of military coup (2020), there is an expected setback in the sustainable finance space

particularly with the removal of its central bank chief and the detention of its deputy governor. The banking sector is currently undergoing a significant reform process that is aiming at growth and sustainability.

### **5) The Philippines**

The Bangko Sentral ng Pilipinas (BSP) issued Circular 1085 or the Sustainable Finance Framework in 2020. The Securities and Exchange Commission (SEC) issued Memorandum Circular 12 on the Guidelines on Green Bonds under the ASEAN Green Bond Standards and Memorandum Circular No. 4 on the Sustainability Reporting Guidelines for Publicly Listed Companies. Both the BSP and SEC circulars assist publicly listed companies in identifying and classifying green projects for measurement, disclosure and reporting. The Philippines has several legislations on environment and climate change which identified the long-term mitigation and low-carbon sustainable growth targets and provided for activities and outputs across sectors including the development of a national renewable energy program for the energy sector. Other key pieces of legislation respond to challenges of climate change, economic and green growth, and energy development.

### **6) Vietnam**

The State Bank of Vietnam (SBV) adopted policies relating to green financing. These include the Action Plan of Banking Sector to Implement the National Green Growth Strategy 2015-2020; Directive on Promoting Green Credit Growth and Managing Environmental and Social Risks in Credit Extension 2015; Circular on lending transactions of credit institutions and/or foreign bank branches with customers 2016; and the Renewed commitment to implementing the Green Growth program and the program of preventing climate change 2017. Since 2008, Vietnam has been issuing regulations in response to the increasing concerns about climate risks, spurred by the growing global attention to achieving low-carbon and climate-resilient development.

### 3. Baseline Survey for Local Financial Institutions in ASEAN

This report investigates the status of clean energy financing in the ASEAN region, specifically Cambodia, Indonesia, Malaysia, Myanmar, the Philippines and Vietnam based on a survey conducted among FIs and supplemented by follow-through interview.

The main objective of the survey is to assess clean energy financing initiatives of FIs in the ASEAN region as well as to determine the bottlenecks in scaling up investments in clean energy projects. The survey questionnaire examines the green or clean energy financing initiatives of FIs and their perspectives in accelerating clean energy finance in the region. The survey was conducted among the ADFIAP members and commercial banks in the identified countries. Thirty-one FIs participated in the Survey through their duly authorized representatives.

The survey focused on CEFIA's priority sectors:

- Energy-efficient / Zero-energy building;
- Renewable energy microgrid;
- Distributed renewable energy;
- Energy Efficiency in factory; and
- Smart cities and communities for low-carbon and decarbonizing development.

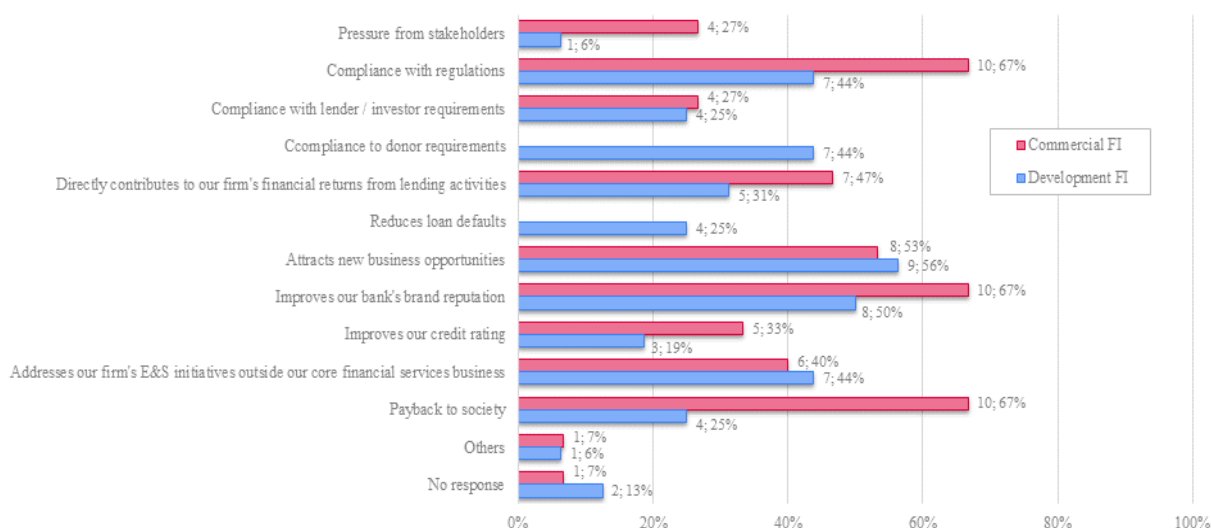
Areas covered include Sustainable Finance Policy,

Clean Energy Financing Initiatives, Evaluation, Measurement and Reporting as well as challenges and needs of FIs.

#### Sustainable Finance Policy

- Sustainability and climate change are important considerations for majority of the respondents. Twenty-four (24) FIs (77%) already have a sustainability framework (ESG) in place. The main reasons of FIs for adopting their sustainability framework are to attract new business opportunities (55%), improve the bank's brand reputation (58%), comply with regulations (55%), comply with donor requirements (23%) and address the firm's environmental and social initiatives outside the core financial services business (42%).
- On the other hand, 7 FIs or 23% of respondent institutions have no sustainability framework. The top reasons are the anticipated extra effort and cost in developing a sustainability framework (19%); lack of full understanding of what a sustainability framework is and what it entails (13%); no mandate from their central bank or regulatory authority (13%); lack of internal recognition (13%) and no bank staff specialist in the area (10%)

**Figure 3-1 FIs Reason for Adopting Sustainable Finance Policy**





## Clean Energy Financing Initiatives

Twenty-three (23) FIs (74%) have carried out activities related to sustainability, green and climate finance. They also indicated that they have existing financing facilities for clean energy projects, which total to USD 2.875 billion. However, only 12 of these FIs have set loan targets for low-carbon finance.

