
ENERGISING DEVELOPMENT

CSR IN CLEAN ENERGY

What are India's top companies up to?

Strategic Partners:



Acknowledgements



We are deeply grateful for the support from Shakti Sustainable Energy Foundation and International Finance Corporation in creating this report and in our ongoing collaborations in the clean energy sector.

We would like to specially thank Anil Misquith, Trustee of Collective Good Foundation, for his insights from working with companies and implementation agencies to strategise impactful clean energy projects. A special mention to Nainika Kotian for her support in collating and analysing the data for this report.

The report's narrative was also shaped by the insights of key personnel from companies, social organisations and other entities. We hope to collaborate with them in the future to share experiences and work together to build a robust CSR ecosystem in clean energy.

Samhita also wishes to acknowledge the team from Collective Good Foundation, our implementation partner, for their contributions to the report.

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Frontier Markets

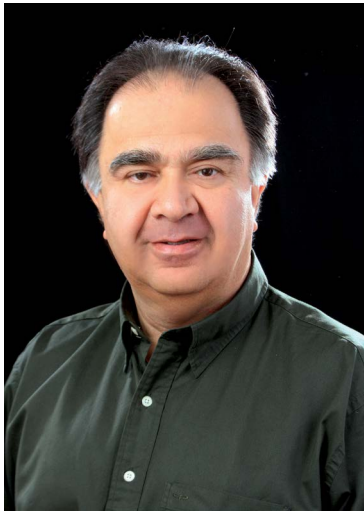
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Foreword



KRISHNAN DHAWAN

*CEO,
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Energy Foundation*



For India to eradicate poverty by 2031, sustained economic growth rate of 8 to 10 per cent per year is essential. The need to drive growth and opportunity for its 1.3 billion people as quickly and as equitably as possible has never been greater. In a global economy powered by technology and information, access to electricity will make the difference between a promise fulfilled and potential squandered.

India is a long way away from achieving this goal. Energy access and energy security continues to be a challenge in rural India where, approximately 45 per cent of the households do not have reliable electricity access.

The Indian government has recognised the importance of universal energy access for India's future, setting the laudable goal of electrifying every corner of the country by 2018. The current CSR Act represents an unprecedented opportunity to drive social progress. The private sector must rally around this ambition, harnessing their resources alongside the government's efforts to make this a possibility.

Leveraging this opportunity to catalyse social change needs pre-requisites such as access to actionable insights and knowledge, evidence of gaps and suggestions on opportunities.

Samhita Social Ventures has undertaken this study in line with our vision of strengthening the energy security of the country by aiding the design and implementation of policies that encourage renewable energy, energy access, energy efficiency and the adoption of sustainable transport. This study analyses the CSR activities of the top 100 companies with the largest CSR spends on the BSE 500 to map their efforts to promote access to energy in India.

I sincerely hope that this study will provide valuable inputs to companies as they plan their future CSR investments.

I would like to thank the team at Samhita Social Ventures for this effort.

Foreword



ANJALI GARG

*Energy Specialist
and Program Manager
- Lighting Asia/India
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LIGHTING ASIA
Catalyzing markets for modern off-grid energy
INDIA



Worldwide there are over 1.2 billion people without access to grid electricity, of which 300 million people, as of 2016, were in India. While the number of households that are not connected to grid electricity has reduced since then due to a nationwide electrification push, significant progress still needs to be made to connect the others to the grid and to ensure reliability and quality of supply and service.

Lighting Global is the World Bank Group's platform to support sustainable growth of the international off-grid solar market as a means of rapidly increasing energy access to these underserved communities. Through Lighting Global, the International Finance Corporation (IFC) and the World Bank work with the Global Off-Grid Lighting Association (GOGLA), manufacturers, distributors, and other development partners to develop the modern off-grid energy market. Lighting Global, and its related programmes, support market development in 17 countries – including India through the Lighting Asia/India programme. Lighting Asia/India works with private sector companies locally to remove market entry barriers, provide market intelligence, foster business linkages, and raise consumer awareness on quality assured modern lighting solutions.

Since the introduction of the Companies Act, 2013, the corporate sector in India has collectively ramped up activity in the social sector supporting various causes and interventions through targeted CSR activities. The estimate of total CSR funding was pegged at USD 2.5-3 billion (INR 167-201 billion) from around 16,000 eligible companies, in 2014-2015. For the off-grid energy market, we believe that companies can work with other ecosystem stakeholders to promote quality assurance, drive consumer confidence, and help increase uptake of products and services.

Samhita's analysis of existing trends in clean energy CSR programmes provides a window into the decision-making process of the companies supporting activities in the clean energy space. Their analysis highlights areas of programmatic interest and potential collaboration in strategic areas aligned to business goals.

Companies can play a crucial role in developing and sustaining the off-grid energy market. I hope that this study will guide and encourage companies to improve and scale up their support to the off-grid clean energy ecosystem, and help them move further on the path to achieving their own sustainable business and clean energy goals.

Executive Summary

WHY THIS REPORT?

Approximately 300 million people in India were estimated to lack access to energy, while an even higher number experienced intermittent access¹. Since a majority of the population resides in rural areas, energy access acquires strategic importance for poverty reduction, quality of human capital, livelihood opportunities, inclusive economic development and social justice.

Section 135 of the Companies Act, 2013 has created a historic opportunity for companies to enable widespread social change through systematic Corporate Social Responsibility (CSR) activities. However, leveraging this opportunity requires certain prerequisites such as access to actionable insights and knowledge, evidence of gaps and suggestions on opportunities.

This study analyses the CSR Initiatives of the top 100 companies with the largest CSR spends from the BSE 500 and maps efforts in promoting energy access to understand the underpinning rationale, identify gaps and opportunities and nudge companies and other stakeholders to overcome these challenges through recommendations.

The following are the major findings from the study:

LOW CSR PRESENCE IN CLEAN ENERGY

Of the 100 companies, only 39 had programmes in clean energy. According to Samhita's previous research, this is low compared to the level of CSR activity in other cause areas; more than 50 per cent

of the top 100 companies have CSR programmes in education, sanitation or skills and livelihoods.

Companies in power and oil and gas industries were most likely to support clean energy projects, capitalising on the strategic alignment and leveraging core competencies. These were followed by the manufacturing and heavy engineering industry, focusing on communities in the vicinity of factories and regional offices.

On average, the clean energy budget amounted to six per cent of overall CSR spends, with the median budget being INR 2.45 crore.

Through the multi-stakeholder interviews conducted as part of this study, the following reasons were highlighted for relatively low participation:

- Access to energy interventions were sometimes perceived to be highly technical in nature. This could discourage CSR teams in companies that may not have the required capacities and capabilities.
- While decisions on CSR projects within health, education, skills etc. were helmed by CSR teams, clean energy cut across CSR, sustainability and even business portfolios, leading to fragmented decision making and a greater lead time.
- Companies found it difficult to source qualified and technically competent implementation partners in geographic areas of interest.

¹ <http://documents.worldbank.org/curated/en/562191468041399641/Power-for-all-electricity-access-challenge-in-India>

- Energy access was not prioritised during needs assessments as its absence was not as noticeable as water or sanitation issues; communities avail of alternative, unclean forms of energy such as kerosene (with the help of subsidies) or firewood.
- Companies believed that the Government's rural electrification policy could render off-grid projects redundant. However, the Draft Energy Policy, released by the Government in August 2017, states that off-grid lighting solutions can play a complementary role given the intermittent nature of electricity supply.

