Enabling SME access to finance for sustainable consumption and production in Asia

An overview of finance trends and barriers in India

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List of abbreviations

AfD	Agence française de Développement
ADB	Asian Development Bank
BOOT	Build, Own, Operate and Transfer
BEE	Bureau of Energy Efficiency
BVP	Bessemer Venture Partners
CAGR	Cumulative Annual Growth Rate
CBs	Commercial Banks
CCBs	Central Cooperative Banks
CEA	Central Electricity Authority
CGTMSE	Credit Guarantee Fund Trust Scheme
CIIE	Centre for Innovation Incubation and Entrepreneurship
CIIF	Core Infrastructure India Fund Private Limited
DDUGJY	DeendayalUpadhyaya Gram JyotiYojana
DST	Department of Science and Technology
ECBC	Energy Conservation Building Codes
EE	Energy Efficiency
EESL	Energy Efficiency Services Limited
ECO	Energy Conservation and Commercialisation
EIB	European Investment Bank
ESCO	Energy Service Company
GEEREF	Global Energy Efficiency and Renewable Energy Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
IFP	Innovation Finance Programme
IGEN	Indo German Energy Programme
IGES	Institute for Global Environmental Strategies, Japan
IIE	Indian Institute of Entrepreneurship
IPPs	Independent Power Producers
IREDA	Indian Renewable Energy Development Agency Limited
JICA	Japan International Cooperation Agency
JST	Japan Science &Technology
KfW	German Development Bank
MFIs	Micro Finance Institutions
MGIRI	Mahatma Gandhi Institute for Rural Industrialisation
MNRE	Ministry of New and Renewable Energy
MoEF	Ministry of Environment and Forests
MoP	Ministry of Power
MSME	Micro-, small- and medium-sized enterprises
NABARD	National Bank for Agriculture and Rural Development
NCEUS	National Commission for Enterprises in the Unorganised Sector
NHB	National Housing Bank
NIB	Nordic Investment Bank
NIESBUD	National Institute of Entrepreneurship and Business Development
NIMSME	National Institute for MSME
NMEEE	National Mission for Enhanced Energy Efficiency
NSIC	National Small Industries Corporation
NSM	National Solar Mission
NSTDB	National Science and Technology Development Board
NTPC	National Thermal Power Corporation Limited
PACE-D	Partnership to Advance Clean Energy-Deployment
PLI	Primary Lending Institutions
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
RE	Renewable Energy
RRBs	Regional Rural Banks
SCARDBs	State Co-operative Agriculture and Rural Development Banks
SCBs	State Co-operative Banks
SDC	Swiss for Development and Cooperation
SEBI	Securities and Exchange Board of India
SECI	Solar Energy Corporation of India
SFC	State Financial Corporation
SIDBI	Small Industries Development Bank of India
SME	Small- and medium-sized enterprises
TDB	Technology Development Board
TERI	The Energy and Resources Institute
TIDE	Technology Incubation and Development of Entrepreneurs
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

Executive Summary

India's population is growing. By the mid of this century, India will have surpassed China as the most populated country in the world. To feed the additional hundreds of millions of people, to provide jobs for youths and to ensure a decent standard of living the Indian economy needs to grow rapidly. Yet, to prevent that this economic growth results in even more overcrowding of cities, inadequate infrastructure, polluted air and water, the push for economic growth needs to go in hand with the push for sustainable consumption and production (SCP) practices. Especially small and medium-sized enterprises (SMEs) need to be encouraged and supported in adopting SCP practices as they – as elsewhere – form the backbone of the country's economy. Such support includes technical support and capacity building but also access to finance for implementing SCP measures.

The Indian Government has acknowledged this need and has implemented several policies that encourage SMEs to adopt energy efficient processes, less polluting practices and alternative energy solutions. Noteworthy policies in this regard are the National Solar Mission (NSM) with an ambitious target of installing 20 gigawatt (GW) of solar power capacity by 2022, and the National Mission for Enhanced Energy Efficiency (NMEEE) with a target to reduce energy consumption by 5% by 2015. These are economy-wide policies, but they enable SMEs to provide and adopt SCP solutions, thus creating a SCP project pipeline. This has, in turn, led to initiatives from financial institutions to provide for loan and equity to meet these needs. Further environmental policies, particularly in the area of pollution control, have additionally required SMEs to undergo Environment Impact Assessments. If a company does not meet the required standards, it faces severe charges up to a closure or relocation of the production facility. SME clusters in Kolkata (leather and castings), Agra (castings), Kanpur (leather) and Tirupur (dyeing) have been forced to shut down and relocate due to non-compliance with the pollution control laws (Planning Commission n.d.). The need for complying with regulation therefore also creates some demand for green finance. Yet, in general the actual enforcement of environmental pollution control regulations remain low.

A prominent role in terms of access to green finance for SMEs is played by the Small Industries Development Bank of India (SIDBI). It is the principal financial institution for SMEs in India and has been at the forefront of providing green finance to SMEs. With support from bilateral institutions such as KfW, JICA and AfD, SIDBI has introduced several credit lines for energy efficiency and cleaner production. Financing for many of these projects has moved beyond the support provided by international development finance organisations and is now part of SIDBI's mainstream business.

India has also been a destination for international impact investors. Several investors have invested in green and inclusive businesses in India, particularly in the area of clean energy and water access for disadvantaged parts of the population.

However, given the importance of SMEs to India's economy, and in turn, their relevance for a transition towards stronger SCP patterns, further technical, financial and knowledge support for SMEs is needed. Only strong SMEs can develop a relevant SCP project pipeline and ensure sufficient demand for green financing products. At the same time the ability of India's financial institutions to provide SMEs financing for green investments must be strengthened. A major problem still is that a lot of financing dedicated to green investments – especially in the renewable energy sector – is still geared towards large projects. SME green financing is not a priority of most financial institutions.

There are 27 public sector banks providing the majority of financing services to SMEs. These banks in particular would need to increase their share of financing to SMEs targeted at green investments. Currently only five banks have specific energy efficiency financing products and none has loans for pollution control and cleaner production measures.

Besides access to finance for any type of company to invest in SCP measures, India also needs to support SMEs developing and marketing green technologies more strongly. Although, India has a vibrant venture capital and start-up scene, the majority of Indian venture capital, has been targeted to sectors such as information technology, consumer internet services and e-commerce. There are only three venture capital funds – INFUSE, Global Environment Fund (not to be confused with the Global Environment Facility) and Green India Venture Fund – which focus solely on the green technology sector. Funding available through Indian incubators is too small to develop green technology products and services. This discourages innovation in green technologies.

The problems of green finance in India are, in the overall context, the problems of SME finance in India. Despite India's large and well-developed financial system and its consideration of SME financing as a policy issue, SMEs face severe challenges in accessing finance for any type of investments. This resembles the situation in almost every other Asian country. The primary reason for the inability of SMEs to access finance is the collateral security requirement of banks (even with the existence of a credit guarantee scheme). Almost as important is the fact that only 6% of SMEs are registered. Non-Banking Financial Companies (NBFCs) which have the potential to fill the void have been restricted by rules on leasing and asset finance.

In general India needs a strong public policy driven agenda to make it easier to do business and particularly for SMEs to be registered and to become part of the formal financial ambit. The country also needs to create far more awareness on green business practices both among large companies and consumers, who are the customers of the SMEs. Finally, what is needed is a strong focus on innovation which includes research and development and incubation of enterprises in green technology sectors.

Introduction

India has a population of 1.2 billion and is the fourth largest formal democracy in the world. Post-independence, from the 1950 to the 1980s, India's GDP grew at an average of about 3.5% per annum. During this period, the private sector was highly regulated by the Government. The liberalisation of India's economy started with the Industrial Policy of July 1991. Subsequently the GDP grew at an average of 6.8% from the 1990s to 2010 (Ministry of Industry 1991; Livemint 2011). In 2013 to 2014 the economy is estimated to have grown at 7.4% (World Bank Data 2015). The small- and medium-sized enterprise (SME)[1] sector in India contributes about 8% of the GDP and accounts for 45% of industrial output and 40% of exports. There are approximately 46 million SMEs, employing about 106 million people (Ministry of MSME n.d.a). Only 6% of the SME sector is formally registered with the Registrar of Companies – the remaining 94% are unregistered enterprises (Ministry of MSME n.d.b).

In India, the MSME Development Act 2006 defines the micro, small and medium-sized enterprise (MSME) sector in terms of investment in the core plant and machinery (see Table 1).

India has a large and stable financial system. The country also comprises a vibrant entrepreneurial class. India has a comprehensive set of laws in the area of environmental protection and there is strong government push in the area of energy efficiency and renewable energy. Yet the implementation of environmental regulation is an enormous challenge. A lack of capacities and resources on the side of environmental authorities as well as corruption are the most important factors that have thus far prevented a stricter implementation of environmental provisions. This would, however, be required as many SMEs in India work with outdated and inefficient technology that negatively impacts on the environment and surrounding communities.

Table 1: SME definition in India (NCEUS 2014)

Manufacturing Enterprises Investment in Plant and Machinery (INR)	
Description	Limits set in November 2014
Micro Enterprises	Up to 5 million (EUR 70,000*)
Small Enterprises	5 million (EUR 70,000) < 100 milion (EUR 1.4 million)
Medium Enterprises	100 million (EUR 1.4 million) < 300 million (EUR 4.1 million)
Service Enterprises Investment in Equipment (INR)	
Micro Enterprises	Up to 2 million (EUR 30,000)
Small Enterprises	2 million (EUR 30,000) < 50 million (EUR 70,000)
Medium Enterprises	50 million (EUR 70,000) < 150 million (EUR 2 million)

* Throughout the study monetary amounts will be expressed in Euro (EUR) Conversion rates were retrieved from www.oanda.com on 06.01.2016 (EUR 1 = USD 1.08 = INR 72.21). Decimal numbers were rounded to one decimal place; amounts below 1 million were rounded to increments of 1,000.

