

Key Findings and recommendations

February 2020



1

Institutionalizing the Clean Energy Policies

- An effective national policy on renewable energy is the crucial first step to shape the markets and geographies that financiers find attractive for investments.
- The SAARC Member States have ministries and policies in place that cater to developing the renewable energy sector.
- However, in many cases the policies remain on paper and significant progress has not been made on the ground.
- On the other hand, some other Member States have made significant progress in policy execution and are being lauded for the same at the world stage.
- As a first step, the SAARC Member States have to co-operate through policy conferences, which may be conducted by the SEC or other agencies to exchange notes at the highest bureaucratic level on their existing renewable energy policies that have worked for them.
- If SAARC as a region has very strong renewable energy policies in place, it will benefit each of the members making the region an attractive place for renewable energy investments.
- Additionally, the Member States will gain greater clarity and confidence to invest in each other's countries.

1

Institutionalizing the Clean Energy Policies

- Regulatory frameworks that mobilise finance for renewable energy can employ both energy policy mechanisms (e.g. feed-in tariffs, quotas and tax incentives) as well as finance policy mechanisms (e.g. banking regulation, interest rates and other monetary policy mechanisms, “Green Bonds” schemes, or establishment of special purpose renewable energy financing vehicles).
- Targeted intervention implies public renewable energy finance mechanisms combined or coordinated with accompanying non-financial interventions (e.g. renewable energy capacity building and knowledge management).

Tools			
Regulation		Targeted Intervention	
Energy Policy	Finance Policy	Public finance programs	Non-financial interventions
• Feed-in tariffs • Tax incentives • Quotas and targets • Self-supply regulation	• Environmental, Social and Corporate Governance lending criteria • Green Bonds • Differentiated interest rates • Public banking	• Tailored package of financing instruments (with flexible design) • Independent governance structure, public-private partnership	• Capacity building • Knowledge management/ expertise • Multi-stakeholder coordination

2

Management of renewable energy finance programs by independent organisations

- Many experts recommend that renewable energy financing programmes should be managed by organisations that are “independent”, meaning that their decisions should not have to be ratified by anyone in the executive or legislative branches of government.
- The aim of this strategy is to protect the mission of the programmes from political interference. An independent organisation can exist in any legal sector: public, private or non-profit. If in the private sector, however, it should have a not-for-dividend structure so that all profits are reinvested in the mission. Such companies are sometimes referred to as “common good” corporations. This protects the mission from being compromised by the need to maximise profits for shareholders.

Type of Legal Entity	Country	Programme
Public agency	Ireland, Chile	• Sustainable Energy Authority of Ireland • Chilean Energy Efficiency Programme
Public-independent	Finland	• Finnish Innovation Fund
Development bank	Mexico, Chile	• Mexican Agricultural Trust Funds Development Bank • Chilean Economic Development Agency
Non-profit	Canada	• Sustainable Development Technology Canada
Private not-for-dividend (“common good”) company	UK	• The Carbon Trust

2

Management of renewable energy finance programs by independent organisations

Case Study

Indian Renewable Energy Development Agency Ltd (IREDA)

- *Using public finance to establish or increase the capital of a special-purpose renewable energy bank, along the lines of the IREDA, can provide an excellent option for leveraging finance into renewable energy sectors while also establishing a lasting, independent, self-sustaining finance institution that will require no additional future support from the government.*
- *IREDA was incorporated in 1987 as a public limited company and non-banking financial institution under the administrative control of the Ministry of New and Renewable Energy to promote, develop and extend financial assistance for sustainable energy projects.*
- *IREDA has for many years been the main provider of credit to renewable energy and EE projects in India and has played a catalytic role in market development, leading to commercialization of renewable energy technologies.*
- *IREDA provides direct loans to developers of renewable energy and EE projects; creates and manages innovative instruments for structured financing, securitisation and refinancing; and administers a number of government programs on behalf of the ministry. Current financing schemes include project financing, equipment financing, and financing through intermediaries.*

3

Reduce the cost of renewable energy technologies

- In particular, when designing policies, attention should be paid to whether a given regulation supports the process of price discovery to drive down renewable energy costs.
- Where regulation blocks this process, then deregulation or regulatory reform can be appropriate for enabling entry and exit of new renewable energy providers into (and out of) the local market.
- The process of price discovery within the renewable energy sector requires free entry and exit of new and competitive renewable energy providers into local markets.
- Encouragement should be provided to the local manufacturing industry for manufacturing renewable energy equipment such as solar photovoltaics, batteries for electric vehicles, wind turbines, and solar hot water collectors.
- This will automatically reduce the cost of these technologies, develop an export market and provide employment in the SAARC region.
- In Brazil, China and India the RE manufacturing industry has created 1 million jobs and China has bagged the position of the largest supplier of RE equipment in the world.

