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Promoting Green Finance – Refinance and Guarantees

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Contents

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Executive Summary

This policy brief presents the financing initiatives that can be undertaken by the banking sector in order to promote green investments, be it investments in renewable energy and/or energy efficiency.

There are four schemes' prototypes which are discussed in this brief in detail and in the light of these, challenges and policy recommendations are given, in order for them to be effective financial mechanisms for promoting the green investments. The four financing mechanisms are :

i. Credit Guarantee Facility for Climate Investment Projects (Pakistan)
ii. Refinance Scheme for Clean Energy Based Solutions (Pakistan)
iii. Dedicated Green Credit Line for Large Renewable Energy Projects (Pakistan)
iv. Green Climate Program to foster Small Renewable Energy Projects (Latin America)

In the developing world, there is a need to introduce enabling financial mechanisms for green investments. These four schemes are quite good as far as the design is concerned, but as with any other mechanism, they come with certain challenges.

The challenges include creating a conducive regulatory framework for which these schemes can act as tools, gauging the market demand for these type of green financial products and the demand-supply dynamics, arrangement of funds from multilateral/bilateral donors or government, the eligibility criteria for the end-users of the scheme and effective monitoring and evaluation system to measure the impact from the introduction of such schemes.

Hence, the schemes should preferably be aligned with the regulatory framework and phase out as the technologies mature. Continuous engagement of stakeholders i.e. public sector, private sector and international donors, also holds the key during the design phase as well as throughout the lifetime of the scheme. Similarly, Monitoring and Evaluation is a crucial part of introducing these schemes to create a positive feedback loop and ascertain that the incentives given in the scheme are targeted. Awareness raising for the public in general and financial sector in particular is also important to create an enabling environment for the promotion of green investments. Technical assistance is also crucial for the banking sector to enable the finance professionals to analyze the otherwise technical risks involved in the investment appraisal.

Therefore, a coherent and conscious effort is needed by both the public and private sectors if we are to create a conductive environment for promoting the green investments.

1. Introduction to the Policy Brief

Climate change is taking its effect across different continents. Evidence shows that climate change has had, and will continue to have devastating impacts for this world's populace. As with any other initiative or proposition, provision of, and access to finance carry utmost importance in catalyzing climate investments, as in any other potential investment proposition.

There are three key areas which need attention in order to bring in the climate investments required to somewhat match the pace of climate change taking place:

1. **Public Finance:** for low-carbon infrastructure to develop rapidly, it needs large injections of public capital and stable, predictable long-term public policies/budget considerations.
2. **Private Finance:** is important to meet the energy demands of developing economies. Public support for these private funds is also necessary. Moreover, most of the institutional investors' assets are in high-carbon investments and thus, they have the responsibility to navigate the global economy into greener pastures.
3. **Green Climate Fund (GCF):** developed countries' support is necessary in readying the Fund to support developing countries' efforts in mitigation and adaptation and to promote sustainable development. On part of developing countries, it is imperative that they come up with a concrete plan of making more bankable proposals.

To practically do something in these key areas, financial mechanisms have to act as tools to carve something concrete in terms of climate investments. This policy brief shall discuss how the central banks/development banks can develop financial mechanisms under a supportive regulatory framework to catalyze green investments.

In this policy brief, we shall discuss and further develop, from the provided prototypes, four different financing mechanisms in order to catalyze private climate investments. These are:

i. Credit Guarantee Facility for Climate Investment Projects (Pakistan)
ii. Refinance Scheme for Clean Energy Based Solutions (Pakistan)
iii. Dedicated Green Credit Line for Large Renewable Energy Projects (Pakistan)
iv. Green Climate Program to foster Small Renewable Energy Projects (Latin America)

Moreover, we shall also evaluate the challenges the different jurisdictions may face in designing and implementing the green incentive schemes and the policy recommendations, both of which should not be considered exhaustive but suggestive.