1 In this study, the abbreviation "SME" will generally include micro enterprises, unless further specifications are made.

Green Finance, SMEs and SCP

In the context of this study, the term "green finance" will be used to link the three focal topics of this study series: small- and medium-sized enterprises (SMEs), sustainable production and consumption (SCP) and access to finance. Aspects of SCP most relevant for SMEs are the reduction of energy and material intensity of goods and services production; the reduction of waste and emissions from raw material extraction, production, consumption, and disposal; and the application of life-cycle thinking in all stages of product life (UNEP 2012). Green finance is thus defined as all capital from public and private sources enabling SMEs to achieve or contribute to these SCP goals.

Green finance from the financial institutions' perspectives usually comprises financial products and services to promote environmentally responsible investments and stimulate low-carbon technologies, projects, industries and businesses. For green finance products, financial institutions usually consider environmental factors in the internal processing of the transaction, e.g. in the loan sanctioning, monitoring or risk assessment (PWC 2013). Green finance covers not only investment costs but also operational costs, such as production preparation or land acquisition costs for green projects (Zadek and Flynn 2013).

In addition to dedicated green finance, this study will also take into account selected SME financing products. This is based on the fact that SMEs may also use conventional financing sources for making green investment, especially if the green finance landscape is still underdeveloped.

A concept providing guidance for this situation is sustainable consumption and production (SCP). It is a concept for reducing negative economic, environmental and social impacts of economic activities and can be defined as "a holistic approach to minimising the negative environmental impacts from consumption and production systems while promoting quality of life for all" (UNEP 2011). SCP has been included as Goal No. 12 of the United Nations' Sustainable Development Goals (SDGs) which states "Ensure sustainable consumption and production patterns" and explains SCP in a catch-phrase with "doing more and better with less" (UN n.d.). To manage a transition towards more SCP practices among SMEs, India needs to tackle various challenges: it needs to address the rising costs and decreasing availability of energy, water and other natural resources and combat increasing pollution, decreasing soil fertility, as well as to ensure the survival of fragile ecosystems. SMEs need to be an integral part of any approach to tackle these problems. And if SMEs are to change the production and consumption patterns that contribute to these problems, they need access to funding to finance such changes.

In the following chapters, the financing landscape for SMEs in India will be analysed in more detail regarding opportunities as well as challenges to access finance in general and green finance in particular.

Methodology

The objectives of this study are to:

- Present an overview of funding opportunities for SMEs with a focus on green SME projects
- Identify and analyse successful cases of green SME financing
- Identify and analyse barriers to green financing for SMEs

The results of this study can be used to inform relevant stakeholders on the situation regarding access to finance by SMEs in India. This can lay the basis for the development, up-scaling and replication of green financing schemes for SMEs to enable more investments in sustainable production and consumption practices.

Data was collected through literature review and face-to-face interviews.

Literature review was conducted on relevant topics, including the situation of SMEs in India, situation and trends in green financing, etc. Reviewed literature includes studies, reports, newspaper articles as well as quantitative data/statistics.

Face-to-face interviews were held with senior officials in Indian financing institutions, international development organisations as well as research institutes and consultancies in Mumbai, Hyderabad, Bangalore, Delhi, Vadodara and Ahmedabad between June 26, and October 25, 2015.

Policy and Institutional Support System

In this chapter the policies and public institutions relevant for green SME finance are presented and their role in providing access to finance for SMEs is analysed. A particular focus is laid on the role of energy as it represents a key resource whose consumption can be targeted by SCP practices.

MSMEs are a priority sector of the government of India. Recognising the importance of MSMEs in the Indian economy, particularly with respect to the sector's contribution to exports and employment, the Government of India introduced the MSME Development Act 2006. The central body that designs, facilitates and monitors MSME policies and schemes is the Ministry of MSME. These MSME policies are actually implemented by the state governments.

The Office of the Development Commissioner (DCMSME) facilitates credit support to MSMEs through two schemes. The **Credit Guarantee Fund Trust Scheme (CGTMSE)** provides funds for guarantees to 133 lending institutions which then can provide collateral free loans to the SMEs (CGTMSE n.d.). The usual guarantee granted is 75-80% of the sanctioned loan amount. The other scheme is the Trade Related Entrepreneurship Assistance and Development (TREAD) that provides grants and credit facilities for projects particularly by women entrepreneurs (Development Commissioner MSME n.d.).

Environmental regulation and climate policy

India has an extensive environmental policy framework with a comprehensive set of laws, specific statutory mandates, regulatory instruments, and institutional frameworks to implement and enforce environmental policy objectives (UNDP 2009). There are over 200 laws relating to environmental protection. Key national laws for controlling industrial pollution include such for prevention and control of pollution of water, air and noise. There are further laws for management and handling of hazardous waste, municipal solid waste, bio-medical waste, plastic waste, e-waste, batteries and fly ash.

India also has a National Action Plan on Climate Change (NAPCC) that has been released in 2008. The NAPCC addresses climate mitigation as well as adaptation challenges through eight national missions. These missions target the areas of solar energy, energy efficiency, sustainable habitat, water, the Himalayan ecosystem, afforestation, sustainable agriculture and a research fund for strategic knowledge for climate change (Centre for Cli-mate and Energy Solutions 2008). In 2014 four new mis-sions were proposed in the areas of wind energy, human health, coastal protection and waste-to-energy (LSE 2015). Following the development of the NAPCC the Indian states have also prepared State Action Plans for Climate Change (SAPCCs). By the end of 2014, 27 states and 4 Un-ion Territories had prepared SAPCCs (LSE 2015).

At the COP21 in Paris 2015, India announced its new climate policy or Intended Nationally Determined Contribution (INDC) that sets an ambitious new target to increase share of non-fossil based power capacity from current 30% to 40% by 2030 with the help of international support. It also commits to reducing carbon emissions per unit GDP to 35% below 2005 and to create an additional carbon sink of 2.5 – 3 billion tonnes of CO_2 through additional tree cover. The plan also prioritises efforts to build resistance to climate change impact (WRI 2015).

Many of the provisions in the environmental as well as in the climate policies that concern the private sector are applicable to SMEs. SMEs using outdated technologies or having poor management practices are known to contribute 70% of the industrial pollution in India (World Bank 2006). The industry categorisations (red/orange/green) depending on its pollution potential and the siting guidelines require SMEs to undergo Environmental Impact Assessments and even relocate their units. SME clusters in Kolkata (leather and castings), Agra (castings), Kanpur (leather) and Tirupur (dyeing) have been forced to shut down and relocate due to their non-compliance with the pollution control laws (Planning Commission, n.d.).

Environmental regulations for SMEs have focused to a large extent on water pollution. The central government has been promoting the establishment of Common Effluent Treatment Plants (CETPs) for SME clusters since 1991. The modified CETP scheme (2012) currently offers a 50% subsidy for investments in CETPs (Central Pollution Control Board & MoEF, n.d.). It has also been made mandatory for SMEs with wet waste to have effluent treatment plants or sewage treatment plants with meters (MoEF 2011). An example of successful introduction of SCP practices focusing on reducing water pollution in India is the SWITCH-Asia project *SUSTEX: Sustainable Textiles for Sustainable Development in India*. This project established a model eco-friendly textile park and brought together technical service providers, textile producer groups and SMEs to conduct action research, to provide low cost technological solutions in reducing pollution from textile production activities (SWITCH-Asia 2014). The SWITCH-

Asia project *ACIDLOOP* also addressed SCP issues, and waste water in particular, with its activities targeted at improving resource efficiency among Indian metal finishing SMEs. Across the participating SMEs, resource consumption could be reduced by more than 20% over the course of the *ACIDLOOP* project.

However, many SMEs remain clustered close to cities and do not have access to affordable planned industrial space with common infrastructure for effluent treatment. The enforcement of environmental as well as climate regulation remains difficult. Key reasons are that SMEs are not formally registered and corruption among the environmental authorities (World Bank 2006).

Energy situation

As of March 2015, India had an installed energy capacity of 272 GW (Centre for Science and Environment 2015). Renewable energy (including hydro power of 25 MW and below) installed capacity was 36 GW. Out of the total installed capacity, 71% is coal, gas and diesel; 2% nuclear; 15% large hydro power; and renewable energy makes up the remaining 12% (36 GW) (The Centre for Science and Environment 2015; CEA 2015).

Energy is one of the key resources for any company, but India faces many challenges supplying the energy needed. Key problems are a substantial energy deficit resulting in frequent power cuts, a heavy reliance on imported fossil fuels, and a large part of the population (77 million) with little or no access to modern energy services (electricity) at all (The Climate Group 2015).

The energy deficit has significant negative effects on India's economy. The average electricity deficit (the share of electricity demand that cannot be met) in the fiscal year 2014/2015 amounted to 3.6% (Central Electricity Authority & Ministry of Power Government of India 2015). SMEs often do not have a reliable power supply to run their manufacturing units. In a survey, 90% of SMEs identified the lack of reliable electricity sources as a key challenge they face, while only 82% identified the rising costs of coal and gas as a challenge (Firstbiz-Greyhound Knowledge Group Initiative 2014).

It is important to particularly target the industrial sector in regard to reductions in energy consumption. This is demonstrated by the fact that almost half (44%) of the electricity in 2013-2014 was used by the industrial sector. Power cuts result in losses for companies as production is stopped or generators have to be used that run on expensive diesel. Increasing energy efficiency should therefore be in the interest of companies as well as the government. However, it is quite a paradox that SMEs have been slow to invest in energy efficiency measures. A reason for this is that many SMEs had been drawing power without adequate equipment thereby increasing the amount of electricity consumed. In addition, many SMEs had been drawing electricity from the grid without paying. The loss due to the technical and commercial reasons amounted to more than 25% of the total electricity consumption (Dubbudu Rakesh 2015). In comparison, losses in developed countries are less than 10%.