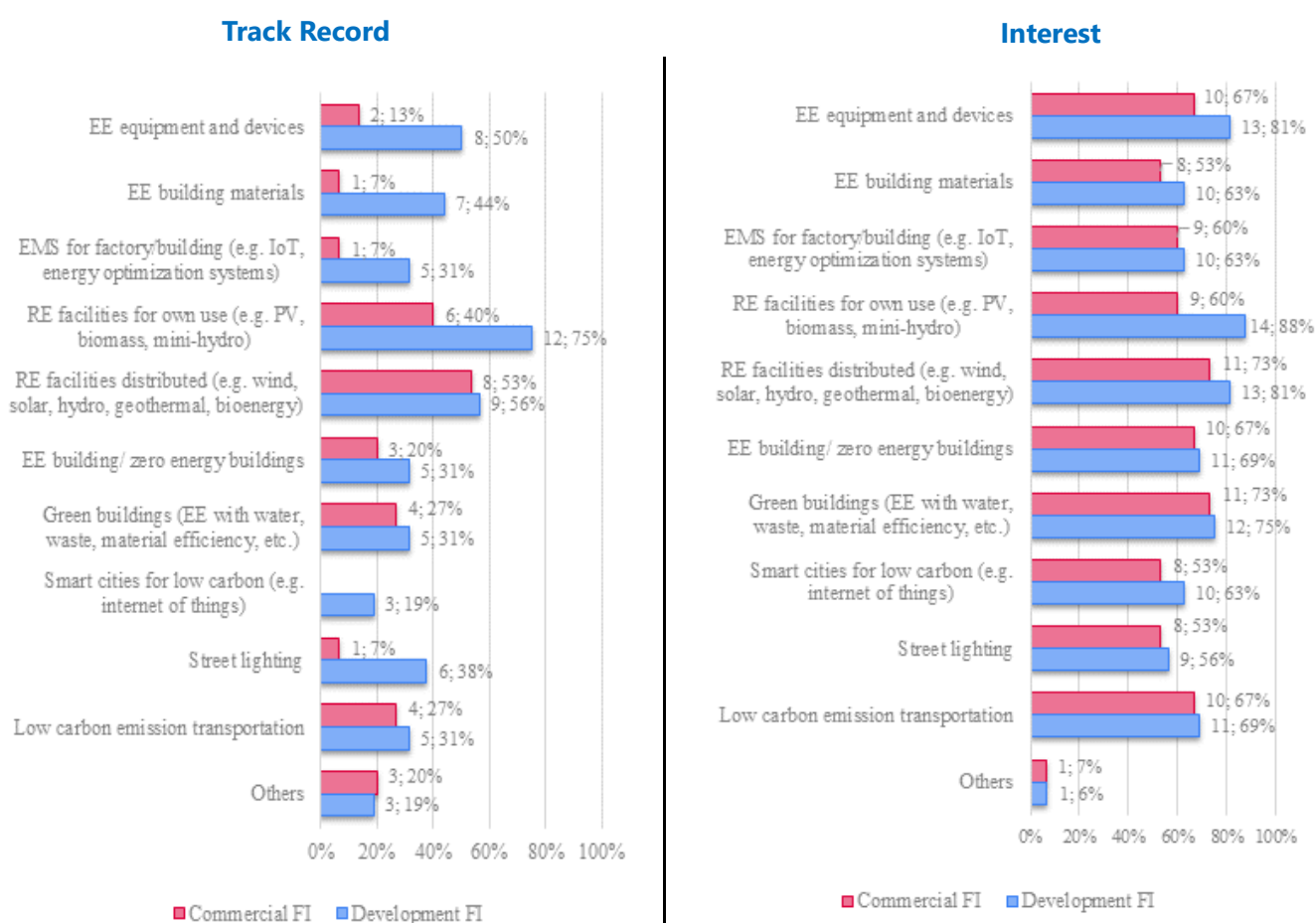
Some of the clean energy projects financed are renewable energy facilities for their own use (58%) such as solar panels, solar lamps, biomass, mini-hydro; 55% on renewable energy facilities distributed such as wind, solar, hydro, geothermal, bioenergy; 32% on energy-efficient equipment and devices; (26%) and energy-efficient building materials.

The majority or 23 FIs (74%) indicated that transition finance is very relevant to their business

operations. Climate transition is a step-by-step approach toward decarbonizing energy and the de/low-carbonization of GhG-emitting industries and sectors. Climate transition finance promotes financing for transition actions as part of climate finance contributing to the mitigation of climate change.

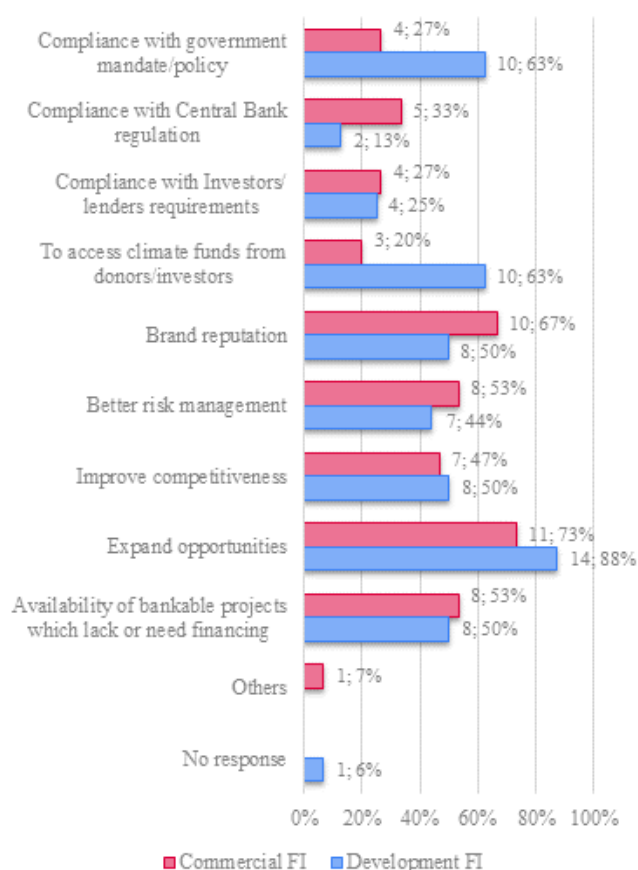
The Survey inquired whether the FIs will be interested to finance other clean energy projects. The majority of the respondents or 75% indicated their FI's willingness to finance projects on renewable energy facilities distributed (e.g., wind, solar, hydro, geothermal, bioenergy); 74% on energy-efficient equipment and devices and renewable energy facilities for their use; 74% on green buildings (energy efficient with water, waste, material efficiency, etc.) and 68% on energy-efficient building/ zero energy buildings as well as on low carbon emission transportation.

**Figure 3-2 Track Record and Interest in Financing Cleaner Energy Projects**



Respondent FIs are interested to finance clean energy projects to expand opportunities (81%), comply with government mandate and policy (45%), have access to climate funds from donors and investors (42%); and enhance brand reputation (58%).