PREFERENCE FOR PRODUCT-BASED APPROACHES

Among the 39 companies that were involved in clean energy, the majority focused on product-based solutions. For example, 20 out of 39 companies installed solar street lights, 18 distributed solar lamps or lanterns for household use. The study identified three

factors as important for the successful delivery of this approach:

- Emphasising on awareness and behaviour change as rural and bottom of the pyramid (BoP) communities face knowledge gaps, compounded by socio-cultural beliefs and convoluted decision-making. For example, women may appreciate the product but the men decide whether or not the investments can be made.
- Ensuring quality of products to increase consumer confidence and consistent usage among new and current users.
- Providing robust after-sales service that ensures repairs and maintenance, and enhanced acceptability. One of the popular models of integrating after-sales services into the supply chain and generating livelihoods, is creating de-centralised networks of small local entrepreneurs close to where the products are being sold.

“Our ‘Saral Jeevan Sakhis’ and ‘Saral Jeevan Sahyogis’ are change agents for India’s rural communities. Using this innovative model, we provide last mile energy access through empowerment and livelihood generation. We create credible partnerships to build innovative products, execute go-to-market plans and weave impact solutions.”

—
Ajaita Shah
Founder,
Frontier Markets

Mandeep Singh
CEO,
Frontier Markets

DIVERSITY OF OPINION ON PAYMENT BY BENEFICIARIES

Stakeholders raised concerns around the sustainability of clean energy projects once a company exited and on whether communities should pay for energy solutions. The concern assumes added importance as there are many social businesses serving the BoP and rural markets, and whose existence depend on consumers' ability and willingness to pay.

The study revealed a variety of opinions regarding this:

- Many companies supported co-paying or co-funding as they believed this was essential to ensure both buy-in from the households and sustainability of the project. Some companies instituted creative solutions such as selling the surplus power to microenterprises in villages to recover costs or creating a prepaid system accessible via villagers' mobile phones to facilitate payments.
- Companies that worked in remote locations or tribal belts felt that communities in their catchment areas lived on extremely low incomes and would not have the capacity to contribute to the project financially.

- A few companies believed that some projects such as street lighting could be financed through CSR grants since these were public services that any single household or community would not be willing to support, though government schemes could be leveraged wherever applicable.
- The manufacturers of products did not favour co-funding as it would complicate cost recovery while the distributors were comfortable as it was aligned to their business model.

PREFERENCE FOR SOLAR ENERGY

37 out of 39 companies utilised some form of solar energy in their clean energy programmes. The preference for solar can be attributed to a variety of factors such as geographical feasibility across India, strong push from domestic policy towards solar energy, reduction of the costs in solar energy production due to financial incentives, cheaper input prices, etc.



MAPPING PRESENCE OF CSR AND NEED FOR ENERGY ACCESS

To understand geographical gaps, the report mapped states based on the need for energy access programmes and the distribution of CSR activity in clean energy:

- The need for energy access was highest in Bihar and Meghalaya but CSR activity in clean energy was low.
- On the other hand, Karnataka and Maharashtra, which provide better energy access comparatively, had a high proportion of companies implementing energy programmes via CSR.
- A few states such as Uttar Pradesh and Madhya Pradesh saw a high need for energy access matched by high CSR activity in clean energy. This could be attributed to the progressive state policies that encourage

the deployment of renewable energy. Odisha also had high need for energy access and high CSR support, mainly from power and mining companies.

PROMOTING CLEAN ENERGY THROUGH SUSTAINABILITY

Corporate activity in clean energy and energy access was not just limited to CSR. The report revealed that 88 companies out of 100 reported energy efficiency measures as part of their internal operations and sustainability agenda. Managing the environmental impact of one's own operations was seen as necessary to help India meet its commitments to the Paris Agreement on Climate Change and to ensure competitiveness of the corporate sector.

“*Rockefeller Foundation’s Smart Power For Rural Development (SPRD) initiative is focussed on creating a robust energy ecosystem. It champions a decentralized energy solution that builds partnerships among various stakeholders and ensures community buy-in with the goal of sustained and impactful community development. The initiative has boosted local economies through livelihood generation and entrepreneurial opportunities and increased the standard of living in communities.*”

—
Deepali Khanna
*Director, Smart Power for Rural Development,
Rockefeller Foundation.*

RECOMMENDATIONS

Supporting the entire value chain

CSR needs to adopt a more holistic approach, investing in not only product distribution or installation, but also behaviour change, product maintenance, after-sales services and so on.

Integrating energy into community development

Incorporating energy access into community programmes will directly impact education, livelihoods, healthcare and agricultural productivity.

Innovative financing

Companies can support innovations to promote bottom of-the-pyramid (BoP) technologies; develop B2B models to provide seed capital to social enterprises via technological incubators; and explore pooled-funding options to drive scale and impact.

Measuring and articulating impact

Impact assessments ensure robustness in the delivery of programmes. They help articulate, measure and report the social returns on CSR investments and highlight gaps and best practices.

Investing in the ecosystem

By supporting intermediaries such as think tanks and foundations in generating research and evidence, companies can help bridge the gap between policy and practice.

Bajaj Electricals provided seed funding to ONergy Solar through IIM Ahmedabad's Centre for Innovation Incubation and Entrepreneurship (CIIE) as an intermediary.

“Bajaj Electricals aims to help ONergy Solar through the CIIE in innovation and to expand its set up to North East of India. ONergy has been a pioneer in developing innovative and customised solar solutions, setting up last mile energy distribution and service networks through Renewable Energy Centres (RECs), and reaching out to underserved households and institutions.”

—
Madhura Talegaonkar
Head - CSR,
Bajaj Electricals



Introduction

“Energy is the golden thread that connects economic growth, social equity and environmental sustainability. With access to energy, people can study, go to university, get a job, start a business and reach their full potential².”

—
Ban Ki-moon
Former Secretary General,
United Nations

According to the World Energy Outlook, as of 2016, around 16 per cent of the world’s population, or 1.2 billion people, did not have access to electricity³. In India, close to 300 million people were estimated to lack access to energy, while an even higher number faced intermittent access⁴. This was estimated to cost the country approximately 7 per cent of its GDP⁵ annually. Lack of energy access has implications for education, livelihoods, health & sanitation, and safety - factors that have a direct bearing on the inclusiveness of economic development and the quality of human capital.

With India’s population pegged at 1.3 billion and an estimated 67.5 per cent residing in rural areas⁶, energy access acquires strategic importance for poverty reduction and social justice.

Against the backdrop of such statistics, the Hon. Indian Prime Minister, Shri Narendra Modi, has reiterated the country’s commitment to the Sustainable Development Goals (SDGs) of which the seventh SDG is concerned with ensuring access to affordable, reliable, sustainable and modern energy for all. Recently, the central government launched the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (or Saubhagya) to ensure universal household electrification in both rural and urban areas by providing last mile connectivity⁷. India made a commitment at the UN Climate Change conference in Paris (COP21) in 2015 to reduce carbon emissions. Towards this, clean energy is being pursued as one of the solutions while facilitating greater access to energy. The government has also drafted a National Policy on Renewable Energy based Micro Grids⁸, which has aimed to build 10,000 renewable micro and minigrids across the country by 2017.

² <http://in.one.un.org/page/sustainable-development-goals/sdg-7/>

³ <http://www.worldenergyoutlook.org/resources/energydevelopment/energyaccessdatabase/>

⁴ <http://documents.worldbank.org/curated/en/562191468041399641/Power-for-all-electricity-access-challenge-in-India>

⁵ <http://www.wri.org/blog/2017/02/5-issues-watch-india-reaches-ambitious-energy-access-target>

⁶ <http://blogs.worldbank.org/developmenttalk/india-s-chaotic-and-messy-use-energy>

⁷ <http://www.tradingeconomics.com/india/rural-population-per-cent-of-total-population-wb-data.html>

⁸ <https://energy.economicstimes.indiatimes.com/news/power/pm-modi-launches-saubhagya-yojana-to-ensure-pan-india-electrification-by-march-2019/60830220>

Renewable Energy Policy Timeline

The trajectory of India's energy policy has been constantly evolving to encourage greater access and use of renewable sources.