To address this situation the Government of India introduced the Restructured Accelerated Power Development and Reforms Programme (RAPDRP) in 2008 that strengthens distribution systems and introduces smart meters (Ministry of Power, n.d.). The government has also started to decrease subsidies for diesel as a step towards reducing subsidies in the energy sector. This development contributes to pushing SMEs towards energy efficiency and renewable energy solutions.

To address the challenge of providing energy access, the Government of India has launched multiple schemes to promote decentralised energy sources in off-grid areas, such as the Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) scheme with an INR 90 billion (EUR 1.2 billion) budget. The DDUGJY offers a 90% capital subsidy for decentralised energy distribution and generation for villages where grid connection is not feasible or cost effective. To respond to demand for energy from the agricultural sectors, both central and state government schemes have been launched to implement solar pumping solutions in selected states. A total of INR 12.97 billion (EUR 176.6 million) has been set aside for these programmes (MNRE 2014).

Renewables

India's energy capacity is largely fossil fuel based with a particular focus on coal. Yet at the same time, the government is promoting the development of renewable sources of energy. The National Solar Mission (NSM) has an ambitious target of installing 20 GW of solar power capacity by 2022. As of August 2015, total installed capacity under the NSM is 4,229.4 MW of grid-connected systems, 279.7 MW off-grid systems, with 8.9 million m^2 of solar thermal power plants. Under the National Biogas and Manure Management Programme (NBMMP), 4.8 million family biogas plants have been installed (MNRE n.d.). Total grid-connected installed capacity for biomass (gasification and bagasse cogeneration) is 4,418.6 MW and off-grid capacity (non-bagasse cogeneration, rural and industrial gasifiers) is 772.4 MW, making up the remaining renew-

able energy capacities along with small hydro power and waste-to-energy contributions.

The wind and solar sectors have so far been dominated by large-scale grid-connected projects set up by large enterprises. An exception might be that large solar enterprises often outsource designing and installing plants to SME sub-contractors, including maintenance services. There are over 380 solar companies registered with the MNRE, supplying solar products and systems for both off-grid photo voltaic and thermal applications. An analysis indicates that about 80% of the companies are small and medium in size (Ministry of New and Renewable Energy, n.d.). In general, SMEs have not benefited that much from the government's push for solar and wind energy. Yet in other sectors like biomass to power generation, waste-to-energy, and small hydro power, SMEs are more actively involved. In these sectors, there are smaller plants that re-quire lesser volumes of investment as compared to wind power. Biomass in particular is very relevant for captive power generation in sugar mills, paper mills, textile indus-try, and for selling power to other micro and small-sized enterprises.

Energy Efficiency

Around 48% of the total energy consumption of the industrial sector is used by SMEs (Jain 2011). It is estimated that SMEs' energy consumption can be reduced by more than 25% through energy conservation and energy efficiency measures (Srijan 2011). Compared to large companies, SMEs have an energy saving potential that is about 15-20% higher (DIE 2015).

An important actor for energy efficiency in India is the Bureau of Energy Efficiency (BEE). It was set up under the Energy Conservation Act in 2002 to help develop policies, build capacity, implement public private partnership (PPP) programmes, monitor results, and leverage international and private sector support for energy efficiency. The BEE has an SME programme to accelerate adoption of energy efficiency technologies using a 'cluster approach'. Under this programme BEE provided technical support to SMEs in a cluster. BEE also facilitated access to finance for SMEs by providing capacity building to local banks and support to acquire partial funding of collaterals through the CGTMSE. SIDBI supported BEE to implement the energy efficiency programmes in 25 clusters (SIBDI, n.d.b). Other cooperation models between SIDBI and BEE are presented in the next chapter on apex financial institutions.

The Energy Service Company (ESCO) market in India is currently developing – yet at a slower pace compared to other countries in Asia. For example, China consumes 3.3 times more energy than India, but the aggregate revenue of its ESCO industry is 6.8 times greater than India's (Jain 2011). However, the Government of India is now supporting the development of the ESCO market by setting up the public Energy Efficiency Services Limited (EESL) Company through the Ministry of Power. EESL functions as a "super ESCO" and implements energy efficiency projects for demand-side measures in municipalities, the agriculture sector and public buildings. ESCO organisations, most of them SMEs, provide services through EESL thereby facing fewer risks.

There are two other government subsidy schemes that currently support the adoption of energy efficiency by SMEs. The Technology Upgradation Fund Scheme (TUFS) focuses on modernising the power loom textile sector. The Technology and Quality Upgradation Support (TEQUP), which is part of the National Manufacturing Competitiveness Programme, includes capacity building, energy audits and energy efficient technology deployment in the SME clusters (Ministry of Textiles n.d.; Ministry of MSME 2010).

Despite the abovementioned government initiatives, the awareness of energy efficiency among SMEs remains poor since they find it hard to undertake the capital expenditure for implementing energy efficiency measures, even if the payback period is attractive. Reasons for this are a lack of awareness on improvement potentials and a lack of cost pressure as energy and electricity are often subsidised and sometimes not even paid for at all.

As for renewables, SMEs are not only targets but at the same time providers of technical solutions for increasing energy efficiency. Our analysis shows that there are over 150 SMEs supplying energy efficient equipment and related services listed with BEE, and more than 240 SMEs are registered with the green building certifying authorities as providers of green building equipment solutions.

Sources of (Green) Finance for SMEs

The Indian financial system is well developed with several tiers and types of financial institutions. In this chapter, the main sources of finance for SMEs in India are summarised. The chapter contains details on general financing options as well as green financing options.

Apex Financial Organisations

Apex financial organisations are organisations implementing financial schemes of the Government of India. The most important apex financial institutions for SME finance are:

1. **Small Industries Development Bank of India (SIDBI)** is the principal financial institution for SMEs in the country. Financial support is provided as (a) re-finance to eligible Primary Lending Institutions (PLIs) such as banks, State Financial Corporation's (SFCs), State Industrial Development Corporations (SIDCs), Micro Finance Institutions (MFIs) and (b) as direct financial assistance to SMEs. SIDBI also coordinates the work of other commercials banks engaged in SME financing. SIDBI is also a key investor in SME-focused venture capital funds (SIDBI n.d.a).
2. **National Bank for Agriculture and Rural Development (NABARD)** promotes sustainable and equitable agriculture and rural development. NABARD also implements the capital subsidy scheme for solar water heating systems, small capacity PV systems, and solar PV pumps. Like SIDBI, NABARD provides financial support as (a) re-finance to State Co-operative Agriculture and Rural Development Banks (SCARDBs), State Co-operative Banks (SCBs), Regional Rural Banks (RRBs), Commercial Banks (CBs) and other financial institutions; and (b) direct financing to producer organisations, marketing federations, central cooperative banks (CCBs), state governments for rural infrastructure development, and loans to the private sector.
3. **National Small Industries Corporation (NSIC)** facilitates credit requirements of small enterprises for (a) financing for procurement of raw material up to 90 days and allowing bulk purchases at competitive rates, (b) financing for marketing activities, exports and bill discounting (short term), and (c) financing through syndication with banks to facilitate long term and working capital financing.

The apex financial institutions have played an important role in offering green finance to SMEs, given their role as implementing entities for the Government of India's financial schemes. The role of SIDBI is of particular importance. Supported by multilateral and bilateral lines of credit, SIDBI has set-up several financing products to support SMEs in implementing energy efficiency and cleaner production measures:

- **SIDBI-KfW Innovation Finance Programme** (2013-2016) is a EUR 53 million line of credit providing assistance to innovative projects and SMEs that supply innovative clean technologies (products, processes and services). Sectors targeted include energy efficiency, renewable energy, green buildings, water and wastewater treatment, waste management, industrial pollution control technologies, sustainable transport solutions and sustainable agribusiness. As of September 2015, INR 2,646 million (EUR 36 million) of the line have been committed to 28 innovative clean technology SMEs. An example of an SME accessing the credit line is a mechatronics company that manufactures controls for small engines. The company availed of debt from SIDBI under the KfW Innovation Finance Programme to expand its manufacturing facilities in response to expanded demand for its customers. The company's products are used to increase fuel efficiency for two wheeler and three wheeler vehicles which are used for transportation in many countries in Asia and Africa. The company also provides solutions for variable speed operation of diesel generator sets and for off-road vehicles such as tractors and construction equipment aimed at saving diesel.
- **UNIDO's Promoting Energy Efficiency and Renewable Energy in Selected MSME Clusters** (2011-2016). This programme provides EUR 5.5 million to the Global Environment Facility (GEF) Financing Energy Efficiency with SIDBI and BEE.
- **GEF-World Bank Financing Energy Efficiency with SIDBI and BEE** (2010-2016). In this scheme, EUR 8.1 million have been given to SIDBI, with 40% of this amount has been disbursed. The SIDBI component of the programme closed in 2014. EUR 2 million were given to BEE. About 60% of the amount have been utilised thus far and the programme is still running until the end of 2016 (USAID and MoP 2013).
- **SIDBI-JICA Energy Saving Line Phase I, II and III** (2008-ongoing). The programme provides financial assistance to SMEs through SIDBI and refinance to banks and other financial institutions. Key element of the scheme is a list of eligible energy efficiency equipment that can be financed. In phase I, EUR 220 million

financed investments in more than 2,900 MSMEs. In phase II, the same amount was spent for 1,880 MSMEs. In the ongoing phase III, EUR 220 million are being spent. The funds are, for example, used for investments of SMEs in energy efficiency and pollution control equipment in the Morbi ceramic cluster.

- **SIDBI KfW Environmental Credit Line** (2009-2014). The available funding of EUR 38.5 million provided assistance to about 282 MSMEs.
- **SIDBI-KfW Energy Efficiency Credit Line** (2009-2014). The programme reduced GHG emissions by 30 tonnes of CO2 per INR 1 million invested (EUR 14,000). The funding of EUR 50 million covered the investments in 275 SMEs.
- **SIDBI-AfD Energy Efficiency Credit Line** (2010-2012). The programme reduced GHG emissions by 440,000 tonnes per annum and implemented renewable energy alternatives. In total, EUR 50 million were invested covering 650 MSMEs (AfD 2012).