3

Reduce the cost of renewable energy technologies

Case Study

Energy Auctions Drive Renewable Energy Investment in Brazil²

- *The Brazilian Government carries out energy auctions annually to support the viability of national manufacturing of renewable energy technology by ensuring stable demand.*
- *Under the regulatory structure introduced in 2004, most new power projects participate in auctions for long-term PPAs with energy distributors who are required to enter into long-term contracts for all of their electricity demand via a reverse auction system.*
- *In the auction process, the regulator informs participants (energy companies) that there will be a tender for a specific technology.*
- *The companies advise how much energy they can create for what price, and a competitive bidding process ensues. The government offers the winner a 20 year PPA, providing substantial incentive for competition among the private bidders and pushing prices down.*

4

Reducing the investor cost and increasing investor confidence & decreasing risks associated with renewable energy projects

- A range of barriers can obstruct the development and financing of renewable energy projects.
- An important factor to explain this is the front-loaded cost structure of most renewable energy projects.
- The limited experience and capacity of policy makers and national financial systems is also a fundamental obstacle to increasing renewable energy investment, even where this would be economically and commercially efficient.
- In practice, this means that risk-adjusted capital, i.e. capital which accounts for the risk return profile, is still not sufficiently available in potential growth markets for renewable energy projects.
- Risk mitigation instruments and structures are still not used enough, contributing to the high cost of capital for renewables projects.

Project start-up and development	Investment risk management	Scaling-up investment
• Limited experience in the financial sector • Availability of investment ready projects • Limited access to capital	• Political risk • Policy and regulatory risk • Counterparty risk (power off-taker risk) • Grid interconnection and transmission line risk • Currency risk • Liquidity and refinancing risk • Resource risk • Technology risk	• Insufficient investment size and high transaction costs • Financial regulations restraining illiquid and riskier investments

4

Reducing the investor cost and increasing investor confidence & decreasing risks associated with renewable energy projects

➤ **Constraint: Project Start-Up and Development**

One of the biggest barriers affecting the release of renewable energy investment is the shortage of investment-ready or bankable projects with an attractive value proposition. For many investors, the inability to find projects mature for investment is a significant constraint.

Key Solution

- Technical assistance and grant funding for project development and document preparation can increase the renewable energy deal flow and improve the pipeline of projects ready for investment.
- SAARC Member States can collaborate with each other to conduct in-depth technical and feasibility studies such that each member state can come up with investment ready project opportunities and save investor cost in doing comprehensive due diligence.

➤ **Constraint: Scaling-up Investment**

When it comes to renewable energy, the projects are smaller in scale and we need to examine ways to break through barriers to attracting large-scale private investment. These barriers include, for instance, insufficient investment size, high transaction costs and limited market liquidity.

Key Solution: Structured finance mechanisms

- Structured finance can help overcome such barriers, especially when the underlying investment vehicles are standardised and/or aggregated to cut due diligence costs.
- In most structured finance transactions, project assets that will generate the cash flow must be isolated from the sponsor. This way, other investors are able to narrow the focus of both the risks and returns to the project itself.

4

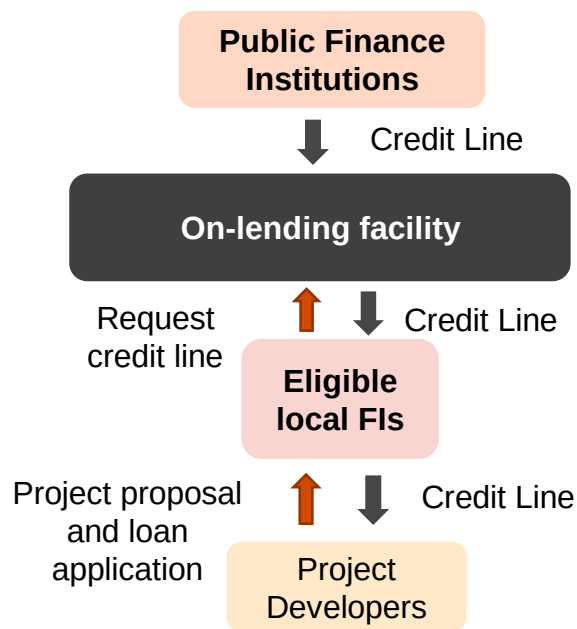
Reducing the investor cost and increasing investor confidence & decreasing risks associated with renewable energy projects