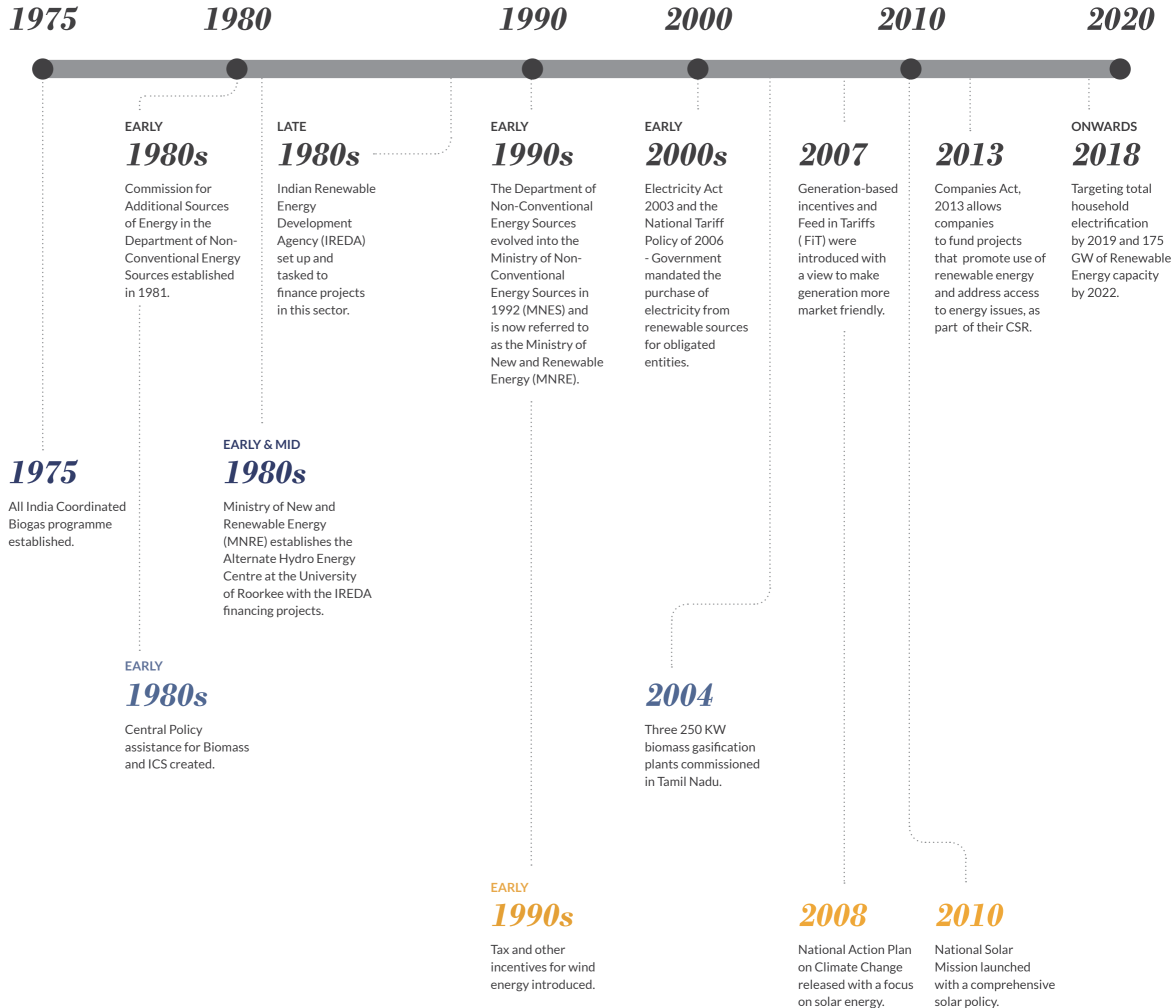
Hydro and Biogas



Biomass and ICS



Wind and Solar



While the government's efforts to ensure energy access gain momentum, the mandatory CSR provision in Section 135 of the Companies Act, 2013 has institutionalised companies as critical stakeholders in the nation's development. To put the CSR opportunity for renewable energy into perspective, estimates of total CSR funding in India are being pegged at USD 2.5-3 billion (INR 167-201 billion) from around 16,000⁹ eligible companies. However, the Act goes beyond merely unlocking financial support for the development sector. In a "Frequently Asked Questions" document issued by the Ministry of Corporate Affairs, the government states, "The objective of this provision is indeed to involve companies in discharging their social responsibility with their innovative ideas and management skills and with greater efficiency and better outcomes¹⁰."

The clean energy sector represents an USD 160 billion opportunity¹¹. However, while the market potential of clean energy has been discussed and deliberated by many reports¹² the CSR angle has not seen much review. The report does analyse the intersection of CSR and business for clean energy, but does not explore business models. Even so, it fully recognises the contribution of private sector through core business models, products and services. It's aim is to provide a snapshot of existing corporate efforts in promoting access to energy through clean and renewable sources, through CSR.



Methodology

This report studied the CSR efforts of the top 100 companies with the largest CSR spends, on the BSE 500. The report focuses on the activities of these companies because of their position as leaders of Indian industry whose decisions are likely to set trends for the CSR sector. Their influence on CSR is significant due to their large CSR spends. Furthermore, due to the mandatory reporting requirements for such companies, information on their CSR activities were easily available.

Data for this report was primarily collected through information available in the public domain such as annual reports, sustainability and CSR reports, business responsibility reports (BRR), among others, for the financial year 2015-16. The analysis was supplemented through other datasets such as the Census 2011 government dataset. In addition, interviews were conducted with companies that are doing innovative work in the access to energy sector.

■ OBJECTIVES

01. TO PROVIDE DATA-BASED EVIDENCE OF TRENDS FOR INFORMED DECISION- MAKING:

There is currently a paucity of information and data on companies that undertake CSR programmes in the clean energy sector in India. While there is encouragement from the government for companies to invest in this space, there has been no attempt to map the different types of interventions that are scattered across different regions and beneficiary groups.

02. TO IDENTIFY GAPS AND OPPORTUNITIES:

The report will help highlight any imbalances or gaps (for example geographies, type of clean energy programmes, type of target groups) within the ecosystem and provide a means to guide companies' efforts in this sector.

03. TO HIGHLIGHT ENABLERS AND BARRIERS:

The report will highlight key factors that enhance the impact of interventions, as well as barriers that hinder change. It will also present models, tools and frameworks that can address the barriers, to encourage companies to support impactful programmes.

■ LIMITATIONS

01. Although the quantitative analysis conducted for this report is supported by a set of interviews, the report is primarily based on secondary data available in the public domain. Hence, the quality of the analysis could be limited by the quality of information available in the secondary data sources.

02. Some companies did not provide a detailed break-up of their CSR budgets or CSR spends for their programmes in renewable energy. In such cases, assumptions and proxies were used to perform the necessary calculations to analyse the data.

03. Data for this study was collected during April, May and July 2016. Information published by companies after this period has not been taken into consideration.