**Figure 3-3 Reasons for Interest in Clean Energy Finance**



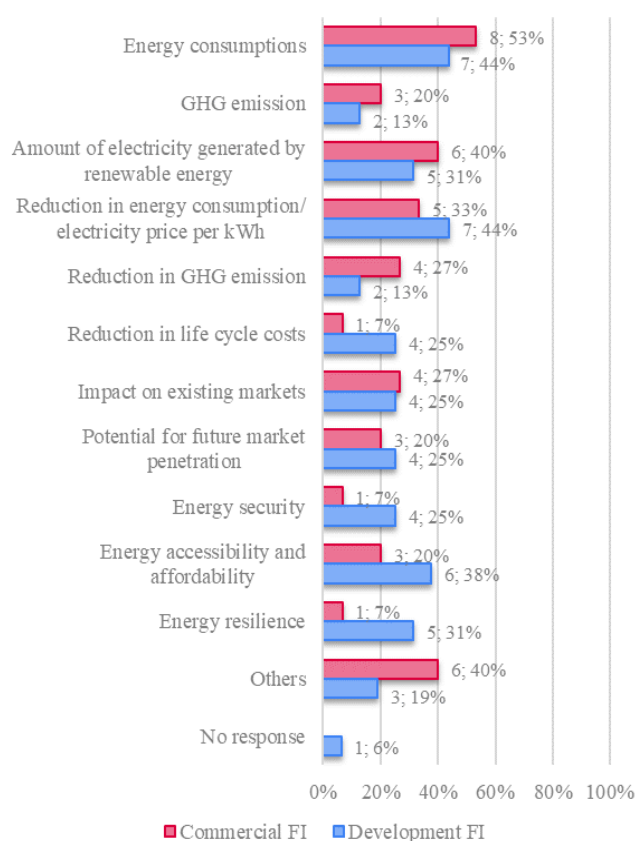
## Evaluation, Measurement, and Reporting

### 1) Evaluation

Only twelve (12) FIs (35%) have environmental and social risk management (ESRM) system to screen and evaluate projects. Specifically for low-carbon projects, respondents indicated that their FIs evaluate their borrower's low-carbon projects based on the following criteria: energy consumption (48%), reduction in energy consumption in terms of cost savings of electricity per kilowatt-hour (39%), amount of electricity generated by renewable energy sources (35%),

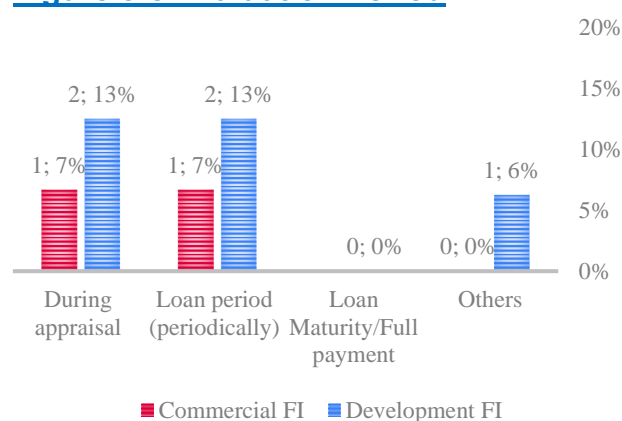
and energy accessibility and affordability (29%).

**Figure 3-4 Evaluation Criteria**



The evaluation is conducted during appraisal (10%), periodically within its loan term (10%) upon its loan maturity / full payment (0%), and others (3%) evaluate on a need basis depending on the type of project. Nine (9) FIs or 29% did not respond.

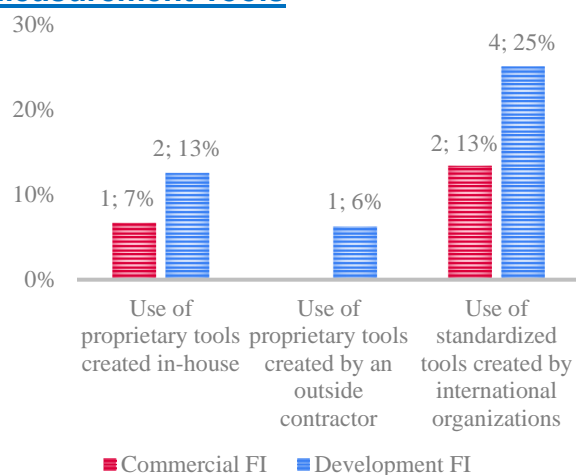
**Figure 3-5 Evaluation Period**



## 2) Measurement

Only ten (10) FIs (32%) measure the GHG emissions reduction of low-carbon projects in their portfolio, while the majority or 21 FIs do not (68%). FIs use standardized tools created by international organizations (19%), or proprietary tools created either in-house (10%) or outsourced (3%).

**Figure 3-6 GHG Emission Reduction Measurement Tools**



## 3) Reporting

Twenty-one (21) responded that their FIs produce sustainability reports. The rest are yet to prepare a sustainability report.

Example of Measurement Tools:

### CAFI (Climate Assessment for Financial Institutions)

- Creating "Climate Friendly Economies" will be a capital-intensive process and will require new capital and new levels of expertise and systems in banks
- The IFC created the CAFI platform to support the growing climate finance volumes
- CAFI is an online platform for financial institutions to assess the climate eligibility and estimate the development impact of the activities they finance