➤ **Constraint: Investment Risk Management**

Investment risks comprise of risks that make investors weary of investing in developing countries because these markets are not as stable as the developed markets. These risks are political risk, policy and regulatory risk, counterparty risk, currency risk and technology risk to name a few

Key Solution: On-lending

- On-lending, also known as financial intermediary lending, can increase the availability of local debt, improve access to local financing and help build local lending capacity.
- Many DFIs (Development Finance Institutions) use their high credit quality and market access to borrow debt at low rates and on-lend them via credit lines to a government or other institution.
- While not necessarily cheaper than ordinary loans, the local lender may access consultancy services and training to develop feasible projects, thus building experience and a track record.
- This practice reduces the local banks' risk, making them more willing to lend, and improves the overall effectiveness of the investment.



5

Mobilizing International Initiatives

Clean Development Mechanism (CDM)

- The Clean Development Mechanism (CDM) is a mechanism which is intended to contribute to the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC), which is to prevent dangerous climate change. T
- The basic principle of the CDM is that it allows developed countries to invest in low cost abatement opportunities in developing countries and receive credit for the resulting emissions reductions (CER).
- Developed countries can then apply this credit against their carbon emission reduction targets, reducing the cutbacks that would have to be made within their borders.
- As a result, projects in developing countries will get a new source of financing for sustainable development in the introduction of clean and renewable technologies by selling their emission reduction on the market.

Case Study

- *Brazil is a successful promoter of Clean Development Mechanism (CDM) projects. Brazil's CDM projects account for 40% of all CDM projects in South America and for 44% of contracted Certified Emission Reduction (CER) credits up to 2012.*
- *In Mexico, a 250.5 MW and USD 600 million EURUS wind park was set up in the midst of the financial crisis. EURUS is permitted to generate 876 GWh annually and as a Clean Development Mechanism (CDM) project, EURUS benefits from the sale of Certified Emission Reduction (CER) credits for offsetting a total of 599,571 tonnes of CO₂ annually.*

5

Mobilizing International Initiatives

Nationally Determined Contribution (NDC)

- 2015 was a historic year in which 196 Parties came together under the Paris Agreement to transform their development trajectories so that they set the world on a course towards sustainable development, aiming at limiting warming to 1.5 to 2 degrees C above pre-industrial levels.
- Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of these long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.
- Each of the SAARC nations have submitted their NDCs and integrated the targets therein in their renewable energy policies.
- The onus now lies on each of the SAARC nations to follow through with these targets.

Country	Target	Investment Requirement
Afghanistan	Cut emissions by 13.6% from business-as-usual levels by 2030	USD 17.4 billion
Bangladesh	Reduce GHG emissions by 5% by 2030 from business-as-usual levels in power, transport and industry sectors	USD 40 billion
Bhutan	Plans to remain carbon neutral	-
India	Cut GHG emissions by 33%-35% of the 2005 levels by 2030	USD 1040 billion
Maldives	Cut emissions by 10% from business-as-usual levels by 2030	-
Nepal	Reduce fossil fuel dependency by 50% by 2050	-
Pakistan	Intends to reduce GHG emissions by 20% from projected 2030 levels	USD 40 billion
Sri Lanka	Cut GHG emissions by 7% from business-as-usual levels by 2030	-

6

Encourage Cross-Border programs, collaborations and cooperation for development of renewable energy sector

Cooperation among government entities:

- Government ministries, public officials and administrators can cooperate with each other to provide guidance on policy formation, targeted interventions, trainings and on the ground execution of renewable energy projects.
- An excellent example of an amalgamation of all of the above is the power purchase agreements between India and countries such as Bhutan and Nepal in which India has helped set up hydroelectric power stations in these countries and imports power from them for domestic consumption.

Cooperation among financial institutions:

- A regional guarantee fund or facility may be established to meet specific regional development needs and position renewable energy strategically in the regional agenda.
- Independent finance institutions such as India's IREDA can cooperate with each other to discuss ways of increasing the pace of fund mobilization in renewable energy.