⁹ http://mnre.gov.in/file-manager/UserFiles/draft-national-Mini_Micro-Grid-Policy.pdf

¹⁰ "Rs. 20000 cr could be spent by 16,000 companies towards CSR activities in 2014-2015: FICCI", *NGOpast.in*, Dec 22, 2014, <http://www.ngopost.in/top-news/rs-20000-cr-billion-could-be-spent-by-16000-companies-towards-csr-activities-in-2014-2015-ficci/>

¹¹ "Frequently Asked Questions with regard to Corporate Social Responsibility under section 135 of the Companies Act, 2013", *General Circular No. 01/2016*, Ministry of Corporate Affairs, Government of India, http://www.mca.gov.in/Ministry/pdf/FAQ_CSR.pdf.

¹² <http://in.reuters.com/article/india-renewable-energy/india-says-clean-energy-a-160-billion-opportunity-over-five-years-idINKBNOLVOW820150227>

¹³ *The Business Case For Off Grid Energy in India; Innovating Financing for Clean Energy Access; Renewable Energy and Green Growth in India*

Main Findings

01. WHICH COMPANIES ARE INVESTING IN CLEAN ENERGY?

39 out of the top 100 companies reported CSR involvement in the clean energy space in FY 2015- 16 as shown below.

INDUSTRY - WISE ENGAGEMENT IN CLEAN ENERGY AMONG THE 100 COMPANIES

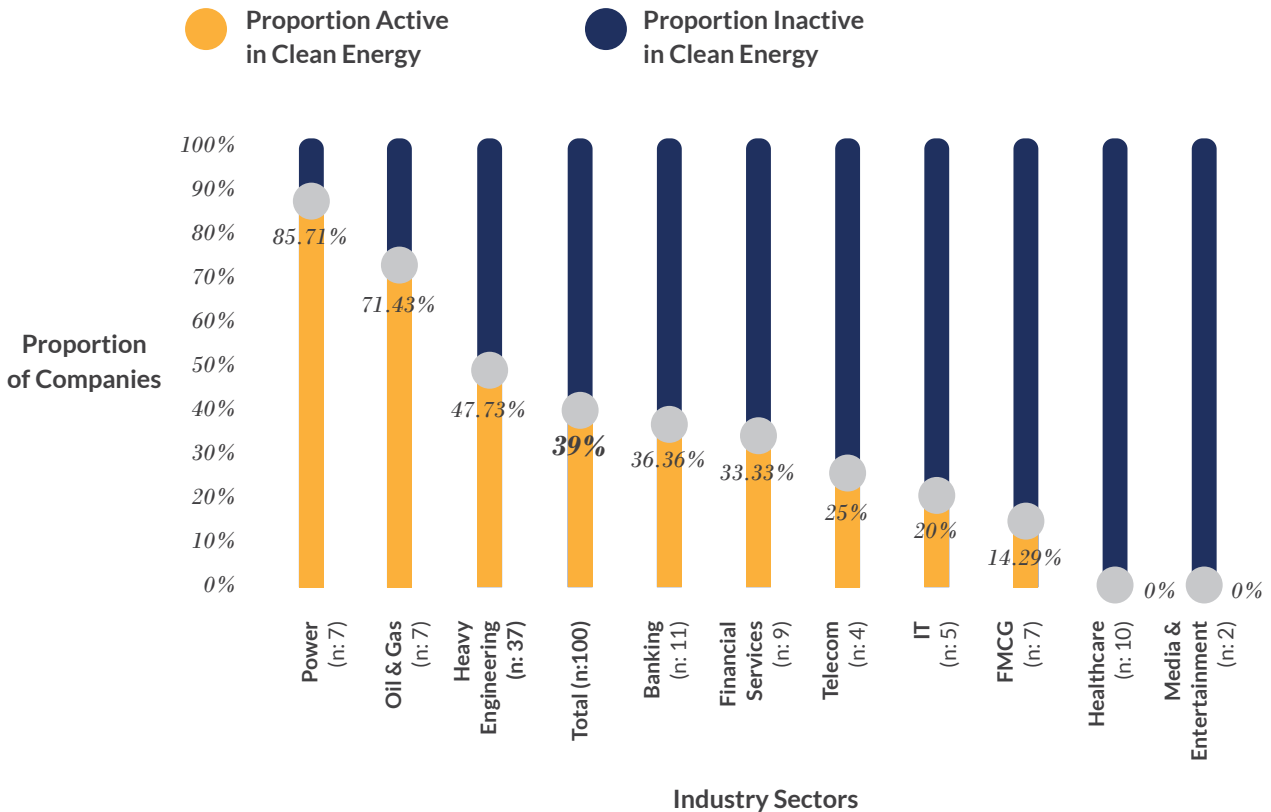


Figure 1: Companies in the Power, Oil and Gas, and Heavy Engineering industries had the highest proportion of engagement in clean energy CSR.

The analysis revealed that CSR programmes in clean energy were reported either under the environment and sustainability category or under community and rural infrastructure. Companies in Power, and Oil and Gas sectors were most likely to support clean energy projects, strategically aligning their CSR to their business and creating social good based on their core competencies. These were followed by the manufacturing and heavy engineering industry, which tended to focus on the socio-economic growth of communities in the vicinity of their plants and locations. The banking sector seemed to be motivated by three factors:

- A strategic interest in the space—assessing the market and consumer behaviour at the bottom of the pyramid, for fine tuning investment strategies

- Promoting environmental sustainability
- Undertaking community development

Contrary to the perception that public sector undertakings (PSUs) are the key movers in the clean energy space, only 16 out of 39 companies in the space were PSUs and 23 were non-PSUs.

Beyond the above mentioned industries, the contribution of other industries to clean energy was minimal. Samhita’s past reports¹³ have highlighted high participation in cause areas such as sanitation and skills & livelihoods, with almost 90 per cent of researched companies supporting at least one programme in these sectors.

WHERE ARE COMPANIES INVESTING THEIR CSR FUNDS?

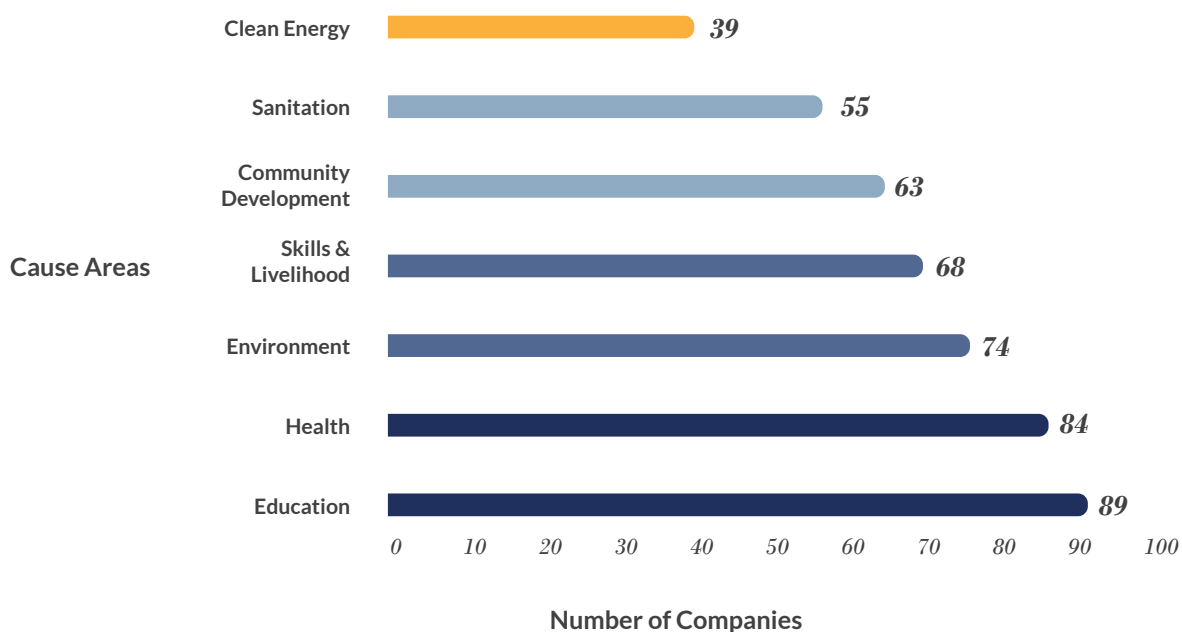


Figure 2: Only 39 of the 100 companies surveyed had programmes in clean energy whereas maximum CSR engagement was seen in education, health and environment. Note: Some companies are present in multiple cause areas.