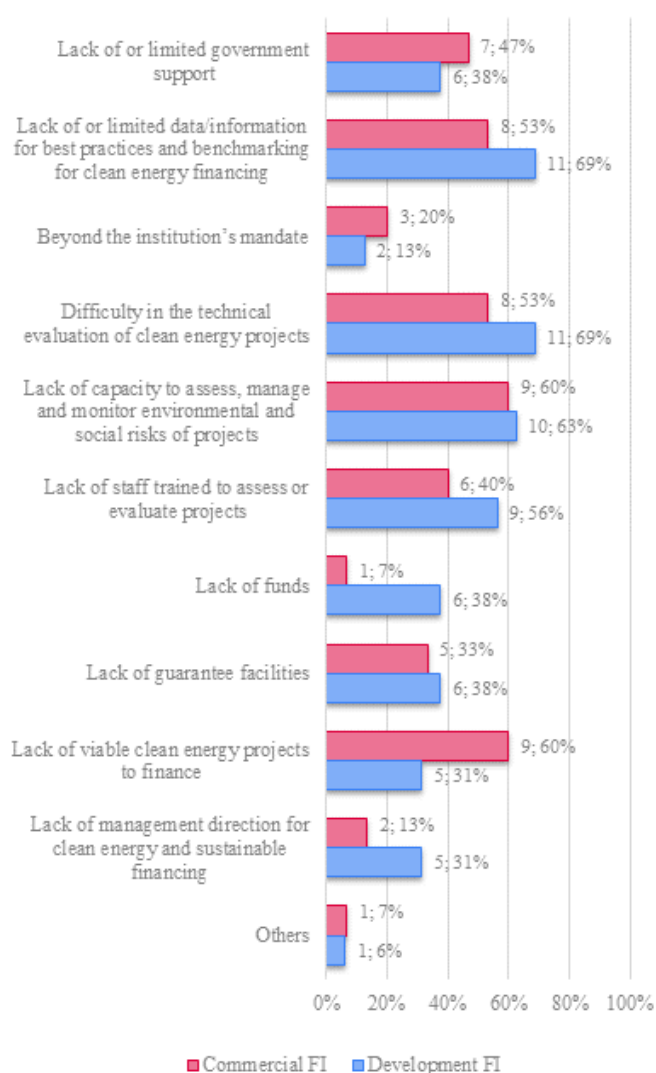
Source) IFC

[https://www.ifc.org/wps/wcm/connect/Industry\\_EXT\\_Content/IFC\\_External\\_Corporate\\_Site/Financial+Institutions/Priorities/Cli+mate+Finance\\_SA/CAFI\\_SA/](https://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Financial+Institutions/Priorities/Cli+mate+Finance_SA/CAFI_SA/)

## Challenges

There are challenges to be hurdled by FIs in developing and implementing a green financing or clean energy financing program are the lack of technical capacity of the FIs to evaluate clean energy projects (61%); lack of or limited data/information for best practices and benchmarking for clean energy financing (61%), lack of capacity to assess, manage and monitor environmental and social risks of projects (61%) and lack of staff trained to assess or evaluate projects (48%). Other challenges include lack of funds (23%), lack of guarantee facilities (35%) and lack of government support (42%).

**Figure 3-7 Challenges in Clean Energy Financing**

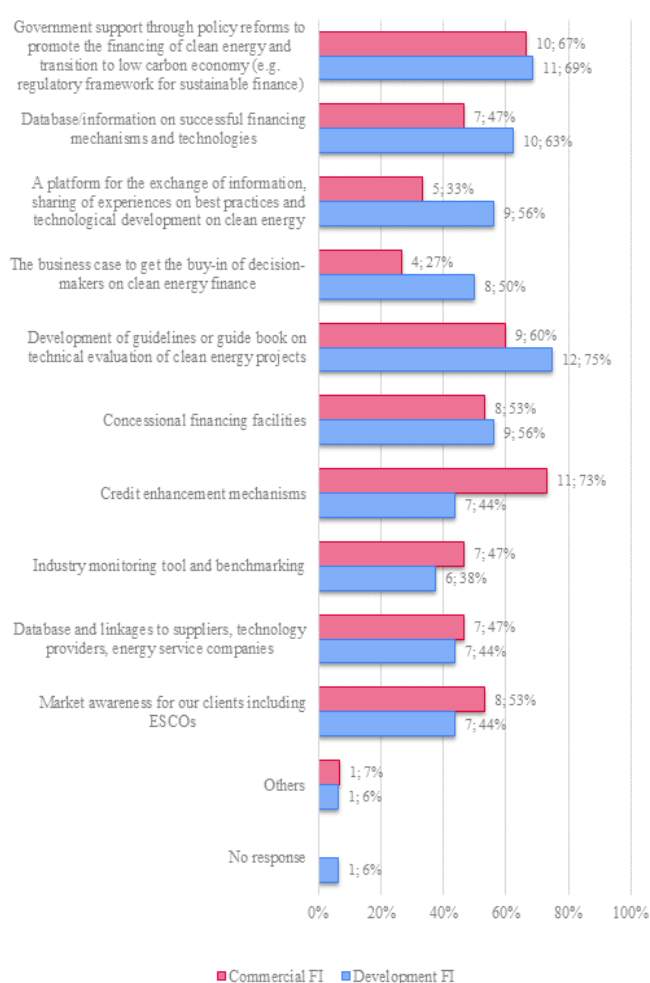


## Needs

### 1) Institutional Support

To accelerate clean energy financing and transition to low carbon economy, FIs need guidelines or guidebook on technical evaluation of clean energy projects (68%), government support through policy reforms such as a regulatory framework for sustainable finance (68%) and access to database/information on successful financing mechanism and technology (55%). FIs will also welcome concessional financing facilities (55%). Equally essential is a platform for the exchange of information, sharing of experiences on best practices, and technological development on clean energy (45%). The majority or 25 FIs (81%) are interested in participating in a Regional Financing Facility.

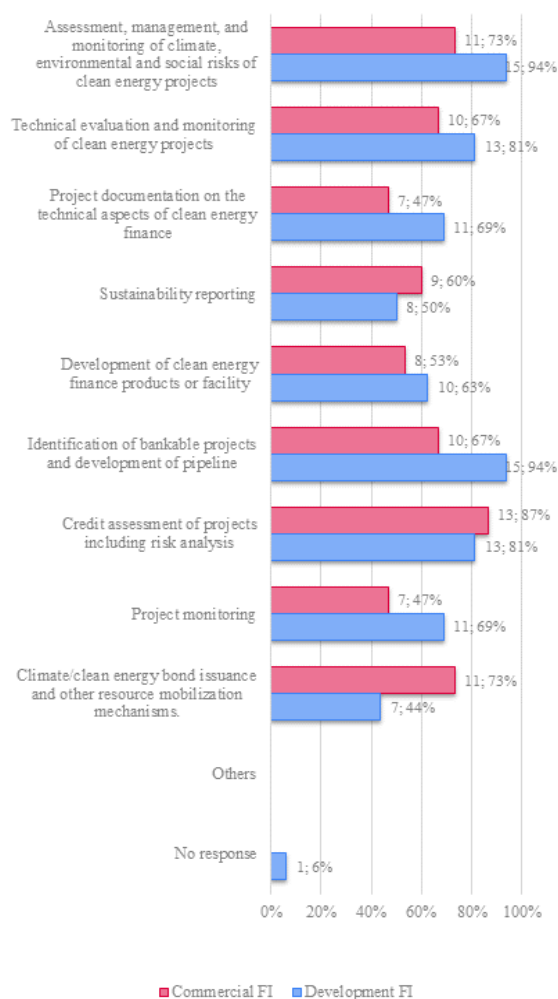
**Figure 3-8 Institutional Support Needed**



### 2) Capacity Building

Respondents indicated the need for capacity-building particularly on assessment, management, and monitoring of climate, E&S risks of clean energy projects (84%), and the identification of bankable projects and development of pipeline projects (81%). FIs also need training on technical evaluation and monitoring of clean energy projects (74%); credit assessment of projects including risk analysis (84%); project documentation on the technical aspects of clean energy finance (58%); project monitoring (58%) and development of clean energy finance products or facility (58%). Only eleven FIs (35%) are already issuing green bonds, while the others are interested in climate/clean energy bond issuance and other resource mobilization mechanisms.