This list of green finance products offered to SMEs by SIDBI makes clear that this financing institution is a front-runner in terms of green SME finance in India. A reason for this has also been that the credit lines funded by JICA and KfW included a technical assistance package that built capacities within SIDBI on providing green financing.

Another apex financing institution is NABARD which, under its Capital Subsidy Refinance Scheme that ran from 2010-2014, provided a capital subsidy for solar home systems and solar water heating systems. This subsidy amounted to 30-40% of the costs of a solar home system. A new capital subsidy scheme was launched at the end of 2014 to promote solar PV pumping systems for irrigation. Capital subsidies of INR 5.91 million (EUR 0.08 million) were sanctioned during the year financial year 2014-2015 (NABARD 2015). These subsidies were targeted at households and thereby indirectly help SMEs to sell their equipment. Generally, the support of NABARD as apex financing institutions to green SME financing has been limited.

In the field of renewable energy, the apex financing institution is the **Indian Renewable Energy Development Agency Ltd (IREDA)**. IREDA mobilises resources through taxable bonds, bank loans, government loans and international lines of credit from KfW, JICA, AfD, ADB, EIB, NIB, IDA and IBRD. In the last five years from 2010-11 to 2014-15, IREDA has disbursed approximately INR 102.9 billion (EUR 1.4 billion) for renewable energy projects. Much of IREDA's funding for solar is currently committed to large scale grid-connected projects, but a recent solar rooftop financing scheme has been launched which is accessible to SMEs. This loan scheme is applicable to grid interactive rooftop solar PV plants for industries, institutions and commercial establishments. Financing can be accessed for single or aggregated investments. In either case, the minimum capacity needs to be 1 MW and the smallest sub-project (in the case of aggregation) has to be at least 20 kW. Various business models including captive use, sale to grid under net/gross metering agreements, or direct sale are able to obtain financing (IREDA 2015). Under Germany's financial cooperation programme with India, KfW is in the process of extending a line of credit to IREDA for financing off-grid renewable energy projects. It is expected that much of this funding will go to SMEs.

Despite the available funding, it is often difficult for apex financing institutions to do small ticket direct lending for SMEs. Renewable energy related lending to SMEs can be increased as the apex institutions play a more active role in providing refinance and risk sharing mechanisms with commercial banks. As is shown in the next section, the bulk of SME financing is provided by commercial banks. To further increase lending of commercial banks in the field of renewable energy, IREDA could provide a risk cover for commercial banks to enable them to enter into renewable energy financing.

Banking Sector

The Indian banking system is organised into public sector banks, private sector banks, foreign banks, co-operative banks and regional rural banks. According to the latest Reserve Bank of India (RBI) report (Mail Today Bureau 2015), 27 public sector banks account for over 73% of loans and deposits. The largest public sector bank in India alone, State Bank of India and its six affiliates, account for almost 25% of the market.

In the last decade, financial support to SMEs by the banks increased significantly. The total bank credit made available for SMEs by public sector banks had increased eightfold between 2000 and 2011. The share of SME credits in the total loan portfolio did not change, however. The share only increased by 0.1% from 14.6% in 2000 to 14.7 % in 2015 (Yadav n.d.).

A key policy measure to improve bank finance for SMEs has been to include SMEs as a dedicated priority sector for lending. Priority sector lending norms require banks to lend 40% of their net credit to dedicated sectors – SMEs have now become such a priority sector next to agriculture, education, or housing. In April 2015, priority sector lending norms were expanded to include medium-sized enterprises (as opposed to only micro and small industries earlier) and renewable energy.

The stagnation of bank credit to SMEs is a serious concern in India. It is possible that the inclusion of SMEs under the priority sectors will increase the flow of finance to SMEs. Yet it should be considered that commercial banks have fallen short of reaching lending to priority sector targets in the past.

Green financing schemes of the banking sector are usually targeted at either renewable energy or energy efficiency schemes. Therefore these two areas and the financing available for SMEs are assessed in more detail below.

Renewable Energy

Public sector banks such as **State Bank of India**, **Bank of Baroda** and **IDBI bank** have funded renewable energy projects in the wind and solar sectors as have private sector banks such as **Yes Bank** and **Axis Bank**. Yet, they have so far funded mostly large scale grid-connected projects set up by independent power producers. Banks usually provide recourse loans for renewable energy projects based on existing relationships with customers. This makes it difficult for SMEs and first time promoters to access finance. A notable exception is **RBL Bank**'s funding for small early stage companies that provide solar-based technology solutions.

There is now interest among several banks particularly State Bank of India, State Bank of Hyderabad, IDBI Bank, Punjab National Bank, DENA Bank (among the public sector banks), and Yes Bank and RBL Bank (among the private sector banks) to finance solar rooftop projects. This is likely to benefit SMEs as the majority of vendors of solar rooftop solutions are SMEs.

Energy Efficiency

Banks have also been providing specific lines for energy efficiency. A credit line of ICICI Bank, which was closed in 2012, focused on energy efficiency projects in the industrial, commercial, SME, and public sectors. However, very few banks have ongoing schemes to finance energy efficiency projects specifically for SMEs. Only two banks have specific loans schemes providing loans for technology upgrade and investing in energy efficient equipment:

- **Canara Bank's Energy Saving Loan Scheme for SMEs:** This scheme provides loans to existing customers or SMEs whose energy cost is 20% of production cost. It covers 90% of project cost up to INR 10 million (EUR 0.14 million). It does not include ESCO projects (Canara Bank n.d.).
- **Bank of Baroda's Energy Efficiency Financing Scheme:** The scheme offers to finance up to 75% of the total project cost, subject to a maximum loan amount of INR 10 million (EUR 140,000) and a minimum amount of INR 0.5 million (EUR 7,000). The scheme covers acquisition of equipment, services and adopting measures for enhancement of energy efficiency or conservation of energy (Bank of Baroda, n.d.).

Non-Banking Financial Companies (NBFCs)

NBFCs are companies registered under the Companies Act (1956) engaged in the business of providing loans and advances, acquisition of marketable securities, leasing, insurance or receiving deposits (Reserve Bank of India 2015). Major NBFCs are Shriram Transport, Bajaj Finance, Mahindra & Mahindra Financial, and Cholamandalam Finance. They provide automobile loans, home loans, personal loans and loans against property. The main difference between banks and NBFCs is that NBFCs cannot accept demand deposits. They do not form part of the payment and settlement system and they cannot issue cheques. In addition, the deposit insurance facility of the Deposit Insurance and Credit Guarantee Corporation is not available to depositors of NBFCs (Reserve Bank of India 2015).

NBFCs provide an estimated EUR 10.8 billion of debt finance to the SMEs (IFC 2012). The size of credits ranges from EUR 5,600 for micro enterprises to EUR 1-2 million for medium enterprises. A large share of the finance provided by NBFCs is used for asset purchases. The importance of NBFCs in providing asset finance to the SME sector has decreased since the 1990s on account of changes in tax rules which have prevented NBFCs from claiming depreciation benefits for leased assets.

Almost 30-40% of infrastructure debt lending by NBFCs is to the renewable energy sector (Bridge to India 2013). Prominent NBFCs that are financing renewable projects include L&T Infrastructure Finance Company (subsidiary of L&T Financing Holdings), Power Finance Corporation (PFC), Mahindra Finance, IDFC, Reliance Capital and TATA Capital.

NBFCs charge a higher interest rate on loans than banks, but clean energy project developers still find them an attractive option because NBFCs offer faster access to finance as the loan sanctioning process does not take as long as with banks. To date most of the

NBFC energy financing has been targeted to the large grid-connected energy projects. There are some early signs that this may change in the near future. TATA Capital and Reliance Capital have commenced the financing of SMEs that implement solar rooftop solutions.

In the absence of bank finance, NBFCs can play a significant role in SME financing. In particular the leasing of renewable energy and energy efficiency equipment can be a useful mechanism to provide financing for green investments. In India, however, the leasing sector has been held back on account of regulatory issues relating to the allowance of income tax depreciation benefits, service tax on lease rentals, and repossession of assets in case of default.

Microfinance Institutions

Microfinance institutions (MFIs) are mostly active in providing funding to the unregistered and unorganised microenterprise segment. It is estimated that MFIs have supplied EUR 0.37 billion of debt to this segment, with loan size of EUR 915 on average (IFC 2012). However, MFIs' current activity in SME funding is limited because it is stipulated that 85% of the loans in the MFIs' portfolio must be below EUR 890. SMEs that want to invest in SCP measures usually require larger amounts. MFIs are, therefore, not a very relevant funding source for SME investments in SCP measures. Yet, the Reserve Bank of India has recently allowed MFIs to (i) act as business correspondents to banks, or (ii) to register as small banks providing higher loans for clean energy.

Some MFIs are now providing green finance for clean energy investments. Friends of Women's World Banking India (FWWB-I) has a special 'clean energy' programme with microfinance institutions as partners. FWWB-I raises debt funds from banks and grants from international donor organisations to provide clean energy loans. Such loans account for 20-25% of the total loan portfolio of FWWB-I and its subsidiaries. Other players in the market such as Grameen Koota (in Karnataka, Maharashtra and Tamil Nadu) or MDFL (OikoCredit) provide household level financing for clean energy solutions (WWF-India & Micro-Save 2015).

Generally, MFIs are not relevant for a large-scale shift of SMEs to SCP practices. They could play a role, however, in opening up markets for SMEs that are offering green products to consumers. Microfinance would allow SMEs to offer their products with a consumer financing package and potentially increase the uptake of green technologies.

Venture Capital, Impact Funds and Incubators

Venture capital, impact investors and incubators are relevant as financing source mostly for start-ups and not so much for the conventional industrial SME. Yet for a country-wide shift to SCP practices, green technological solutions and products are required. Start-ups with green products, technologies and business models can contribute to this shift. For such enterprises that also classify as SMEs, the types of finance covered in this section are relevant and can support their growth.