¹³ <http://www.samhita.org/resources/knowledge-centre/>

“Energy plays a very important role in human development. A socially responsible business or individual can’t ignore a section of society living without reliable electricity in the 21st Century.”

—
Manish Pandey,
Fellow and Area Convenor,
Lighting a Billion Lives (LaBL),
Social Transformation Division,
The Energy and Resources
Institute (TERI)

The low participation in clean energy is mirrored globally as well. The 2016 Giving in Numbers report¹⁴, based on survey responses from 272 companies, including the bulk of the top 100 companies of the Fortune 500, shows that total giving towards all ‘environmental causes’ – including increasing Sustainable Energy Access, Sustainable Consumption, Marine Conservation, and other Ecological Conservation – accounts for just 3 per cent of all reported CSR spending. In comparison, Health and Social Services made up 26 per cent and education accounted for 29 per cent. It is important to note that the percentage of companies that rank environment as a main focus area globally, decreased slightly in recent years from 27.5 per cent in 2013 to 25 per cent in 2015.

A few possible reasons why CSR participation in energy access is relatively low compared to education, sanitation or health in India include:

TECHNICAL NATURE OF INTERVENTIONS

There is a perception that energy projects require technical know-how and expertise in terms of suitable technologies, models, capacities etc., which may discourage companies that do not have the required appetite, capacity and/or capability. As shown by the data in Fig. 1 most companies participating in clean energy possessed some orientation towards engineering or financing.

¹⁴ <http://cecp.co/home/resources/giving-in-numbers/?tid=88>

¹⁵ <http://www.thehindu.com/business/budget/full-electrification-by-2022/article6946322.ece>

¹⁶ http://niti.gov.in/writereaddata/files/new_initiatives/NEP-ID_27.06.2017.pdf

SEGREGATED NATURE OF DECISION MAKING

While decisions on CSR projects within health, education and skills are mainly driven by CSR teams in companies, clean energy cuts across the CSR and sustainability portfolios and sometimes even business functions. These might be led by different people and teams, with differing competencies. Therefore, the decision-making loop is more convoluted. However, the study did find that some companies have internal structures that facilitate systematic interaction between all these teams.

LOW AWARENESS OF CREDIBLE PARTNERS

Some companies reported that it was difficult to find credible partners in geographies of their interest with requisite service and/or good-quality products to execute energy projects. Availability of experienced partners is critical especially when the companies have to rely on them for technical expertise, as not all companies have this competency. On the other hand, some states and districts might see a higher concentration of social enterprises and related partners, while lacking CSR presence, leading to a mismatch between need for programmes and availability of funding.

LOW PRIORITY FOR COMMUNITIES

During needs analysis, communities generally articulate requirements around water, sanitation, health, education, and skills and livelihoods, due to their direct and visible nature of impact. Clean energy is not considered a priority despite its cross cutting nature, as most households do not face an absolute absence of it; they make do with unclean sources such as kerosene or candles for lighting and cow dung or wood for cooking. The impact of moving from such sources to more reliable and cleaner solutions is not perceived to be as urgent, given other pressing issues such as lack of clean drinking water or good-quality education. This is reflected in the CSR strategies of companies.

UNCERTAINTY OVER UNIVERSAL ELECTRIFICATION POLICY

A few companies believed that solutions such as off-grid were redundant due to the government's commitment to complete electrification by 2022¹⁵. They believed that once villages were connected to the main grid, they would not buy power from off-grids, which is more expensive. However, the Draft Energy Policy 2017 clarifies that off-grid still has an important complementary role to play given the intermittent nature of electricity in India, wherein the slack can be addressed through off-grid methods¹⁶.



02. SHOULD COMMUNITIES CO-FUND AND/OR CO-PAY FOR ENERGY ACCESS?

Many stakeholders raised concerns about the sustainability of clean energy CSR projects, after a company exits them.

As with other sectors, the clean energy space has seen passionate discussions on whether communities should be asked to co-fund CSR projects that benefit them or pay for energy solutions. This question has added significance for the energy sector since there are many large and small businesses serving the BoP and rural markets, whose existence depend on consumers' ability and willingness to pay for products and services.

The study found diverse opinions on the matter:

- Companies arguing in favour of co-paying or co-funding believed that these are essential to ensure both buy-in from the households and sustainability of the project. They felt that in addition to one-off payments for purchasing products such as solar lanterns or construction of biogas plants, it was crucial to create viable, community-based business models that could depend on a reliable stream of revenue from the community, to operate and maintain the facilities. In rural areas, to offset low revenues from low consumption households, companies instituted creative solutions via rural Energy Service Companies (ESCOs) such as selling surplus power to micro-enterprises in the village, a small wheat mills (locally known as chakkis), weaving units, mobile phone towers etc. For example, ACC set up a solar micro grid to benefit nearly 50 households in a village in UP. The households paid for uninterrupted electricity and theft-free power distribution, using a prepaid system via cell phones. And the surplus power generated has been used to support village microenterprises.
- On the other hand, companies that operated in extremely remote and tribal parts of the country, felt that communities in their catchment areas subsisted on extremely low incomes, and would not be in a position to contribute to the project financially.
- A third group of companies believed that projects such as street lighting, which were public services could be fully covered through CSR grants in combination with government schemes when applicable. Since these were public services that any single household or community may not be willing to support. However, projects involving services or products for use by individual households such as indoor solar lights or lanterns should be based on a co-pay model, facilitated through local entrepreneurs or Self Help Groups (SHGs).
- In terms of insights from implementation agencies, the opinion was again divided among manufacturers and distributors of energy products. Manufacturers did not prefer a co-funded model as it prolonged and complicated the process of recovering product costs. On the other hand the distributors were more comfortable with co-pay as it was closely aligned to their business models.