**Figure 3-9 Capacity Buildings Needs**



## 4. Case Studies: Current Status of Local FIs in ASEAN

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These case studies look at the experiences of the Bank of the Philippine Islands (BPI) and the Development Bank of the Philippines (DBP) in developing and implementing clean energy financing and related programs. They explore how these FIs' programs contribute to climate change mitigation and social and environmental development aspects while at the same time achieving economic returns. In essence, these case studies will present a business case for clean energy finance facilities and how FIs can achieve the triple bottom line. Information on the case studies is limited to desk research and results of the survey.

### Bank of The Philippine Islands

#### 1) Bank Profile

BPI founded in 1851 was the first bank in the Philippines and in the Southeast Asian region. The bank ushered in the Philippine banking and finance industry, performing many functions, including providing credit to the National Treasury and printing and issuing currency, thus making it in effect, the country's first Central Bank. Today, BPI finances private and public sector initiatives and enterprises in support of economic growth and nation-building.

#### 2) Sustainability Framework

BPI strives to achieve sustainability by creating shared value for its clients, shareholders, and society as a whole. For BPI, sustainability means providing opportunities not only for financial wellness but also for a greener economy and society. Managing ESG risks is a key strategy of BPI, recognizing and managing ESG issues as a long-term driver of market value. BPI adapts not merely to operational or financial risks but also to changes in the business environment.

#### 3) Clean Energy Finance Initiatives

BPI is one of the first movers in clean energy

finance through its related programs detailed below.

- **Walking the Talk: Investing in Energy Efficient Office.** The first investment of BPI in clean energy is for the retrofit of its head office building to improve its energy performance. The bank replaced its heat ventilation and air conditioning (HVAC) systems with efficient chillers, cooling tower and pumps, and introduced automation. It entered into an energy efficiency performance contract with an Energy Service Company (ESCO) that will provide guaranteed savings. This resulted in energy savings of 990,000 kWh per year amounting to PhP 6 million (USD 133.33 thousand) cost savings annually. This means that the investment cost of PhP 63 million (USD 1.4 million) can be paid off by the generated cost saving in just 9.5 years, and thereafter, BPI will have extra funds that can be invested elsewhere. This concrete example demonstrates the benefits of going green – how it would be good for the pocket, good for business and for the environment.
- **Sustainable Energy Finance Program.** BPI launched its Sustainable Energy Finance (SEF) program in 2008, with technical assistance (TA) and a risk-sharing facility (RSF) from the International Finance Corporation and partially funded by the Global Environment Facility. The RSF helped BPI expand its energy loan portfolio, enhance credit of small energy players and mitigate risk of lending to the perceived high risk energy market. The bank organized a dedicated team to handle the program, which gained momentum resulting in a paradigm shift in the traditional banker's way of thinking. SEF enabled BPI to veer away from collateral-based lending to cash flow-based lending which is a unique value-add for clients.



Investments in sustainable energy projects typically have short payback period due to the energy savings attributed to project implementation. SEF provides clients the opportunity to improve operations, save money, gain more profit and at the same time contribute to climate change mitigation. In the process of marketing the product, BPI is also able to educate the business community about environmental sustainability. The SEF program has since been renamed Sustainable Development Finance (SDF) program since its scope expanded to cover other aspects of sustainable development. The SDF Team remains responsible for the selection and evaluation of projects. As of 2019, BPI has disbursed a total of PhP 88.62 billion (USD1.846 billion).

- **Green Bonds.** BPI is the first Philippine bank to issue a five-year dollar-denominated ASEAN green bond in 2019. BPI has raised USD 300 million from the green bond with a 2.5% coupon rate per annum. The proceeds are to be used for the financing or re-financing of eligible green projects. BPI also issued the first Swiss franc-dominated bonds out of the Philippines carrying an annual coupon rate of 0.00%. The net proceeds from the bonds will be used for the financing and/or refinancing, in whole or in part, of eligible “green” projects.
- **Green Finance Framework.** BPI established a Green Finance Framework (GFF) to serve as basis for future fund-raising activities, in line with its commitment to fund projects with clear environmental benefits. The framework is aligned with the ASEAN Green Bond Standards, the Green Bond Principles of the International Capital Market Association as well as the Green Loan Principles of the Loan Market Association. The GFF details guidelines for the evaluation and selection of eligible projects, management of proceeds and reporting of any green bonds or loans to be issued by BPI.

**Green Loan Portfolio.** BPI’s existing green loan portfolio as of 2019 amounted to PhP 157 billion (USD 3.271 billion) outstanding loans to energy sector, of which 38% is for renewable energy. A total of PhP 27.69 billion (USD 577 million) was disbursed for energy efficiency projects while PhP 88.62 billion (USD 1.846 billion) is for renewable energy projects.

#### 4) Best Practices

BPI is a recognized pioneer in green finance and was the first bank to have sustainable energy finance facility. It has made sustainability as one of its core strategies and all programs and initiatives are anchored on sustainability. BPI helped accelerate clean energy investments by demonstrating the benefits of transitioning to clean energy by retrofitting its own office buildings and showing cost and energy savings and contribution to climate change mitigation. One of its innovations is to incorporate advisory services to project proponents to ensure that their projects comply with the green eligibility requirements.

#### Challenges

As the first-mover, BPI met challenges particularly in helping generate awareness and educating clients on sustainable energy.

### Development Bank of the Philippines

#### 1) Bank Profile

DBP is the premier development financial institution owned 100 % by the Philippine government. It currently ranks number 9 in the Philippines top universal banks with total assets of PhP 763.5 billion (USD 15.906 billion) in 2019. It has 140 branches and 22 lending centers which are able to reach 53% of the countryside requirements. As the lead bank for development finance, its mission is to support infrastructure development, responsible entrepreneurship, efficient social services and protection of the environment. It is committed to spur economic and social growth of

the public sector primarily in the local government units, water districts and electric cooperatives.