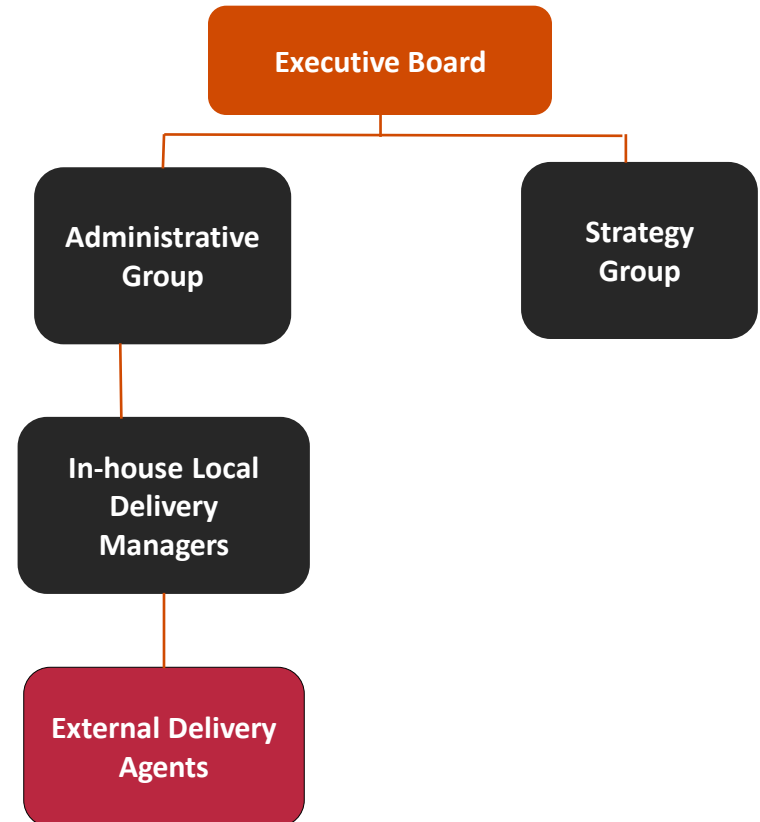
Cooperation among a range of other stakeholders:

- It is equally important to engage a range of stakeholders from across the public, private, academic and non-profit sectors to increasing learning, knowledge transfer and absorptive capacity among local actors.
- This will help create awareness and share knowledge and skills that are highly developed in one country among its neighbors.

7

Importance of cooperation among related entities of SAARC Member States

- A central, independent, mission-driven organisation at the SAARC level needs to be established.
- The mission of this organization will be to be a pioneering, participant friendly and competitive institution for financing and promoting self-sustaining investment in energy generation from renewable sources in the SAARC member states.
- Along with this central mission it will also provide support to various projects in the form of technical assistance, getting government clearances, providing crucial project execution support and so on. There would be appropriate ownership, with establishment of shared governance and control of project prioritisation.
- A partnership element between this organisation and international donors could include agreed goals and success criteria.



8

Evolution of One Mode of Financing to the Other

There are broadly three modes of financing that SAARC Member States could be categorized in. In order to move to the next phase of financing they need to cover financial instruments and investment strategies that are applicable to their phase. Further, they shall be required to branch out on those applicable to the next phase in a set period (3 to 5 years).

Description	Public Funding Mode	Public Private Partnership (PPP) Funding Mode	Private Funding Mode
Countries	Afghanistan, Maldives, Nepal, Pakistan	Bangladesh, Bhutan, Sri Lanka	India (In between PPP and Private funding mode)
Financial Instruments	- Budgetary Allocations - Borrowings/ Grants from international agencies like World Bank - Political Risk guarantee	- Venture capital funds - Infrastructure Funds - Debt from development finance institutions/climate finance institutions - Government guarantee - Carbon Financing - Infrastructure Investment Trusts - Small scale project financing - Loan syndication	- Private Equity Funds - Pension Funds - Debt from local finance institutions/banks - Green Bonds - Asset backed securities - Aggregation, securitization

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Description	Public Funding Mode	Public Private Partnership (PPP) Funding Mode	Private Funding Mode
Countries	Afghanistan, Maldives, Nepal, Pakistan	Bangladesh, Bhutan, Sri Lanka	India (In between PPP and Private funding mode)
Investment Strategy	- Choice of policy instruments, policy design, and complexity of the policy package tailored to the actual conditions of the system in the type of market, supply or demand volume, and nature and level of risks, as well as institutional and administrative capacity. - Increasing awareness among the citizens	- Targeted interventions by the government such as priority sector lending, clean energy funds - Smart subsidies, tax exemptions, renewable obligations - Price based policies such as feed in tariff, net metering - Management of renewable energy finance programs by independent organizations - Incentives to reduce costs of renewable energy technologies - Mobilizing CDMs, NDCs	Letting the market forces of demand and supply take over with minimum requirement of government intervention

Thank you

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