03. WHICH INTERVENTIONS ARE COMPANIES SUPPORTING WITHIN CLEAN ENERGY?

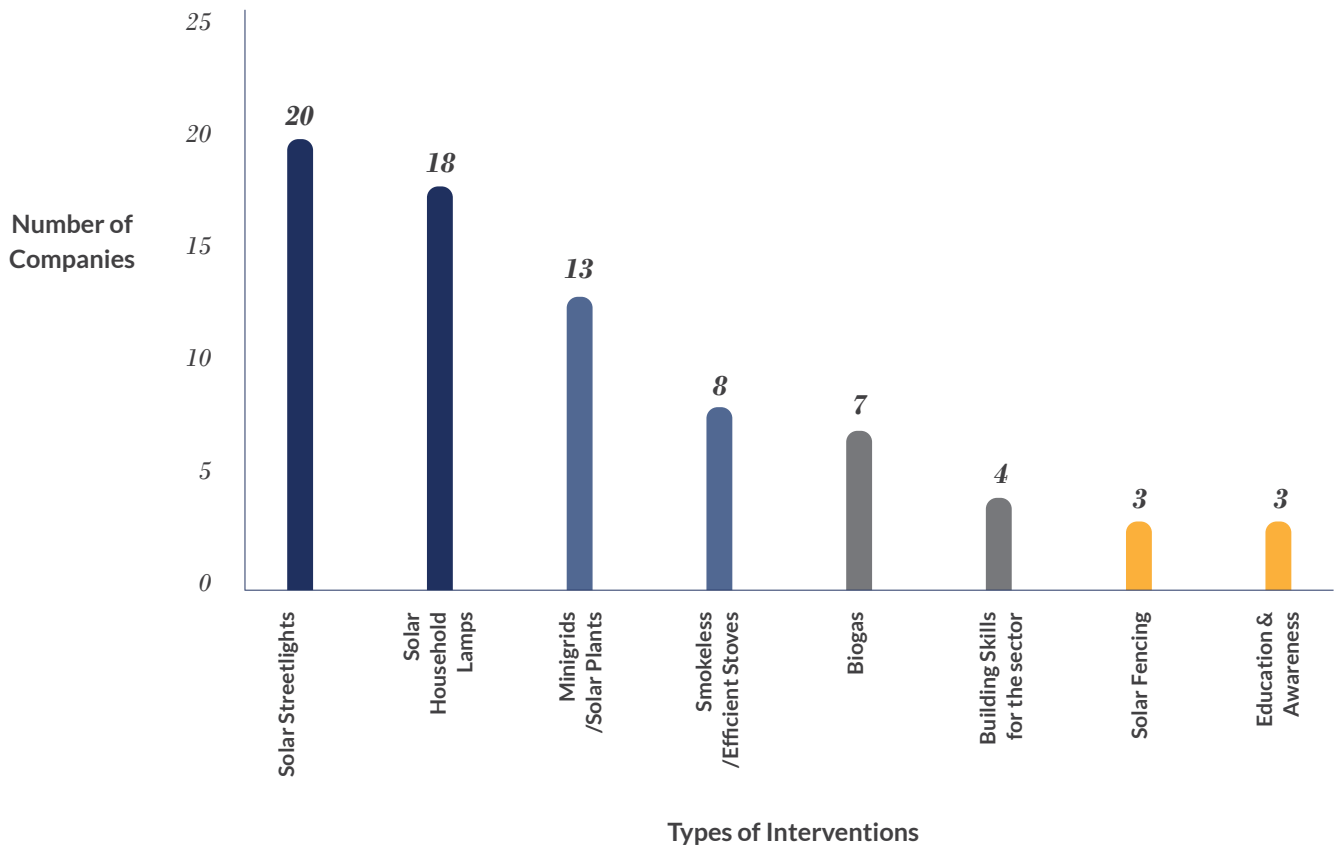


Figure 3: Solar streetlights and solar household lamps were the most popular interventions. Note: Some companies engaged in multiple interventions.

As the graph shows, most companies with CSR programmes in access to energy were focused on product-based solutions. For solving lighting and electricity shortage among different stakeholders, 20 out of 39 companies reported installing solar street lights in rural areas, 18 reported distributing solar lamps or lanterns for household use and 13

had installed solar minigrids to bring electricity to villages or institutions such as schools and hospitals. Within the clean fuel spectrum, distributing clean stoves, encouraging installation and use of biogas were popular.

Even within the product-based approach, there were differences in the type of solution preferred and the underlying motivations.

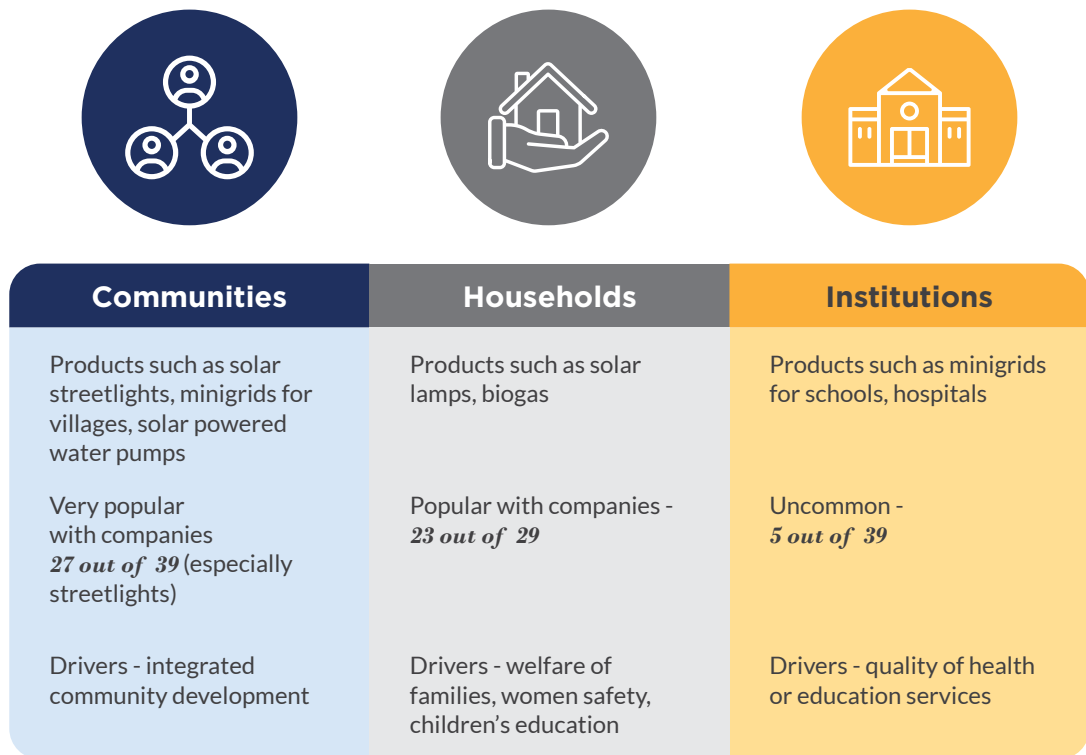


Figure 4: Different product-based approaches and their drivers

Given the pre-dominance of product-based CSR approach, three factors become critical in ensuring that products create the desired impact:

EMPHASISING AWARENESS AND BEHAVIOUR CHANGE

Rural and BoP communities sometimes lack the knowledge required to understand the need for shifting to cleaner energy forms, compounded by socio-cultural beliefs. For instance, Samhita's past research has shown that some people in rural areas believe that the taste of food cooked with firewood is better or that in cold locations, it provides an intimate setting for the family to huddle. Often, the decision-making authority lies with the men in the household though the need for products such as solar lamps emanates from women. Any communication to create awareness and generate demand has to factor in rational triggers such as

improvements to health and reduced costs and the emotional triggers such as reduced drudgery and time saving¹⁷. The socio-cultural practices should ideally also inform the product design to make them more relevant to the users.

ENSURING QUALITY ASSURANCE

Products meant for BoP and rural markets, mostly low-cost need to be high quality; this is a key factor in building consumer confidence, ensuring consistent usage and encouraging consumers to climb the energy ladder¹⁸. Importance of quality assurance was highlighted by companies during interviews as a key criterion for selecting the implementation partner. There are some interesting initiatives for quality assurance in the clean energy sector, as can be seen in the Case Study Box 1.

¹⁷ <https://www.sei-international.org/mediamanager/documents/Publications/Atmospheric/sei-wp-2012-03-cookstoves.pdf>

¹⁸ <http://www.sciencedirect.com/science/article/pii/S1364032112006594>

CASE STUDY 1: IFC LIGHTING ASIA'S QUALITY ASSURANCE STANDARDS

International Finance Corporation's (IFC) Lighting Asia/India is an IFC market transformation programme aimed at increasing access to clean, affordable energy in rural India by promoting modern off-grid lighting products, systems and minigrid connections. The programme works with the private sector to remove market entry barriers, provide market intelligence, foster B2B linkages and raise consumer awareness on modern lighting options.