## 2) Sustainability Framework

In view of DBP's developmental mission and commitment to sustainability the bank initiated various measures to integrate environmental protection and sustainable development into its overall operations and services. Since 2008 DBP has been publishing annually a Sustainability Development Report which discloses its sustainability performance and contributions. It established an Environmental Management System (EMS) which earned for the bank the distinction as the first Philippine bank to be ISO 14001-certified. The EMS measures the bank's internal organization's performance and initiatives in resources conservation. It has adopted a Quality Management System (QMS) which is likewise ISO 9001-certified. DBP regularly implements energy reduction and resource efficiency measures in the bank's headquarters and branches under the QMS.

## 3) Green Credit Process and GHG Emissions Monitoring

The bank's environmental management (EM) team evaluates, and monitors impact indicators as required under the bank's Sustainability Finance Framework (SFF). Projects are assessed based on energy consumption, energy savings, amount of electricity generated by the renewable energy, GhG emission reduction and fuel oil replaced. Baseline and potential outcomes are established during the appraisal period and are compared during the project's periodic monitoring and progress review up to the loan's full payment. Specifically, in computing energy-related GhG emission reduction, the bank uses standard tools created by international organizations and from the Department of Energy approved methodology under the National Grid Emission Factor.

## 4) Clean Energy Finance Initiatives

The bank's umbrella programs for clean energy

projects are as follows:

- **Green Financing Program (GFP)** – a PhP 72 billion (USD 1.5 billion) program that supports the Bank's strategic thrust of environmental protection and the country's green growth strategy. The program provides financing and technical assistance to strategic sectors, industries and local government units in adapting environment-friendly processes and technologies and incorporating climate change adaptation and mitigation and disaster risk reduction measures.
- **Financing Utilities for Sustainable Energy Development Program (FUSED)** – a PhP 48 billion (USD 1.0 billion) program targeting the power generation and distribution sectors to contribute to the increased access to electricity services and address the needs and constraints of the power supply system. The program ensures universal access to affordable, reliable and modern energy services especially to the off-grid areas where renewable energy is one of the main sources of electricity. Eligible projects under FUSED are the development and construction of renewable energy resources (hydro, solar, wind, geothermal and other emerging technology). Total portfolio as of 2019 amounted to PhP 37.12 billion (USD 773.33 million) and generated an additional 3,473-megawatt capacity.
- **Energy Efficiency Savings Financing Program (E2SAVE)** - a PhP 6 billion (USD 124.87 million) program that supports the government's Energy Efficiency and Conservation Act (Republic Act 11285) aimed at institutionalizing energy efficiency and conservation in the public and private sectors. Projects that have been financed include replacement and installation of highly efficient mechanical/electrical equipment, process improvement and system optimization, solar rooftop in buildings and investment-

grade energy audit for government buildings, among others. Credit assistance to ESCOs is also provided under the program.

- **Program Assistance to Support Alternative Driving Approaches (PASADA)** - a program that supports the implementation of the national government's Public Utility Vehicle Modernization Program and its Omnibus Franchising Guidelines. It provides financing to transport cooperatives and corporations for the acquisition of brand new, energy efficient public transport vehicles. As of 2019, PASADA financed 45 transport cooperatives with a total portfolio of PhP 664 million (USD 13.833 million).

**Other programs** are also offered to support cleaner production facilities in agriculture and manufacturing, water treatment and sanitation, micro small and medium businesses, socialized

housing, social services and community development, among others.

**ASEAN Sustainability Bonds.** Under the bank's Sustainability Finance Framework, DBP has a three-year PhP 50 billion (USD1.042 billion) bond program to support the government's developmental goals. The first issuance in 2019 was a 2-year bond with a coupon rate of 4.25% per annum. It raised PhP 18.12 billion (USD 377.5 million) and bulk of ~~the proceeds~~ financed projects on renewable energy (83%), healthcare (13%) and water (4%).

## 5) Challenges

DBP continuously exerts efforts to raise its benchmark for economic competitiveness for sustainable growth. It still has to optimize its full potential to scale up investments in clean energy.

## 5. Key Findings and Conclusions

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### Clean Energy Financing in ASEAN

ASEAN is a large, diverse, and dynamic region with varied markets, that includes the world's largest energy consumer and economies that are among the most vulnerable to the impact of climate change. The majority of FIs in the region have a clean energy finance framework and policies in place considering their development goals. They fully support SDGs, Paris Agreement on Climate Change, ESG standards, as well as climate, environmental and social, and related financial risks. However, the adoption of clean energy financing program(s) is still a struggle as many of the FIs need clarity of policies and direction from the government to ensure a secure, affordable, and more sustainable pathway for the energy sector. Making the transition to a sustainable, low-carbon energy future requires a clear vision and strong commitment by the governments.

### Enablers

Central Banks, as bank regulators, play a strong leadership role in creating an enabling environment for sustainable finance. Two countries have made substantial progress on this aspect. OJK was the first to introduce its strategic roadmap for sustainable finance market development in 2014. This was followed by an umbrella policy to green the entire financial system, provide a set of sustainability reporting requirements, green loan definitions and a green bond framework. Next was Vietnam's SBV which issued its directives to promote green loan growth and ESRM in 2015. More recently, two more countries have taken concrete steps in launching policies and regulations although still in their nascent stage. Malaysia's BNM launched its Strategy Paper in 2018 for practitioners of VBI to deliver the intended outcomes of Shariah through products and activities that generate positive and sustainable impact. This was followed by the issuance of the framework to incorporate ESG

considerations in financing and investment decisions, mandatory testing and sustainability reporting. With an initial focus on capacity building, the Philippines BSP issued the sustainable finance framework in 2020, to address climate change and its impact on the country's financial sector. It also required banks to integrate ESRM in their corporate governance and risk management frameworks as well as in their strategic objectives and operations. Cambodia and Myanmar are strengthening their enabling environment and are showing interest in getting into the sustainable financing space by supporting initiatives mostly led by their respective banking associations. Existing national policies and regulations by other agencies on environmental, social, climate and energy can also be leveraged as policy to promote clean energy finance.