2. Proposed Financial Mechanisms

Following prototypes were used in deriving the challenges and recommendations, which may be faced by any climate finance policy initiative.

i. Credit Guarantee Facility for Climate Investment Projects

The primary role of a guarantee scheme is to kick-start a lending business among FIs with the target group and move FIs along their learning curve. The guarantee serves to bridge the initial phase of uncertainty, where, in the absence of experience in successfully financing this sector, FIs may perceive the target group as too risky. Hence, the objective over the medium to long term is to enable these projects to be financed without the scheme after the program ends. A study by the World Bank (2009) concluded that credit guarantees are useful instruments where credit risk is perceived to be the key barrier to accessing finance.

On a more general level, guarantees cannot address structural banking problems such as liquidity constraints or inadequate financing sources. But, due to its ability to generate financial leverage, a well-designed and well-implemented guarantee scheme can be a more efficient use of public funds than other public interventions.

Pakistan is faced with sever energy crisis and electricity shortfalls have been taking a toll on life of citizens and economy. The Government estimates show that energy shortfall causes a reduction of 2% in GDP Growth. The banks, however, shy away from financing to renewable energy projects due to higher perceived risks of these projects and somehow not getting to understand the technological risk involved. In order to address this scenario, State Bank is working to establish a Credit Enhancement Mechanism for sustainable energy financing projects of banks which will primarily be a risk sharing facility for renewable energy and energy efficiency projects. Guarantee may help a great deal if the perceived risk mainly comes from lack of knowledge about a new technology. Adding further, the role of technical assistance is crucial to success in accompanying FIs in the necessary learning curve.

The proposed facility will provide guarantee cover on sustainable energy financings, mainly for energy efficiency projects, extended by the banks. Specifically, loans will be of 3-10 years tenor with shorter term loans primarily used for energy efficiency. The facility will be bifurcated in two parts.

Under part I of the Facility, guarantee coverage of up-to 20% will be provided for loans to the renewable energy and energy efficiency projects of up-to 1 MW and energy efficiency projects of up-to Rs. 30 million. Being large guarantee coverage on relatively large expected loan sizes, this guarantee coverage will be extended on an individual loan basis and the banks will be required to approach State Bank for guarantee coverage on each loan separately. The average loan size under this scheme will be Rs. 20 million with energy efficiency loan encompassing a higher number of loans. The expected number of loans will be around 1250 in the initial phase of the Scheme.

The part II of the facility is designed to cater to the financing needs of small sized energy efficiency and renewable energy projects of agricultural borrowers, small businesses and commercial enterprises. This facility will be on the portfolio basis; however risk coverage will be on parri passu basis with guarantee coverage of 40% for each loan extended under the facility. State Bank will specify eligibility criteria of borrowers and the participating banks will not be required to approach State Bank for guarantee coverage on each loan. Keeping in view the aversion of banks to finance small borrowers, risk coverage under this part will be up-to 40% on portfolio basis.

The facility will be available for loans of up to 20 million but the average loan size is expected to be Rs. 10 million. The banks are expected to extend loans of Rs. 12.5 billion to around 1250 borrowers.

The funding support required for the facility will be Rs. 10 billion in the first year of its implementation, as summarized in the table below. After the successful implementation of the Scheme, State bank will approach Government and multilateral agencies for funding support to continue the facility in coming years.

Guarantee Scheme Specifications	
PART I	
No. of Loans to be financed in one year	1250
Average financing per unit	Rs. 20 million
Total Financing per year	Rs. 25 billion
Guarantee required at 20% of outstanding principle	Rs. 5 billion
Cont'd…	
PART II	
No. of Loans to be financed in one year	1250
Average financing per unit	Rs. 10 million
Total Financing per year	Rs. 12.5 billion
Guarantee required at 40% of outstanding principle	Rs. 5 billion

ii. Refinance Scheme for Clean Energy based Solutions

Keeping in view the growing demand of energy and specially the need arising in the off-grid areas, State Bank of Pakistan (SBP) envisages establishing a Distributed Energy Fund (DEF) as a means to facilitate financing of solar home solutions (SHS). The DEF is proposed to have a structure quite similar to IDCOL SHS program with an independent board, efficient management team and technology advisory body for selection of technology and operations committee for selection of partner institutions.