Venture capital funds use money from investors to buy high risk private equity stakes in start-ups and SMEs with high growth potential. There are currently 180 venture capital funds registered with the Securities and Exchange Board of India (SEBI) (SEBI n.d.). Total venture capital investments in India averaged EUR 1.2 billion per annum from 2011 to 2013. This amount increased by almost 56% to EUR 2.1 billion in 2014 and was expected to increase further in 2015 (VCCEdge 2015).

The majority of Indian venture capital has been targeted to sectors such as information technology, consumer internet and e-commerce. Yet there are 21 venture capital firms that have invested in green technologies. Of these **INFUSE**, **Global Environment Fund** and **Green India Venture Fund** are the three venture funds focused solely on the clean technology sector. The other venture capital funds have a multi-sector focus.

Private equity funds invest money in private companies that have grown further than those funded by the venture capital funds. Private equity funds in India have invested largely in wind and solar renewable energy projects and are only, to a limited extent, relevant for SMEs. Also, **angel investors** have provided funding to start-ups in India. The amount invested by angel investors has increased from EUR 55 million per annum in 2011 to EUR 112 million as of June 2015 (VCCEdge 2015). Several organised groups of angel investors are currently present in big cities like Bengaluru, Mumbai and Hyderabad. As is the case with private equity funds, the relevance of angel investors for conventional SMEs and their financing needs is limited.

Another type of relevant financing is **impact investing**, socially responsible investments with a financial return. This segment of financing is growing in India and investments have been made in sectors such as healthcare, education, livelihood, agribusiness, clean energy access, and water and sanitation. A recent study by Intellecap shows that 11% of total impact investments are targeted at the clean energy sector and another 3% at the water and

sanitation sector (Intellecap 2015). Since 2002, a total impact investment of about EUR 58 million has been made into 29 green and inclusive business companies. This is a small amount compared to the overall financing available in India. But impact investing is still a relatively new sector with potential to grow. Analysis shows that India is, next to Kenya, the country that has attracted the largest amount of impact investment across all sectors.

Technology and business incubators provide advisory and infrastructure support to start ups and innovative businesses. Incubation is supported by the Department of Science and Technology (DST), National Science and Technology Development Board (NSTDB), and Technology Development Board (TDB). Investments from incubators are (a) grants in the range of INR 2 - 5 million (EUR 30,000 - 70,000) from various government schemes; (b) convertible debt or equity in the range of INR 2.5 - 5 million (EUR 35,000 - 70,000) from Technology Incubation and Development of Entrepreneurs (TIDE), NSTDB or TDB; as well as (c) equity or quasi-equity of INR 5 million (EUR 70,000). This small amount of funding is not suitable for green technology innovation which requires a larger amount of investment. India has only one specialised clean technology incubator which is the Centre for Innovation Incubation and Entrepreneurship (CIIE). The CIIE also runs India's only clean technology focused fund (INFUSE).

An overall trend that is apparent is the emergence of private players in the area of equity financing. India has been a favoured target of venture capital and international impact investors who have a track record in investing in green and inclusive businesses. These impact investors and venture capital firms usually raise money internationally and look for enterprises that fit the criteria of being green and inclusive, but there has been little financing from MFIs to consumers of these products. There are several venture capitalists that have financed companies focusing on green innovation, but there has been little incubator financing for companies in the early stage of innovation.

Challenges Faced by SMEs in Accessing Finance

Despite India's diverse and well-defined financial system, SMEs still face various challenges to access finance in general and specifically for green investments. The primary reasons for MSMEs are being unable to access finance are the collateral security requirement of banks (even with the existence of Credit Guarantee Fund Trust / CGTMSE scheme) and the fact that only 6% of MSMEs are registered.

In an analysis by IFC and Intellecap in 2012 (IFC 2012), almost 78% of SMEs' financing demand was met through informal sources or self-financing, and only 22% through formal sources. Banks and government financing agencies account for almost 90% of the formal sources, while the remaining 10% is supplied by non-banking financial companies (NBFCs). Public banks account for 70% of the banking debt to the MSME sector, while private and foreign banks 22% and small banks such as regional rural banks and urban co-operative banks 8%. There still exist significant barriers for SMEs in India to access green finance. These barriers exist in spite of the focused initiatives and actions of the financing institutions described in previous chapters. Barriers for a better access of SMEs to finance can be found on the demand and supply side.

Supply-side barriers

- **Risk aversion of banks and high collateral requirements restricts the provision of loans to SMEs.** Banks are usually risk averse and often have inflexible lending guidelines which require collaterals. Usually a property – either land or buildings – are required as collaterals. Oftentimes SMEs cannot provide adequate property as collateral, especially if they want to take up larger amounts of financing.
- **Application procedures are cumbersome for SMEs.** Complicated application forms and banking procedures as well as delays in fund disbursements often discourage SMEs from applying for a loan. It takes time for large public sector banks to approve loan applications, while the private sector banks tend to focus on larger (non SME) clients.
- **Financial institutions are often unfamiliar with green technologies.** Bank officers often lack knowledge on green technologies and business models as well as risk assessment tools for green finance products.
- **Venture capital and private equity investors do not have the investment horizon required for green financing.** The existing venture capital investor is typically geared to invest in information technology and consumer internet companies, as they promise higher returns compared to SMEs requiring capital for green innovation.

Demand-side barriers

- **The informality of SMEs makes it difficult for them to access financing.** SMEs are often unregistered and work outside the formal company law and banking systems. These SMEs conduct financial transactions in cash and do not have financial records. This makes it very difficult for banks and other lenders to assess their credit-worthiness. As a result SMEs find it challenging to access external finance, let alone green finance.
- **SMEs are not aware of the benefits of greening their production.** As energy has been heavily subsidised and the law enforcement for environmental protection is relatively poor in India, SMEs lack incentives to invest in SCP measures. Consequently, they do not generate demand for green financing products.
- **SMEs lack knowledge on particular financing schemes as well as green financing schemes.** Lack of awareness on financing options resulting from the unavailability of information is another major challenge for SMEs in accessing finance. In a recent survey, 71% of SMEs reported that they were unaware of the CGTMSE programme. Out of the 29% of SMEs that were aware, 99% found it difficult to obtain information from banks (Firstbiz-Greyhound Knowledge Group Initiative 2014).
- **SMEs often have to provide upfront finance for selling their green products.** There is lack of customer confidence for green products and services offered by SMEs. Interviews with these SMEs indicate long sales cycles on the part of large corporate customers to purchase green products. Within large corporations, green purchasing budgets are often limited as there is still lack of awareness of the new technology. Government purchases in sectors such as water, waste and energy are often extremely cumbersome. Purchasing managers, both within the government and the private sector, tend to push the risks to the SMEs. Therefore, there is a strong tendency among buyers to implement projects on a Build Own Operate Transfer (BOOT) basis, where the small or medium-sized vendor has to invest in the capital expenditure upfront. Naturally this puts additional pressure on SMEs' finances as very few SMEs have the ability to pay for the upfront capital expenditure of such projects.

Conclusions

From the overview of the financing sector it can be concluded that India has very promising green financing options for SMEs which are in line with the country's will to embark on a path towards sustainable consumption and production (SCP). However, given the size of challenges faced by the country, the options available are nowhere adequate. Although the Indian SME sector is energy intensive and polluting, there are few funding initiatives available to SMEs to address these challenges. Options for funding are restricted to registered SMEs which only make up a very small share of the total number of SMEs in the country. Several multi- and bilateral initiatives, such as the KfW-SIDBI energy efficiency and environmental credit lines, indeed have achieved considerable success in several selected MSME clusters. However, the scaling up of similar initiatives aiming at capacity building for green finance and an ease of lending conditions has been slow. Given the barriers described above, the following recommendations are given to enable SMEs to get better access to funding to invest in SCP measures:

- **Financial institutions need to move away from a collateral-based funding approach towards project finance.** Project finance would significantly help SMEs in raising finance for BOOT projects which are becoming the norm in the green business area. Project finance which addresses risks by securitisation of cash flows and "bankable" contracts between the vari-ous parties involved would be a key solution to un-lock the green financing for SMEs. The acceptance of project finance would take time. It is therefore recommended to start working with financial

institutions which have experience in the area of green investments, and to develop standard processes and templates in specific green areas (for example, solar rooftop and water treatment). It would also be crucial to collect data on the performance of project finance compared to conventional financing schemes.

- **A reform of the credit guarantee system is necessary.** The experience drawn from the Credit Guarantee Fund Trust (CGTMSE) scheme shows that the scheme needs to be marketed across the banks' branch networks, to support bank officers in actually applying the scheme. It is also essential to create clear procedures where a guarantee can be revoked. With regard to green investments, it should be considered to establish a specific green guarantee fund. This fund could be operated by an institution with experience in green technologies. This would make it easier for banks and non-banking financial companies (NBFCs) to provide financing for green investments. The Indian banking sector currently has a high level of liquidity and the provision of a "green guarantee" with clear and transparent guidelines will help unlocking this excess liquidity for green investments.

- **Banks need a more streamlined loan application process and a shared due diligence process.** This would significantly ease the process of accessing finance for SMEs. In addition, it would reduce the time required for a loan to be approved and it would make it easier for SMEs to submit a loan application to several financial institutions. It is recommended that, in consultation with other financial institutions, application forms and key documents are standardised. These standard documents, together with information on financing schemes, can then be made available to SMEs through an internet portal. Technical assistance should be provided to financial institutions to support them in achieving this task.

- **Lessons learnt from successful green SME financing schemes must be taken up by other financial institutions and these schemes need to be replicated.** There is an urgent need for financial actors to be encouraged to learn from best practices and adopt them to develop better assessment tools, while capacity building programmes for policy makers and banks could improve the way they disseminate information. In terms of financial actors, SIDBI has emerged as a green development bank and offered several innovative green financing instruments to promote the consumption and production of green products and services. However, there has been no other bank which has tried to provide a range of green financing options to the SME sector. An exception may be Yes Bank which has positioned itself as a "green bank," yet its impact on the SME sector has not been strong to this day.