Sound financial sector policies and regulations create a conducive enabling environment which is necessary to shift and mobilize volumes of clean energy financing and enable countries' transition to low carbon economy. Regulations and mechanisms such fiscal and non-fiscal incentive schemes encourage FIs to finance clean energy projects as well business to invest in clean energy projects. The government can mobilize resources and grants from overseas development aid agencies, and other DFIs and international funding agencies. The government can also issue technical guidelines and bulletin to help the private sector understand and contribute to achieving national goals on clean energy. The private sector is an important partner of the government in accelerating the transition to low-carbon economy.

### FIs Clean Energy Finance Initiatives

BPI and DBP are two FIs considered as the first movers that supported low carbon/clean energy market transformation. BPI's SEF Program and DBP's GFP supported the country's green growth strategy. These banks faced challenges particularly in creating awareness, educating, and leading

people to embrace green development. Both BPI and DBP had to package technical assistance and advisory to clients, where green development as a concept is still in its nascent stage back then. Moreover, BPI and DBP's strategy of "walking the talk" or investing in clean energy for their own use proved helpful in turning a concept into reality. Presenting GhG emission reduction, energy consumption reduction as well as cost savings builds a concrete business case for green market transformation particularly in the achievement of the triple bottom line. The program has helped increase the reputation of these banks as clean energy advocates that enable them to easily have access to donor funds as well as private capital through the issuance of green bonds (BPI) and sustainability bonds (DBP). The funds have enabled these banks to expand their portfolio to include other sustainable development projects.

## Challenges

The challenges to clean energy financing pertain to lack of technical capacities, limited access to funds and guarantee facilities, availability of viable and bankable projects as well as the still nascent stage or weak enabling environment.

a) **Lack of technical capacity.** The immediate challenge that needs to be overcome first in FIs is their limited awareness and understanding of the potential of the clean energy market. As a result, this hinders them from penetrating the market. FIs also do not have in place systems, methods and tools to assess or evaluate clean energy projects which constrain their lending. FIs loan and credit officers also lack the skills and capacity to assess the risks as well as the projects' contributions to GhG emissions reduction. This erodes the confidence of the officers in approving the project for financing and developing their pipeline.

b) **Limited access to funds and guarantee facilities.** FIs generally perceived the clean energy sector as higher risk investment. Clean energy projects usually involve new and untested technology. In addition, the market is not yet ready for clean energy projects which are perceived as a

costly alternative. Thus, FIs need concessional funds that could offer lower rates and longer loan tenor than the prevailing market conditions. Guarantee facilities enhance the borrowers' credit risk profiles, while risk-sharing arrangements distribute the financial risks which provide FIs additional comfort in lending.

c) **Lack of availability of viable and bankable energy projects.** Pipeline of projects exist; however, this may not meet the FIs' criteria for clean energy financing. This fails to create an opportunity or demand for FIs to grow their clean energy portfolio. On the other hand, companies that are into clean energy projects lack the skills and capacity to develop bankable projects.

d) **Nascent stage or weak enabling environment.** Governments' support for clean energy are still in its nascent stage and some have weak enabling environment. Regulations and policies ensure FI's clarity of goals, purpose and alignment to national climate change agenda, as well facilitate support of FIs to government in translating NDC targets into tangible investments objectives. They also harmonize concepts to establish a common understanding and level the playing field among FIs. Currently there is confusion in the use and implementation of relevant concepts such as sustainable finance, green finance, climate risks, ESG etc. Thus, there is need for further work to determine regulatory gaps and overlaps for a more conducive enabling environment. This will help direct financial flows and private sector investments in clean energy.

e) **Lack of or limited data and information for best practices and benchmarking.** There is lack of reference and baseline as basis for FIs to make sound decisions. There is no opportunity to study trends or leverage on best practices. Global best practices enable FIs to learn from the experiences of their peers in implementing successful clean energy programs which can be replicated. Benchmarking allows FIs to identify to assess and measure their current management and business operations against global standards.



## 6. RECOMMENDATIONS

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### Capacity Building

FIs main bottleneck boils down to lack or insufficient capacity to evaluate, assess clean energy projects, lack of or limited data/information for best practices and benchmarking for clean energy financing and lack of capacity to assess, manage and monitor E&S risks of projects. To address this need, the following actions are proposed:

**Product Development.** Develop knowledge products that can help FIs understand clean energy. This includes: i) business case on clean energy finance for FIs that will provide evidence or justification on its benefit to people, the environment as well as commercial gains; ii) guidelines on evaluating the risks and opportunities of clean energy projects; and iii) guidebook on the best practices on clean energy. Tools must also be developed to help establish, assess and measure relevant indicators such as GhG emissions mitigation, energy consumption reduction, and energy cost savings.

**Training.** Offer training opportunities on the needed skills and capacities for aspects of clean energy including assessment, management, and monitoring of climate, E&S risks, identification of bankable projects and development of pipeline, project documentation on the technical aspects, sustainability reporting, green finance and resource mobilization. Relevant areas of clean energy finance training include:

- Climate-related financial risks: set of potential risks, classified as physical and transition risks, that may result from climate change and that could potentially impact the safety and soundness of individual financial institutions and have broader financial stability implications for the banking system.
- Environmental and Social Risk Management: policies, procedures and tools to identify,

assess, monitor and mitigate FI's exposure to E&S risks from its client's activities, which translate into credit, liability and reputational risks to FIs.

- Sustainability Reporting: reporting about an organization's environmental and social performance impacts for the organization to understand and better manage its impacts on people and the planet. It also helps identify and manage risks, seize new opportunities, and take actions towards becoming a responsible, trusted organization in a more sustainable world.
- Clean energy finance: financing renewable energy and energy efficiency projects to accelerate transition to sustainable and green development to help reduce GhG emissions in support of the Paris agreement.
- Green building: the practice of adopting measures that promote resource management efficiency and site sustainability while minimizing the negative impact of buildings on human health and the environment.
- Green Transportation: financing the transportation sector to help GhG emissions reduction.
- Innovative financing mechanisms and resource mobilization - non-traditional financing structures that will crowd in funding from both the public and private sector to support development of new higher risk market segments but with significant growth potential and which FIs typically are not exposed to.

**Advisory.** Provide advisory services that is tailor-fit to help FI's address their specific needs and issues in order to effectively manage their clean energy portfolio and create new business opportunities. Areas for advisory services include:

- Review of clean energy finance portfolio, ESRM practices, ES governance structure and

strategy, disclosure of ESG goals,

- Development of funding strategies, green and sustainable finance frameworks, financing products, climate-related financial risk assessment and management frameworks, business plans, sustainability reporting, and
- Project implementation support.