The DEF may initially be housed within Infrastructure, Housing and SME Finance Department (IH&SMEFD) of SBP. The IH&SMEFD may also facilitate development of operational modalities of the fund including terms of the loan programs, lending formalities and procedures for selection of partner instructions, disbursements and repayments of loans and maintenance of proper MIS for monitoring. After the initial successful establishment of the DEF, it may spin-off as a separate entity.

The organizational structure envisions establishment of Program Secretariat in SBP and establishment of independent Technical and Investment Committees under the overall apex Program Steering Committee (PSC).

The composition and responsibilities of these arrangements are explained as below:

Program Steering Committee (PSC): May be headed by the Governor, SBP and would be responsible for taking all policy decisions regarding the operations of the program. This apex body may also review performance of the Fund and approve changes/modifications with a view to achieve the envisioned results. The PSC would comprise of two sub-committees as:

Technical Committee (TC): Would be responsible for approving the suppliers and SHS equipment to be financed by the Participating Financial Institutions. The TC may also be mandated to select these PFIs, which would be interested in taking part under the program. Final approval may be given by the full PSC. The TC may comprise of:

- Alternative Energy Development Board (AEDB), Ministry of Water & Power
- IH&SMEFD, SBP
- Agricultural Credit & Microfinance Department (AC&MFD), SBP
- Donor Agencies contributing to the Fund, financially and technically.
- Pakistan Solar Association (PSA)

Investment Committee(IC): Would be responsible for efficient utilization of idle funds. This may be done through investment avenues under the criteria set by the full PSC. This committee may be headed by the Managing Director – Banking Services Corporation (BSC, A subsidiary of SBP) and may comprise of officials from:

- IH&SMEFD
- AC&MFD
- Development Finance Support Department, SBP-BSC
- Pakistan Bankers' Association
- Donor Agencies
- Ministry of Finance, Government of Pakistan

A program secretariat would also be established to co-ordinate the activities and operations of the Fund.

Proposed Model for Financing Programs

The program envisions having two financing windows for DEF:

a) Concessionary loans and grants to selected willing banks/Microfinance Banks (MFBs) for onward lending to households for purchase, installation and after-sales service of solar equipment.
b) Concessionary finance (Refinancing Facility) to Distributed Energy Services Companies (DESCOS) i.e. suppliers of SHS to scale-up their current activities.

As for the financing program, it is proposed that the IDCOL and PAYGO models may be integrated for development of a functional model of financing. The mobile network based PAYGO model presents an effective tool for disbursement of financing and its subsequent monitoring for timely repayments. The mobile GSM chips present an effective solution for tracking present location of the equipment through GPS.

iii. Dedicated Green Credit Line for Large Renewable Energy Projects

Under the proposed Credit Line Facility SBP plans to set-up, with funding support from multilateral agencies, a liquidity facility to facilitate financing of sustainable energy projects, mainly renewable energy projects. The size of the proposed credit line may be decided through a demand analysis of the market for such a facility while the structure of the facility may be fine-tuned on the basis of demand analysis and feasibility study.