As part of this programme, a rigorous Quality Assurance (QA) verification has been developed to minimise market spoilage, incentivise manufacturers and distributors to provide higher quality products and thereby ensure that new, unaccustomed consumers can develop a stickiness to using cleaner and better ways of lighting.

Qualification for the Lighting Asia programme (part of Lighting Global) depends on meeting the Lighting Global Minimum Quality Standards as developed by the Lighting Global programme. These standards have been developed for two different types of products, the pico PV off-grid products that have peak module power till 15 W and the plug and play solar home kits that have a peak module power of 15-350 W. In addition, these products pass through a business evaluation and IFC's due diligence process. Key features of Lighting Global Quality standards include truth in advertising, durability, system quality, lumen maintenance and warranty.

IFC/World Bank developed an international quality assurance framework for off-grid lighting products. It has been adopted by the International Electrotechnical Commission (IEC). Product quality, durability and performance are evaluated using the IEC quality assurance framework for pico PV off grid products or the Lighting Global Solar Home System Kit Quality Assurance Protocols. The tests are conducted at an approved, third-party test centre using randomly-procured samples. It is then followed up with Market Check Testing to ensure that products on the market continue to meet the standards. This is an initial primary check that consists of two sample products. If the product fails this test, then additional testing with a sample size of six is conducted. If the products fail this testing as well, verification is withdrawn. The testing results are valid for two years and organisations are expected to send their products for testing to ensure compliance with the standards before the expiration date.

PROVIDING AFTER-SALES SERVICE AND HANDHOLDING

Along with easily accessible and affordable products, there needs to be provision for after-sales support. This will boost the acceptability of the products within the community and ensure timely maintenance. One of the popular models of integrating after-sales services into the supply

chain and generating livelihoods has been the movement towards creating de-centralised networks of small, local entrepreneurs close to where the products are sold. These entrepreneurs function as distributors and/or service providers. Case Study Box 2 showcases such programmes.

CASE STUDY 2:

ENTREPRENEURSHIP MODELS TO ADDRESS LAST MILE DISTRIBUTION AND SKILLS GAP

01. FRONTIER MARKETS: SARAL JEEVAN SAHAYOGIS AND SOLAR SAHELIS

The last-mile delivery, distribution and support lacunae in the access to energy ecosystem are being addressed by some organisations through innovative methods. Frontier Markets, a social enterprise, offers a unique distribution model as part of its business by setting up a network of village-level entrepreneurs (VLEs) who sell the products that help rural audience to address their aspirations and live a 'Saral Jeevan'. The VLEs, termed as "Saral Jeevan Sahyogis" (SJS), are generally identified from a set of people that have a presence and existing set-up in the village, such as owners of general stores, electronics stores, agricultural supply points, and home supply shops. Another simple yet innovative approach in Rajasthan has been building a network of village women called "Saral Jeevan Sakhis" (SJS). SJSs leverage their relationships and their knowledge of local communities to ascertain demand of products Frontier Markets offer and fulfill the same. Further, they help in building new product categories by understanding their explicit and latent needs. Overall, this initiative helps identify and empower grassroots women by giving them a sustainable livelihood and transforming them into community leaders .

02. TERI: LIGHTING A BILLION LIVES

The Lighting a Billion Lives model (LaBL), under the aegis of TERI University, establishes and incubates local entrepreneurs to function as last mile delivery experts by setting up Uttam Urja Kendras or Energy Enterprises (EEs). These independent rural entrepreneurs have multiple important roles in the rural access to energy ecosystem; they function as a retailer as well as an intermediary between the manufacturer and end user. For manufacturers, these entrepreneurs provide feedback and market intelligence whereas for users they supply good quality and reliable products.

03. DHARMA LIFE:

Dharma Life - a social enterprise, leverages rural entrepreneurship to deliver quality products and services to create social impact and foster social development. Backed by a strong advisory council that includes Tata Trusts, Shell Foundation and the World Bank, Dharma Life has developed a strong last mile delivery model where the distributor, enterprise agent and village entrepreneur all work to ensure that products reach the rural consumer.

Entrepreneurs are identified, from among the local community and are provided with access to necessary training and finances. These entrepreneurs earn a monthly income between INR 2000 – 8000. The organization has utilised technology in an innovative manner to ensure that not only effective outreach takes place, but monitoring impact and the capture of market knowledge is possible. With emphasis on behavior change and training, their model addresses aspects of the clean energy ecosystem that are critical in ensuring the sustainability of such initiatives.

However, as shown in Fig. 3, not many companies were focused on 'softer' interventions such as, building skills for the sector, encouraging entrepreneurship or creating awareness and changes in behaviours. The 2014 United Nation Environment Programme (UNEP) Light and Livelihood study estimated that the jobs to population ratio for alternative lighting technologies and associated value chains is 30 jobs per 10,000 people whereas in the case of kerosene, the jobs to population ratio was 1 per 10,000 people. While it may be possible that companies and/or their implementation partners cover these aspects without explicitly reporting them, CSR reporting and interviews with sector experts suggest otherwise. The focus for many companies seems to be one-off 'distribution of products'. Awareness building and other behaviour change aspects remained unsupported, undermining the progress towards clean energy.

A related point is on the low up-take of programmes that link households to grid. While solar lanterns can address a critical gap, connectivity to grid is essential to realise the full benefits of electrification. Among the companies that implemented CSR programmes in renewable energy, 13 had off-grid programmes through mini and micro grids for communities or public institutions such as schools and hospitals. Mini and micro grids are generally constructed in areas that are remote and are not connected to the national and regional grids. The companies that implemented off-grid systems for their CSR programme belonged to the heavy engineering and manufacturing industry, working in areas generally characterised by a lack of reliable and intermittent energy



04. HOW MUCH ARE COMPANIES SPENDING ON CSR IN CLEAN ENERGY?

Of the 39 companies surveyed, 28 published allocation data on energy projects undertaken in FY 2015-16.

The total spending on clean energy projects reported by these 28 companies was approximately INR 183 crore. The Indian Government’s Budget for renewable energy for the same period amounted to INR 4,965.01 crore¹⁹. Against this context, the amount of CSR funding in clean energy may not be able to add significant value or create desired impact, unless used in a catalytic way.

The clean energy budget amounted to six per cent of their overall CSR spends across all cause areas. There was a significant difference in the budgets allocated among companies for renewable

energy programmes. The average budget per company was around INR 6.5 crore, skewed due to the presence of a few large budgets. The median was much lower at INR 2.45 crore.

Ten companies had budgets below INR 1 crore while eight companies had budgets between INR 1 to 5 crore. Four companies had budgets between INR 5-10 crore. Six companies had budgets above INR 10 crore. The last category included ONGC, Axis Bank, Infosys, REC, Power Finance Corporation and Container Corporation of India.

IT buoyed by Infosys’ INR 55 crore budget²⁰ and heavy engineering companies accounted for around 50 per cent of the total.