- **Environmental laws and regulations should be enforced more strictly to drive a demand for green investments.** Currently, many of the environmental regulations are not strictly enforced. As a consequence many SMEs do not feel the need to adopt SCP measures. With stricter law enforcement, the authorities will contribute to generating more green investments made by the SMEs, thus a demand for green financing products. In addition, higher awareness about environmental standards needs to be created among SMEs, and support in terms of capacity building should be provided to the industries to comply with regulations.

- **Requirements for leasing schemes should be improved**. Leasing laws and accounting standards can be reviewed to enable NBFCs to set up green leasing schemes. Asset finance can unlock financing for many green investment projects (e.g. solar rooftop plant and energy efficiency equipment). However, a revision of financing lease structures is necessary in particular with respect to income tax laws and service tax laws, for these structures to become more attractive.

- **The infrastructure supporting clean technology SMEs needs to be strengthened.** So far there is only one specialised green incubator in India. Therefore, it is necessary to develop a Climate Innovation Centre where SMEs developing clean technology can test their products, develop their plans and also obtain seed funding. The need for seed funding is higher than what is currently available. The Climate Innovation Centre could be set up in a

model that comprises several organisations. They would then provide support to SMEs in different regions and sectors. Additionally, the government or international development institutions should consider a corpus to invest in clean technology venture funds. This would allow fund managers to establish a track record and help "crowd-in" private investment. Furthermore, an impulse to enhance the environmental awareness in society and the potential of SCP is needed as a critical next step. At the same time it is important that clear and transparent regulation on environmental protection and resource efficiency is defined and adequately implemented. Support in terms of finance, technology and knowledge needs to be made available to SMEs to adhere to the regulatory requirements. In turn, this would increase the demand for green products, for SCP practices and thereby also for all sorts of green financing.

With its projects, the SWITCH-Asia Programme can contribute to the development of the financial sector in India, especially with regard to the development of dedicated green SME finance products. There is an enormous opportunity for the projects funded by SWITCH-Asia to contribute to a project pipeline for SCP measures. As upscaling of SCP practices is the overall goal of the European Union funded programme and as most grant projects engage directly with SMEs, the SWITCH-Asia Programme can generate an increased demand for green SME finance. It needs to be demonstrated to financial institutions that such demand exists to encourage them developing and offering such financing products.

If project activities are related to SMEs, SWITCH-Asia projects often include a financing component. SMEs could be trained to increase their financial literacy and supported to develop appropriate financing proposals, preferably for SCP measures. At the same time financial institutions could be targeted through training and capacity building on specific opportunities for green investments. The financial institutions could be sensitised on the types of SCP investments relevant for the particular SWITCH-Asia project. This would make the access to finance easier for SMEs. Activities with financial institutions could be implemented on local branch level as well as general management level.

In addition, SWITCH-Asia projects could work on establishing alternative financing models – for example leasing models – for relevant SCP measures. There is also potential for bringing the supply and demand side together. Fairs and market places could be set-up where financial institutions and SMEs meet. At such events investment proposals would come together with funding. These events could be held for SMEs involved in one particular SWITCH-Asia project only, or for all companies participating in SWITCH-Asia projects in one particular country, or even at a regional level with financial institutions and SMEs from several countries. The SWITCH-Asia Programme should make use of its unique position and broad network to push the agenda for more and better access to green finance for SMEs in India and the region.

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Annex: Database with Funding Schemes

Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	
Implementing institution	Implementing agencies include: • State Power Distribution Companies • State Electricity Board • Government Power Department • Central Power Sector Undertakings • Co-operative societies
Description	The scheme has been launched by the Government of India to promote decentralised energy sources in off-grid areas. It offers a 90% capital subsidy for decentralised energy distribution and generation for villages where grid connection is not feasible or cost effective.
Target group and investments	Investments: • Rural electricity distribution backbone • Village electrification infrastructure • Decentralised distributed generation systems
Type of finance	Grant, loan
Volume, duration and status	Volume: INR 90 billion (EUR 1.2 billion)
Conditions	• 90% of financial support is provided as a grant. • 10% is provided as a loan.
Source(s)	*http://www.ddugjy.in*

Credit Guarantee Fund Trust Scheme (CGTMSE)	
Implementing institution	Government of India, SIDBI
Description	The CGTMSE provides funds for guarantees to 133 lending institutions. These lending institutions then provide collateral-free loans to SMEs.
Target group and investments	Target group: lending institutions; SMEs
Type of finance	Guarantee; loan
Volume, duration and status	Duration: in force since August 2000
Conditions	• Eligible borrowers: new and existing SMEs • The usual guarantee granted to the lending institutions is 75-80% of the sanctioned loan amount. • Through these lending institutions, SMEs have access to collateral-free loans. • Interest rate: max. 3% above the prime lending rate of the member lending institution
Source(s)	CGTMSE (2008): Credit Guarantee Trust Fund for Micro and Small Enterprises. Retrieved on 03.12.15 from *https://www.cgtmse.in/about_us.aspx.*

Technology and Quality Upgradation Support to MSMEs (TEQUP)	
Implementing institution	Various
Description	TEQUP is a government subsidy scheme that supports the adoption of energy efficient processes in SMEs. It is part of the National Manufacturing Competitiveness Programme which includes capacity building, energy audits and energy efficient technology (EET) development in SME clusters. The TEQUP scheme provides financial support for the following major activities: (1) Capacity Building of MSME Clusters in EET (2) Assistance in Implementation of EET Projects (3) Setting up of Carbon Credit Aggregation (CCA) Centres in Clusters (4) Assistance in Product Certification (5) Impact Studies & Administration
Target group and investments	Target group: SMEs that fulfil the following criteria: • Entrepreneurial Memorandum with an appropriate authority has been filed • Company has been audited for energy consumption and has a Detailed Project Report (DPR) on energy efficient technology by a qualified Energy Manager or Auditor • Part of the cluster intervened in under Major Activity 1 of the National Manufacturing Competitiveness Programme (NMCP) • Planned project must lead to at least 15% reduction in energy consumption • Investments: energy efficiency and product quality certification; implementation of energy efficient technology
Type of finance	Loan; subsidy
Volume, duration and status	The Fund has allocated CNY 5.92 billion (EUR 871 million) of concessional loan to support 97 projects in 20 provinces, and leveraged CNY 31.4 billion (EUR 4.6 billion) of market capital by October 2013. SMEs had been involved in over half the projects and benefited from over half of concessional loans. Duration: 2006 - onwards.
Conditions	• 25% capital subsidy for the introduction of well-established and improved technologies • Loans: max. INR 4 million (EUR 52,000) • Subsidy: max. INR 1 million (EUR 13,000)
Source(s)	*http://www.dcmsme.gov.in/schemes/TEQUPDetail.htm* *http://www.dcmsme.gov.in/schemes/technology&quality10.pdf* *http://www.msmediagra.gov.in/writereaddata/TEQUP-Guidelines-FINAL.pdf* *http://www.igep.in/live/hrdpmp/hrdpmaster/igep/content/e48745/e49028/e56114/e56207/SIDBI_EEinitiatives.pdf*

Technology Upgradation Fund Scheme (TUFS)	
Implementing institution	Several banks
Description	TUFS is a government subsidy scheme that supports the adoption of energy efficient processes in SMEs. It focuses on the power loom textile sector.
Target group and investments	Target group: textile and jute industries Investments: technology upgradation
Type of finance	Loan
Volume, duration and status	Duration: first launched in 1999, latest revision in March 2013, prolonged until March 2017 Status: ongoing
Conditions	• Different conditions for spinning and weaving industries, for details see homepage • Interest reimbursement for a period of 7 years, including 2 years of implementation / moratorium period • Investments like common effluent treatment plants and energy saving devices are NOT covered under the scheme
Source(s)	*http://www.idbi.com/tufs-textile-jute-industries.asp* *http://www.canarabank.com/English/scripts/CBTechnologyUpgradationFundSchemes.aspx*

Innovation Finance Programme	
Implementing institution	SIDBI, KfW
Description	The credit line provides assistance to innovative projects and SMEs that supply innovative clean technologies. The credit line is fully operational: as of September 2015, a total of INR 2,646 million (EUR 36 million) has been committed to 28 innovative clean technology SMEs.
Target group and investments	Target group: projects and SMEs Target sectors: energy efficiency, renewable energy, green buildings, water and waste water treatment, waste management, industrial pollution control, sustainable transport and sustainable agribusiness Investments: innovative clean technologies (products, processes, services)
Type of finance	Loan
Volume, duration and status	Volume: EUR 53 million credit line Duration: 2013 – 2016 Status: ongoing
Conditions	Minimum assistance: generally not less than INR 10 lakh (EUR 13,000)
Source(s)	*http://www.sidbi.com/?q=prequalification-notice-innovation-finance-programme* *http://sidbi.in/sites/default/files/products/KfW%20Innovation%20Finance%20Programme.pdf*

Promoting Energy Efficiency and Renewable Energy in Selected MSME Clusters	
Implementing institution	United Nations Industrial Development Organisation (UNIDO), GEF, SIDBI, BEE
Description	The project aims at developing and promoting a market environment for the introduction of energy-efficient technologies and the enhanced use of resource-efficient technologies in process applications in energy-intensive SMEs.
Target group and investments	Target group is SMEs from the following sectors: • Ceramic production • Hand tool production • Foundries • Brass production • Dairy production Investments: energy-efficient technologies
Type of finance	Various
Volume, duration and status	Volume: USD 6.1 million (EUR 5.5 million) Duration: 2011 – 2016 Status: ongoing
Conditions	N/A
Source(s)	*http://www.iipnetwork.org/databases/finance/unido-%E2%80%93-promoting-energy-efficiency-renewable-energy* *http://www.ipeec.org/solutions/projectlist/id/90.html*