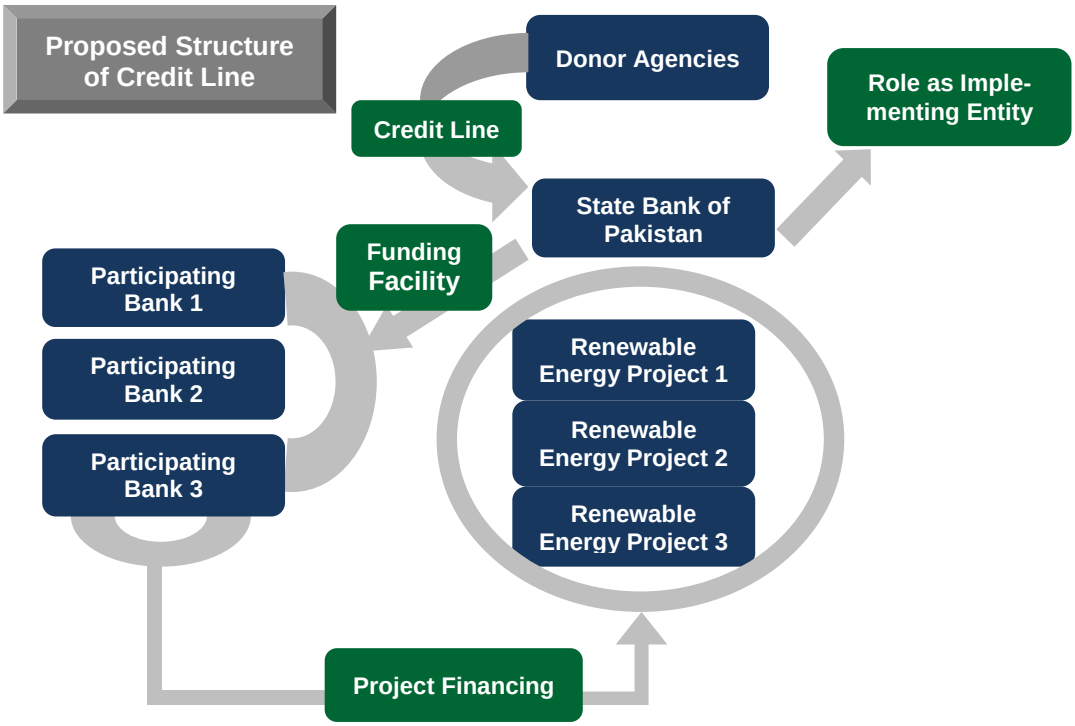
Funding Base for the Facility:

Under the proposed program, State Bank is willing to work as the implementing entity/ intermediary between donor agencies and commercial banks. The credit line from the donor agencies may be a line term soft term loan facility of a period of 15-20 years including grace period of grace period of 4-6 years.

Eligibility Criteria of Projects:

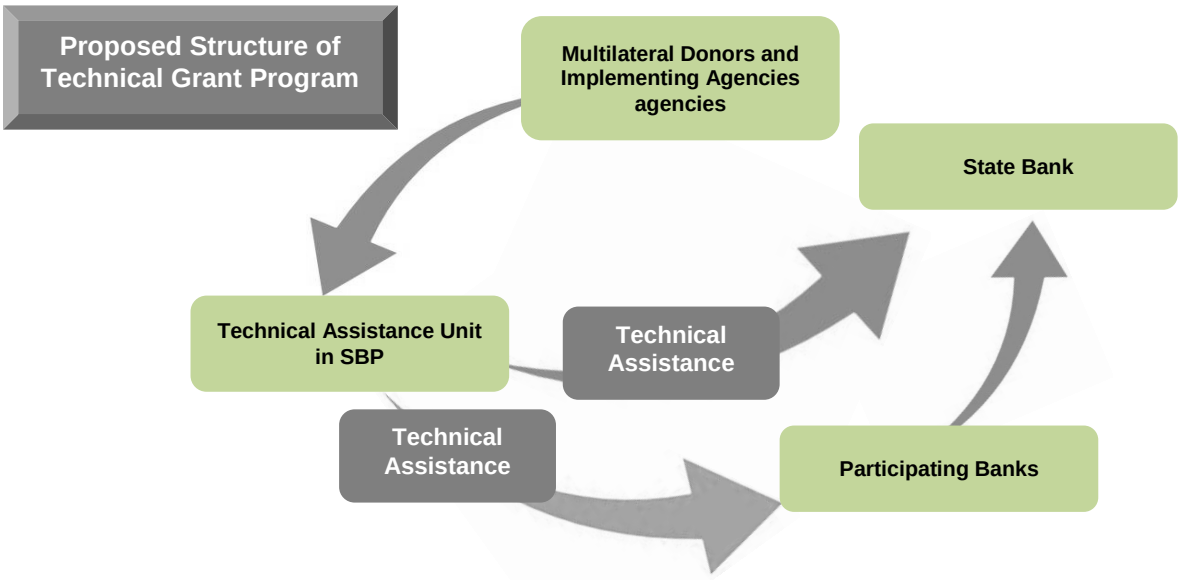
The eligibility criteria of renewable energy projects have to be decided mutually by State Bank of Pakistan and multilateral agencies and may cover following projects:

- Hydropower projects
- Biomass based power and/ or heat generation projects
- Solar energy projects
- Wind mills
- Energy efficiency projects



Technical Assistance:

As was the case with the Credit Guarantee Scheme, State Bank of Pakistan favors that the proposed Credit Line may be accompanied with a technical assistance program with the aim of strengthening the capacity of banking sector to identify, assess and finance sustainable energy projects. State Bank of Pakistan and multilateral agencies may jointly decide precise scope, tenure and activities of the proposed technical assistance during the negotiation process. In addition to supporting the commercial banks in developing their internal processes, documentation and assessment techniques for evaluation of sustainable energy projects, the technical assistance may encompass supporting commercial banks in developing green banking policy. The technical assistance component may also be used for the demand analysis and feasibilities studies mentioned above as well as designing incentive/ funding support mechanisms and provisions of the liquidity facility.



Specifics of this financial scheme are summarized as follows:

Credit Line from Multilateral Agencies	Technical Assistance Program (Grant Based)
• Amount: US$ 100 to 150 million credit line • Tenor: maximum 15 to 20 years • Grace Period: 4 to 6 years • Margin: LIBOR • Commitment Fee: No commitment fee • Appraisal Fee: 0.5% of committed amount • Credit line route: Multilateral agencies → EAD –GOP →SBP → Banks → SEF projects	• Strengthening the capacity of the Pakistan's banking sector to identify, assess and finance sustainable energy projects. • Support banks in designing green banking policy etc. • Provide 'on the job' training to PFIs by reviewing feasibility studies • Organizing formal training seminars on RE financing

iv. Green Climate Program to foster Small Renewable Energy Projects

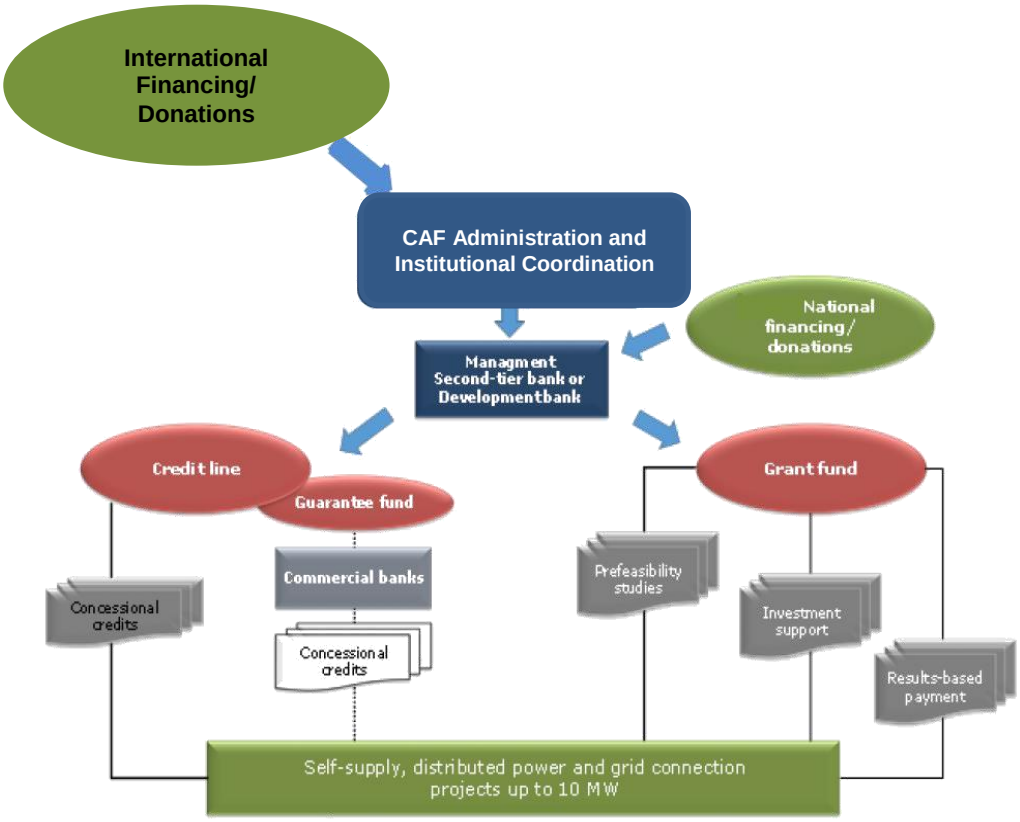
The main objective of this programme is to foster the use of Renewable Energy (RE) sources for electricity and heat production at local, provincial and national level to secure a clean, reliable and competitive power supply. At the same time the programme seeks to stimulate regional development and contribute to climate change mitigation.