**Knowledge Exchange.** Facilitate knowledge and learning exchange through peer-to-peer learning, study tours, twinning arrangements, internships, secondments, on-the-job training and other learning channels.

### Institutional Support

A conducive and enabling environment is needed to fully transition to clean energy. Stakeholders including policymakers, regulatory agencies, business sector, finance sector, industry associations and development partners play critical roles in shaping both the direction and pace of green development.

**Government Support: Leading the Transformation.** The Paris Agreement of 2015 requires governments to communicate their nationally determined contributions and therefore have the greatest responsibility of achieving their respective targets. In effect, Governments should lead the transformation towards a low carbon economy and clean energy to achieve their emissions reduction targets. Governments can provide an enabling environment for financing clean energy. This can be through the adoption of policy reforms that will promote business sectors appetite in investing into the climate business. This can include fiscal and non-fiscal incentives for businesses and FIs such as Feed-in-Tariffs or FIT mechanism that offer long-term contracts for renewable energy producers. Governments can also generate resources for concessional financing to support private sector usually in research and development. They can mobilize resources from grants or concessional funding through official development assistance,

partnerships with international financing institutions and other development partners. They can also use their various development financing institutions and guarantee facilities to create risk sharing arrangements.

**Business Sector Involvement: Market Transformation.** Regulations alone cannot fully drive the transformation; it also needs a changing of mindset in the way goods and services are being produced and consumed. Responsible companies can be proactive in promoting clean energy by offering green choices with product information to influence consumer behavior. Companies that have also instituted energy efficiency in their production and operations have somehow lowered the embodied energy of the products and services that they offer. The offering of green alternatives also presents an opportunity to educate the consumers on their sustainable choices that will trigger market transformation.

**Finance Institutions: Driving the Transition to Low Carbon.** Financial institutions can influence and direct where investments will be made through the power of the purse strings. By creating lending facilities to finance clean energy projects, FIs are already driving the business sector to invest in projects that promote low carbon development.

Further, FIs can also incorporate E&S management in their evaluation schemes to ensure that the projects will not do harm to the people and the environment. FIs can also generate valuable information through a disclosure requirement for projects to measure and report on the projects' GHG emissions, renewable energy and cost savings.

**Industry Associations: Greening the Sectors.** Industry associations play an important role in advancing the interests of their respective sectors through holding a forum for sharing of global best practices, facilitating transfer of technology and innovations, addressing common issues, as well as establishing voluntary industry standards such as

the greening of business operations. For instance, the Organization of Socialized Housing Developers in the Philippines have come up with the manifestations to green their housing projects - that is, to make their houses energy efficient.

Industry associations are also knowledgeable on the issues and challenges of their respective sectors and can serve as advocates to voice out their concerns. Some of their vital work include advocacy and preparation of position papers for regulators and relevant authorities to effect a change that will be favorable to their industry.

**Regional Mechanism: Advancing Collaboration.** Regional associations are crucial in understanding the issues and challenges faced by countries in advancing clean energy. They serve as a platform for sharing knowledge and experience as well as finding solutions. They facilitate the collaboration of members to work on regional projects.

They can also provide the following advisory, training and secretariat services:

- Provide training on best practices and recent development of technology in clean energy in

the region.

- Serve as the knowledge center and repository of data and information on clean energy finance, particularly on global best practices, case studies and breakthrough scientific studies, technology advancement and innovations.
- Establish regional working groups that will conduct study and understand pressing issues and identify options to address these issues as well as prepare advocacy or position papers for recommendations for the members' consideration.
- Establish a regional network of FIs, technical energy professionals, private sector groups such as ESCOs, energy producers, manufacturers, building developers, transport and, tourism service providers.
- Conduct study on relevant clean energy issues, in coordination with existing sector networks, and prepare advocacy or position papers for recommendations to regulators and policymakers.
- Facilitate the establishment of a regional funding facility to complement the lending operations of FI on clean energy.

## 7. NEXT STEPS

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This study investigated the status of clean energy finance in the ASEAN region, particularly in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, and Vietnam, through an online questionnaire survey and interviews. ADFIAP also surveyed financial institutions' approaches to clean energy finance and their ideas on how to accelerate clean energy finance in the region. Thanks to the generous cooperation of ADFIAP member financial institutions and the ASEAN Bankers Association (ABA) in the six countries mentioned above, a total of 21 financial institutions participated in the survey and responses were collected, focusing on the priority areas of CEFIA. In this baseline survey, based on the results of the above survey, the experts of ADFIAP have analyzed the challenges faced by the local banks and the solutions and ideas for the dissemination of CEFIA. Based on this analysis, ADFIAP hope to accelerate CEFIA's activities in the field of finance in the future.

CEFIA can serve as ASEAN's regional mechanism. CEFIA was established and endorsed by 16th Asean+3 Meeting of Energy Ministers in 2018, as a platform for regional discussions on clean energy. CEFIA operates within the ASEAN framework, and CEFIA holds a regional forum, the CEFIA Public-Private Forum, in which the launch of a flagship project in the field of finance has been declared. The purpose of this project is to collaborate with relevant organizations in the field of finance, to understand the finance issues in promoting the introduction of low and decarbonized technologies in the ASEAN region, and to study measures to strengthen cooperation within the AESAN region by utilizing the forum of CEFIA.

The direction of the future activities of the flagship project in the field of finance and the expected improvement of the environment are as follows.

### <Direction of CEFIA Finance Flagship Project>

- Strengthening the capacity of Cleaner Energy Finance in the ASEAN region
- Developing cooperative mechanism to accelerate Cleaner Energy Finance in the ASEAN region.

### <Approach to strengthen cooperation to accelerate cleaner energy finance in the ASEAN region>

- Creating roadmap for enhancing regional capabilities to attract cleaner energy finance
- Fostering mutual understandings of risks and enablers in linkage with Flagship Projects
- Providing a knowledge sharing platform for government and private sector, with a focus on ASEAN financial institutions

### <Key elements of CEFIA Finance Flagship Project that are expected by key stakeholders>

- Value sharing of various climate finance frameworks related to cleaner energy finance
- Investment catalysts by focusing on cleaner energy finance mobilization
- Ensure a stable, transparent, and integrated policy environment addressing key barriers to cleaner energy finance
- Make a commitment to encourage and lead the social implementation of clean energy projects by providing a medium- to long-term strategy and roadmap.

CEFIA will continue its activities for further development, and we look forward to your active participation in CEFIA.

## **Baseline Study on Clean Energy Finance Initiatives and Challenges of Financial Institutions in the ASEAN Region**

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