Financing Energy Efficiency at MSMEs Project	
Implementing institution	SIDBI, BEE
Description	The objective of this project is to improve energy efficiency and to reduce GHG emissions by investing in energy efficiency goods and services in SMEs. Under this scheme money was transferred to SIDBI and BEE. While the SIDBI component was closed in 2014, the BEE programme is still running, with only 61% of the funds having been disbursed to date.
Target group and investments	Target group: SMEs from foundry, chemical and other sectors
Type of finance	Loan
Volume, duration and status	Volume: EUR 8.1 million to SIDBI EUR 2 million to BEE Duration: 2010 – 2016 (SIDBI component closed in 2014) Status: ongoing (BEE component)
Conditions	N/A
Source(s)	USAID and MoP 2013 SIDBI (n.d.): Financing Energy Efficiency at MSMEs Project. Retrieved on 03.12.15 from *https://www.sidbi.in/sites/default/files/ProjectBrief.pdf*

Energy Saving Line Phase I, II and III	
Implementing institution	SIDBI, JICA
Description	The programme provides financial assistance to SMEs through SIDBI and refinance to banks and other financial institutions. Key element of the scheme is a list of eligible energy efficiency equipment that can be financed. In phase I, the scheme financed investments in more than 2,900 SMEs; in phase II, 1,880 SMEs benefited from the scheme's financial support. The energy saving equipment list can be accessed here: *http://www.sidbi.in/sites/default/files/products/Annexure%20D%281%29%20ESEL%207.5.pdf*
Target group and investments	Target group is SMEs fulfilling the following criteria: • Defined as MSME as per MSMED Act 2006 • Satisfactory financial track record and sound financial position • Minimum investment grade rating of SIDBI • Saving potential of equipment / machinery needs to be above 10% Investments: • Acquisition of energy saving equipment / facilities • Replacement of obsolete industrial furnaces and / or boilers • Installation / improvement / adoption of manufacturing machinery for improved energy performance • Installation of heating, lighting etc. systems for improved energy performance • Introduction of equipment using alternative energy sources • CDM projects
Type of finance	Loan
Volume, duration and status	Volume: EUR 220 million for each phase Duration: since 2008 Status: ongoing
Conditions	• Minimum assistance: INR 1 million (EUR 13,000) • Minimum promoters contribution: 25% for existing units; 33% for new units • Debt-equity ratio: max. 2.5 : 1 • Interest rate: as per credit rating and 1% below the normal lending rate • Upfront fee: Non-refundable upfront fee of 1% of sanctioned loan plus applicable service tax • Security: First charge over assets acquired under the scheme; first/second charge over existing assets and collateral security as may be deemed necessary • Minimum Asset Coverage should be 1.4 : 1 for new units and 1.3 : 1 for existing units • Repayment period: Need based. Normally, the repayment period does not extend beyond 7 years. However, longer repayment period of more than 7 years may be considered under the energy saving line if considered necessary
Source(s)	SIDBI (2012): Financing Schemes for Energy Efficiency & Cleaner Production. Retrieved on 03.12.15 from *https://www.sidbi.in/?q=financing-schemes-energy-efficiency-cleaner-production* SIDBI (n.d.): JICA – SIDBI Financing Scheme for Energy Saving Projects in MSME Sector (Phase II). Retrieved on 03.12.15 from *https://www.sidbi.in/sites/default/files/JICA%20Phase-II%20Scheme_Brochure.pdf*

Energy Efficiency Credit Line	
Implementing institution	SIDBI, KfW
Description	The credit line supports SMEs to reduce their energy consumption and to increase their energy efficiency. It provided financial assistance to more than 270 SMEs and achieved a reduction of GHG emissions by 30 tonnes of CO_2 per INR 1 million (EUR 13,000) invested.
Target group and investments	Target group: SMEs fulfilling the following criteria: • SME as per definition of the MSMED Act 2006 • Satisfactory financial track record and sound financial position • Score above the minimum investment grade rating as per SIDBI's extant loan policy • Planned investments will result in significant energy savings and reduction of GHG emissions • Planned investments will upgrade existing installations instead of merely enhancing production capacities • Civil construction is less than 25% of total project cost Investments: Equipment, technology or process improvements for improved energy performance, including: • Insulation of e.g. heat pipes • EE lighting • Variable speed drives • Upgrading or modernisation of industrial boilers • Heat recovery systems • Optimisation of air pressure systems • Fuel switching • Introduction of energy efficient equipment / machinery
Type of finance	Loan
Volume, duration and status	Volume: EUR 50 million Duration: 2009 – 2014 Status: closed
Conditions	• Minimum assistance: INR 1 million (EUR 13,000) • Minimum promoter's contribution: 25% of project cost • Overall debt / equity ratio: 2 : 1 • Interest rate: as per credit rating and 1% below the normal lending line • Asset coverage: 1.3 for manufacturing unit and 1.75 for service sector unit • Repayment period: need based, normally not more than 7 years
Source(s)	KfW & SIDBI (n.d.): Financing Energy Efficiency Projects in the MSME Sector. Retrieved on 03.12.15 from *https://www.sidbi.in/sites/default/files/SIDBI_Flyer_Financing%20EE%20Projects.pdf*

Solar Rooftop Financing Scheme	
Implementing institution	IREDA
Description	The loan scheme is applicable to grid interactive, rooftop solar PV plants for industries, institutions and commercial establishments. Financing can be accessed for single or aggregated investments.
Target group and investments	Target group: SMEs Investments: solar rooftops for various business models (captive use, sale to grid under net/gross metering agreements or direct sale)
Type of finance	Loan
Volume, duration and status	Duration: launched in 2015 Status: ongoing
Conditions	• The applicant's minimum capacity needs to be 1MW. • In case of aggregation, the smallest sub-project has to be at least 20 kW. • Interest rate: 9.9% - 10.75% • Max. repayment time: 9 years • Minimum promoter's contribution: 30%
Source(s)	IREDA (2015): Loan Scheme for Financing Rooftop Solar PV Grid-connected / Interactive Power Projects. Retrieved on 03.12.15 from *http://mnre.gov.in/file-manager/UserFiles/IREDA-Solar-PV-Loan-Scheme.pdf.*

PNB Solar Energy Scheme (PNB Saur Urja Yojana)	
Implementing institution	Punjab National Bank
Description	The scheme helps farmers to purchase solar lighting and solar water heating systems.
Target group and investments	Target group: • Small farmers • Marginal farmers • Share cropper • Tenant farmers • Agri-entrepreneurs Investments: • Solar home lighting • Solar water heating systems
Type of finance	Loan
Conditions	• Extent of loan: need-based with a max. limit of INR 50,000 (EUR 650) • Repayment: 5 years in yearly or half-yearly instalment
Source(s)	Punjab National Bank (n.d.): PNB Saur Urja Yojana. Retrieved on 03.12.15 from *https://www.pnbindia.in/new/Upload/En/Scheme15.pdf.*

Energy Saving Loan Scheme for SMEs	
Implementing institution	Canara Bank
Description	The scheme supports the acquisition and/or adoption of equipment and/or measures related to energy saving. It does not include ESCO projects.
Target group and investments	Target group isSMEs fulfilling the following criteria: • Energy costs are less than 20% of production costs • Availability of an energy audit report issued by an approved energy consultant or auditor • Borrowal a/cs-ASCC code S1 or S2 during previous review • Current account holder at Canara Bank with satisfactory financial track record during the previous year Investments: technology upgrade and energy efficient equipment
Type of finance	Loan
Volume, duration and status	Ongoing
Conditions	• The scheme covers up to 90% of project costs of up to INR 1 million (EUR 13,000). • Max. loan: INR 10 million (EUR 130,000) • Security: collateral free up to INR 5 million (EUR 65,000), beyond INR 5 million collateral required as determined by the bank • Margin: 10% of project costs • Rate of interest: 1% less than the applicable rate • Upfront fee: 1% of the loan
Source(s)	Canara Bank (n.d.): Scheme for Energy Savings for Small & Medium Enterprises (SME) Sector.

Scheme for Financing Energy Efficiency Projects	
Implementing institution	Bank of Baroda
Description	Financing SMEs for acquisition of equipment, services and adopting measures for enhancement of energy efficiency/conservation of energy.
Target group and investments	SME units already financed by the Bank of Baroda as well as SMEs that want to shift their account to Bank of Baroda. Investments: • Cost of acquisition/modification/renovation of equipment/software • Cost of alterations to existing machinery • Cost of structural/layout changes • Cost of energy audit/consultancy • Preparation of Detailed Project Report (DPR)
Type of finance	Loan
Status	Ongoing
Conditions	Limit: Up to 75% of the total project cost, subject to maximum of Rs. 1/- crore. (Minimum amount of loan Rs. 5/- Lakhs). Interest rate: Base rate plus 4.00% p.a Repayment terms: Maximum 5 years, including moratorium, if any. Collateral / security • For Sole Banking Accounts: Extension of first charge on all fixed assets. • For Consortium/Multiple Banking Accounts: First charge on equipments acquired out of loan and collateral, if any, with the total security coverage being not less than 1.25.
Source(s)	*http://www.bankofbaroda.com/bbs/financeenergy.asp*

Renewables Seed Programme	
Implementing institution	Infuse Ventures
Description	Infuse Ventures is a capital firm specialised in supporting clean technology entrepreneurship. It provides business and mentoring support as well as seed and early-stage capital. The Renewables Seed Programme is supported by the Ministry of New and Renewable Energy (Government of India) and promotes to adoption of renewable energy in India through new IT, financial model and product innovations.
Target group and investments	Investments: Projects related to cleantech and sustainability, including: • Renewable energy • Energy efficiency • Water and waste • Distributed energy • Sustainable agriculture • Green buildings • Sustainable transport • Green IT and cleanweb
Type of finance	Loan; equity
Volume, duration and status	N/A
Conditions	• Investments are between INR 10-100 million (EUR 130,000 – 1.3 million) • Additional capital may be accessed through Infuse Venture's network of debt and equity investors
Source(s)	Infuse Ventures (2013): *http://www.infuseventures.in/#infuse*