The promotion of projects for energy generation and heat production from RE requires additional measures, especially to finance self-supply, distributed power projects and grid connection projects up to 10 MW. Several advantages justify this choice, for example the lower demand from grid-connected systems and reduction of the transmission and distribution losses. In addition, small-scale generation displaces electricity at the point of consumption where the price per kWh is higher. Moreover, in those regions of the country where electricity subsidies are lower than for example in the metropolitan area, self-sufficiency and distributed generation has the potential to become competitive with few incentives.

During the initial phase (2017-2020) the main focus will be the funding of projects that are already designed in order to demonstrate the potential of RE projects, as well as their co-benefits and thus, increase the interest in investing in these projects by the public and private sector. During

the first phase, the financial mechanism will be rolled out on a small scale with a few selected financial institutions and funds that have experience in the field of RE financing.

In the second phase (Post 2020) the scope of the financial mechanism will be extended through the involvement of a range of national and local financial institutions, with the aim of maximizing the efficient use of available funds in terms of GHG reductions and installed capacity of RE projects.



The financial instruments that will be used to build this whole mechanism are as follows:

1. Grant fund;
2. Concessional credit line administered by a second tier bank or national development bank; and
3. Guarantee fund.

Grant Fund:

The grant fund aims to provide co-financing for feasibility studies and to create a support to finance projects that can demonstrate a high impact. In addition, a results-based payment scheme is proposed to provide additional incentives for the efficient and successful project implementation. It is proposed to establish the Grand fund with grant resources from international financing such as the Green Climate Fund/NAMA Facility.

Concessional Credit Line:

One of the main barriers to the implementation of RE projects is the high cost of capital. In general, this is the result of high commercial interest rates and short loan terms offered by banks.

During the pilot phase of Programme, a concessional credit line will be established to finance individual projects.

It is intended that the fund operates in USD with a c concessional rate of interest and at least a terms of 10 years in order to improve the profitability of projects and their access to funding. This is especially relevant for projects in the SME sector. The loan will cover a maximum of 70% of the total investment. The fund will be administered by a second-tier bank or a national development bank.

Projects that meet all general eligibility criteria established and that submit a feasibility study prepared by a company approved by CAF would be eligible to apply for a concessional loan. As is the case with the Grant Fund, it is proposed to establish the Concessional credit line with resources from international financing like as the Green Climate Fund or NAMA Facility.

Guarantee Fund:

The third component of the financial mechanism is a Guarantee fund that will be implemented aiming to mitigate the risk for commercial banks. Partial credit guarantees will be offered to national and local financial institutions, to cover part of the risk of loan default of project developers. The objective of this instrument is to create an incentive for financial institutions to establish new credit lines for RE projects and/or to expand existing credit lines with favorable terms for project developers. The level of coverage of guarantees will vary depending on the type of financial institution and its target group.

Technical assistance:

To remove the barriers to the implementation of RE projects for the generation of energy and heat production, it is important to combine the financial mechanisms with a technical assistance program. A technical assistance program offered by CAF will be a central component of the Programme. It will include a number of activities in three areas:

- Capacity building and training; of both the project developers and financial institutions
- Technical assistance for RE projects; for project developers
- Research; again for both project developers and financiers

3. Key Challenges

As with any other policy initiative, challenges may arise in developing financial mechanisms for creating an environment for green investments.

1. Having a suitable regulatory framework to which these financial mechanisms can act as tools. If the regulatory or basic framework is not there, the financial mechanisms would be nothing but some showcase commodities. For e.g. Green Banking Guidelines/regulations are the first step towards a favorable regulatory framework. The financial mechanisms can act as tools to implement and support this framework as its integral part. Moreover, there is a need to understand the policy context and barriers, costs and risks to be overcome through offering a public finance incentive. Policy contexts will be unique and largely determined by the political economy of the country.
2. To gauge the market demand for such finance. If the demand for green investments is high enough to warrant a public intervention, only then it would be suitable to have such mechanisms. On the other hand, it can be argued that these mechanisms may also cre-

ate demand for green investments by incentivizing them. In this context, awareness rising among the masses may also be seen as challenging as in the case of rural electrification and for commercial banks/entities in convincing them on why they need to promote green investments.

3. The arrangement of funds from bilateral and multilateral donor agencies since most of the schemes are based on these financial donations. Even if the central bank is arranging funds from the government, it is not possible without a convincing marketing strategy and demand analysis.
4. Another challenge would be to have flexible eligibility criteria defined for each of the schemes as it should be adjustable to changing economic and market conditions.
5. Development of effective monitoring and evaluation system so as to see how significant the introduction of a specific green incentive scheme.

4. Policy Recommendations

1. Integrating green finance schemes with the policy context can help to ensure that the level of incentive provided is in line with the barriers and risks that exist. This will require a sufficient level of institutional capacity to understand how the regulatory framework impacts on commercial decisions.
2. Whilst green incentive schemes are required for new and immature technologies, these should be phased out as the technologies mature and where the familiarity of a particular investment market is developed.
3. Engagement of key national public stakeholders, private sector stakeholders and multilateral donor agencies carries utmost importance and can therefore be considered as a cross-cutting issue. This needs to go beyond sharing information of the incentive scheme once it has been designed; rather, public and private financial stakeholders should be consulted during the design process itself as well as throughout the lifetime of the scheme. Donor coordination is also a necessary part of this engagement.
4. Effective monitoring and evaluation is valuable in providing a positive feedback loop to inform future design of green incentives that are closely integrated with the policy process and/or further tailored for ensuring that the incentives are targeted.
5. There is an ever growing need to raise awareness among banks/DFIs to facilitate the green finance, alongside incentivizing the finance itself.
6. Technical assistance carries a crucial importance whenever a green finance scheme would be introduced. Awareness rising to the masses and businesses is necessary to let them know that why green investments are necessary for them as households, businesses and economy as a whole. Similarly, technical assistance is necessary for bankers/financiers for them to better understand the risks that are involved in such investments so that they are comfortable appraising a proposal on their table.

5. Conclusion

The roll out of financial mechanisms requires a policy direction from the state. To design and implement a comprehensive financial mechanism, effective stakeholder engagement is required, public and private sector stakeholders both. Technical assistance is a key part of the financial mechanisms, as green investments are technical in nature and bankers need to understand the risk aspects related to them in order to appraise the projects.