Green India Venture Fund (GIVF)	
Implementing institution	IFCI Venture Capital Funds Ltd.
Description	The Green India Venture Fund invests in companies that set up CDM projects or other projects / businesses that pursue "green" objectives.
Target group and investments	Target group is companies or projects that set up CDM projects or intend to achieve one or several of the following objectives: • Reduction or elimination of negative ecological impact • Improvement of responsible resources use • Promotion of alternative energy sources • Achieving greater ecological balance and a sustainable environment Investments: • Transition to renewable / non-conventional energy • Energy storage, e.g. fuel cells, hybrid systems, etc. • Waste management • Water and waste water • Pollution control • Sustainable transportation • Clean / environmental friendly materials • Afforestation and reforestation • "Greening" industrial and manufacturing processes
Type of finance	Equity
Volume, duration and status	Volume: the corpus size of the fund is approx. INR 3300 million (EUR 4.3 million) Duration: 7 years with 3 prolongation options of 1 year each
Conditions	• Max. investment per portfolio company shall not exceed 10% of the fund corpus • Investments are generally made in early stage or expansion capital stage
Source(s)	GIVF (n.d.): *http://www.ifciventure.com/Funds-fund-givf-objective*

Technology Incubation and Development of Entrepreneurs (TIDE)	
Implementing institution	Department of Electronics and Information (DeitY), Ministry of Communications & IT, Government of India
Description	The scheme supports 27 incubation centres at academic institutions across India. Its aims are to: • Set up and strengthen technology incubation centres • Promote technology entrepreneurship development • Promote product orientated research and development • Encourage and accelerate development of indigenous products and packages • Bridge the gap between R&D and commercialisation
Target group and investments	Target group: Institutions of higher learnings, young entrepreneurs
Type of finance	Incubation services
Volume, duration and status	Duration: 2008 – 2017 Status: ongoing
Conditions	• Each TIDE centre may receive financial support of up to INR 155 lakhs, payable in instalments • Up to INR 30 lakhs may be spent on infrastructure improvements • Up to INR 125 lakhs may be spent on the provision of financial support to the incubating companies
Source(s)	DeitY (n.d.): Technology Incubation and Development of Entrepreneurs. Retrieved on 03.12.15 from *http://deity.gov.in/content/technology-incubation-and-development-entrepreneurs-dpl-innovation.*

Venture Capital Fund	
Implementing institution	Andhra Pradesh Industrial Development Corporation venture fund managed by Venture East Fund Advisors (India) Ltd
Description	Series A investor, Venture capital fund
Target group and investments	Multi sector focused (green sectors invested in includes renewable energy, energy efficiency, water, solid waste management and sustainable agribusiness).
Conditions	Typical ticket EUR 0.9-4.5 million
Contact	APIDC venture capital pvt ltd, 8-2-546, Plot # 140, Sheesh Mahal, road no.7, Banjara Hills, Hyderabad 500 034 Venture east fund advisors (India) ltd, 5B Ramachandra Avenue, Seethammal colony, 1 Main Road, Alwarpet, Chennai 600 018 Tel: +91 (0)44 2432 9864 / 2432 9863, e-mail: *info@ventureast.net*
Source(s)	*http://www.ventureast.net*

Venture Capital Fund	
Implementing institution	Blume Venture Advisors Pvt. Ltd.
Description	Seed investor, Venture capital fund
Target group and investments	Multi sector fund (green sectors invested in includes energy efficient lighting and carbon capture)
Conditions	Typical ticket size is INR 10 million (EUR 130,000)
Contact	Blume Venture Advisors, unit 4, Jetha compound, opposite Nirmal Park, Byculla east, Mumbai 400 027
Source(s)	*http://www.blumeventures.com*

Venture Capital Fund	
Implementing institution	SIDBI Venture Capital Ltd. (SVCL)
Description	Series A investor, Venture capital fund
Target group and investments	Multi sector focus (green sectors invested in includes renewable energy, automotive efficiency and sustainable agribusiness)
Conditions	Typical size is EUR 0.9-2.7 million
Contact	Ground floor, MSME Development Centre, C-11, G block, BandraKurlacomplex, Bandra east, Mumbai 400 051 Tel: +91 (0)22 2652 7124/25/27/28, e-mail: *info@sidbiventure.co.in* *http://www.sidbiventure.co.in*
Source(s)	*http://www.sidbiventure.co.in*

Venture Capital Fund	
Implementing institution	CIIE and IIM Ahmedabad / INFUSE Ventures
Description	Seed investor, Venture capital fund
Target group and investments	Exclusive focus on green sectors (renewable energy, energy efficiency, eWaste, sustainable agribusiness and green IT)
Conditions	Typical size EUR 0.9 million
Contact	C/O Centre for Innovation Incubation and Entrepreneurship (CIIE), IIM Ahmedabad, New Campus Vastrapur, Ahmedabad 380 015 Tel: +91 (0)79 6632 4201/ 4234 e-mail: *kunal@iimahd.ernet.in*
Source(s)	*www.infuseventures.com*

Venture Capital Fund	
Implementing institution	IFCI Venture Capital Funds Ltd / Green India venture fund (GIVF)
Description	Venture capital fund
Target group and investments	Exclusive focus on green sectors (renewable energy, energy efficiency and solid waste management)
Conditions	N/A
Contact	IFCI Tower, 16 floor, 61 Nehru Place, New Delhi 110 019 Tel: +91 (0)11 4179 2800, e-mail: *business@ifciventure.com* *http://www.ifciventure.com*
Source(s)	*http://www.ifciventure.com*

Venture Capital Fund	
Implementing institution	Global Environment Fund
Description	Series A investor, venture capital fund
Target group and investments	Exclusive focus on green sectors
Conditions	Typical size EUR 0.9-4.5 million
Contact	76A, North Avenue 3, Maker Maxity, BandraKurla complex, Bandra east, Mumbai 400 051 Tel: +91 (0)22 6124 7100
Source(s)	*http://www.globalenvironmentfund.com*

Private Equity Fund	
Implementing institution	Fidelity Growth Partners
Description	Private equity investor
Target group and investments	Multi sector focus (green sectors invested in includes renewable energy)
Conditions	Typical size EUR 4.5 million and higher
Contact	304, 3 floor, Tower A, Peninsula business park, Mathuradas Mills, SenapatiBapat Marg, Lower Parel, Mumbai 400 013 Tel: +91 (0)22 6655 4200, E-mail: *info@fidelityindiacapital.com*
Source(s)	*http://www.fidelitygrowthpartners.in/*

Private Equity Fund	
Implementing institution	Peepul Capital
Description	Private equity investor
Target group and investments	Multi sector focus (green sectors invested in water, solid waste management and sustainable agribusiness)
Conditions	Typical size EUR 4.5 million and higher
Contact	62, ABM Avenue, Boat Club road, R A Puram, Chennai 600 028 Tel: +91 (0)44 4223 5000, E-mail: *contact@peepulcapital.com*
Source(s)	*http://www.peepulcapital.com/*

Impact Fund	
Implementing institution	Aavishkar India Micro VC Fund
Description	Invests in SMEs that promise commercial returns with additional social benefit
Target group and investments	Multi-sector focus including green and inclusive business (particularly clean and water access)
Conditions	Typical ticket size is EUR 0.89 million
Contact	13B, 6 floor, Techniplex II, IT park, off Veer Sarvarkar fly over, Goregaon west Mumbai 400 062 Tel: +91 (0)22 6124 8900, E-mails: *funds@aavishkaar.org*
Source(s)	*http://www.aavishkaar.in/*

Impact Fund	
Implementing institution	Acumen Fund
Description	Invests in SMEs that promise commercial returns with additional social benefit
Target group and investments	Multi-sector focus including green and inclusive business (particularly clean and water access)
Conditions	Typical ticket size is EUR 0.89 million
Contact	203 Dheeraj Plaza, Hill road, Bandra west, Mumbai, 400 050 Tel: +91 (0)22 6740 1500, E-mail: *mvastari@acumen.org*
Source(s)	*http://acumen.org/*

Microfinance	
Implementing institution	Friends of Women's World Banking India (FWWB-I)
Description	Women's access to finance; Loans for solar energy lamps, water purification and sanitation; have financed toilets and water connections in 2,000 households as well as 53,000 lamps through 48 partner organisations
Target group and investments	Women
Conditions	N/A
Contact	101, Sakar I building, opposite Gandhigram station, Ashram road, Ahmedabad 3800 09 Tel: +91 (0)79 2658 0119, 2658 4199, E-mail: *fwwb@fwwbindia.org*
Source(s)	*http://fwwbindia.org*

Microfinance	
Implementing institution	Oikocredit Maanaveeya Development & Finance Limited MDFL
Description	Loans to MSMEs manufacturing and distributing solar lamps and home lighting systems (Thrive solar), sustainable agribusiness (Darjeeling organic tea estates Pvt. Ltd.) Loans to other MFIs for on lending Total sanctioned loan volumes of INR 250 million (EUR 3.3 million)
Target group and investments	Poor and disadvantaged communities
Conditions	N/A
Contact	Door no. 8-2-293/82/2/208/A and 208/A/1, M.L.A's colony, Banjara Hills, road no. 12, Hyderabad 500 034 Tel: +91 (0)40 2355 4729, E-mail: *office.in@oikocredit.org*
Source(s)	*http://www.maanaveeya.org/*

Microfinance	
Implementing institution	Saija Finance Pvt. Ltd
Description	Loans for purchasing solar lighting products
Target group and investments	SMEs, urban and rural poor
Conditions	N/A
Contact	3 floor, Uma complex, Fraser road, Patna, Bihar 800 001 Tel: + 91 (0)612 233 2009, E-mail: *info@saija.in*
Source(s)	*http://www.saija.in/products-2*