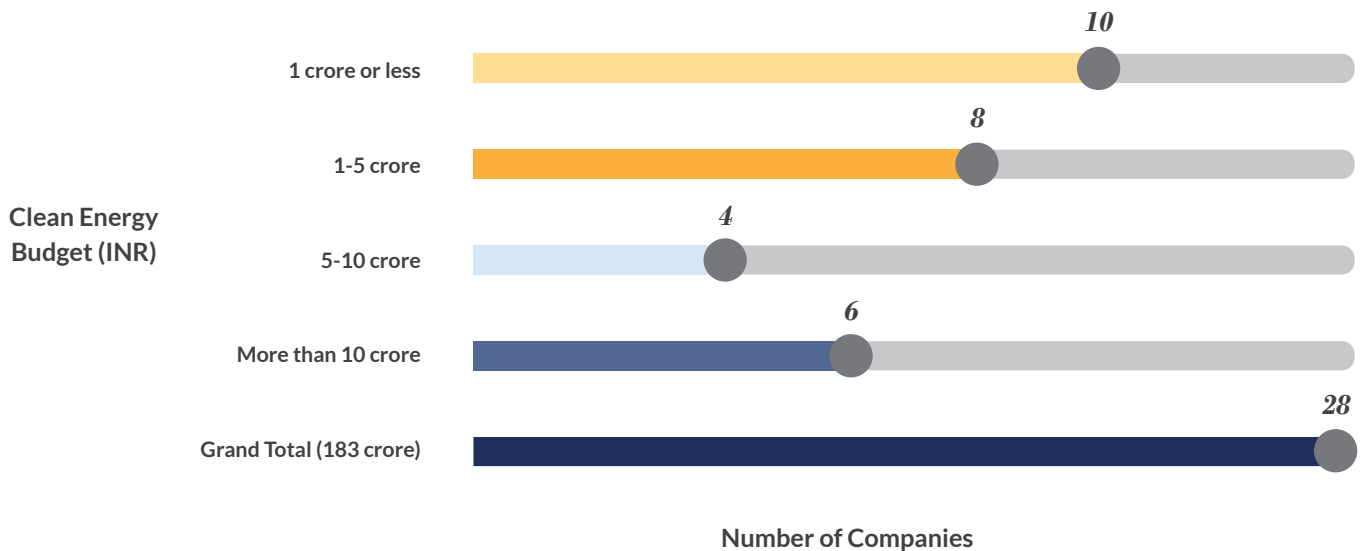


Figure 5: The average budget per company was approximately INR 6.5 crore, skewed due to the presence of few large budgets. Note: Only 28 of the 39 companies in clean energy reported their CSR budgets.

¹⁹ <http://www.scidev.net/south-asia/energy/news/india-budget-bets-on-renewable-energy.html>

²⁰ <https://www.infosys.com/investors/reports-filings/annual-report/annual/Documents/infosys-AR-16.pdf>

05. WHICH TYPE OF RENEWABLE ENERGY DO COMPANIES PREFER?

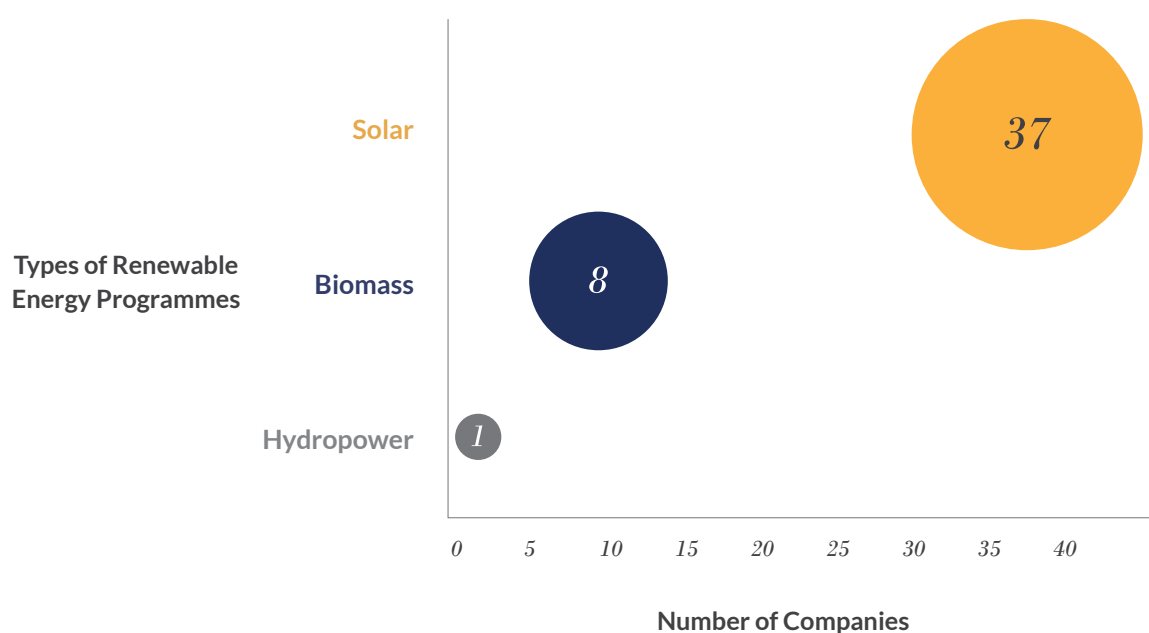


Figure 6: Solar was the most popular choice for renewable energy projects with 37 companies having solar-based interventions. Note: Some companies had programmes in multiple renewable energy types.

The study revealed a preference for solar energy solutions in CSR programmes focusing on access to energy. 37 out of 39 companies implemented models that leveraged solar energy in one form or another. The next preferred type of renewable energy was biogas with seven companies utilising biogas solutions in programmes. Only one company had a CSR programme that used hydropower. Use of wind energy did not feature in the data.

Among companies that used renewable energy to manage their sustainability footprint, a similar trend was observed. Over 56 companies used some form of solar energy to manage their environmental impact.

The key reasons for the wide adoption of solar energy include:

AVAILABILITY AND ADAPTABILITY

Unlike energy generated from wind²¹ and hydropower²², solar energy is available across all types of geographies. Only eight states in India have been identified as suitable for implementing wind power projects. Additionally, wind energy is seasonal with energy output being highest during monsoons²³. Hydropower is constrained by certain geographical conditions. While biomass is an easily available resource and is low on maintenance, greater adoption of this source is hampered because quality and output vary across seasons and there is a technology investment to convert biomass into pellets and manage the moisture content²⁴.

²¹ http://www.ideasforindia.in/article.aspx?article_id=422

²² <http://powermin.nic.in/en/content/faqs-hydropower>

²³ <http://www.livemint.com/Home-Page/gV4ucPd83M4Zc9yr6l6NPO/Wind-energy-sector-feels-the-heat-as-solar-steals-limelight.html>

²⁴ <http://windergy.in/index.php/wind-energy-faqs/>

ENABLING POLICY ENVIRONMENT

Several government initiatives and schemes have increased the attractiveness of solar energy and reduced the cost of production, waiving of duties and water charges in some states, land clearances for solar energy plants, etc. The reduced production costs have resulted in solar energy achieving cost parity with coal generated power²⁵, and have led to a proliferation of solar-based technologies and products.

EASE OF MAINTENANCE

The maintenance of a wind energy plant can be an issue as it entails a lot of moving parts whereas a solar plant has stationary parts so it requires lower maintenance²⁶.



06. WHERE ARE ACCESS TO ENERGY PROGRAMMES LOCATED AND WHY?

The study attempted to highlight geographical trends in CSR and energy access by analysing two sets of data:

- State-wise percentage of households having either no access to electricity or using sub-optimal fuels such as kerosene and oil (sourced from the 2011 Census²⁷)
- State-wise distribution of CSR programmes in clean energy

Juxtaposing these data sets helps identify any mismatch between where CSR programmes are concentrated and where the need for such programmes is. A mismatch can occur if:

- States that have a low need for access to energy but host many CSR programmes in clean energy
- States that have a high need for energy but low CSR presence in clean energy

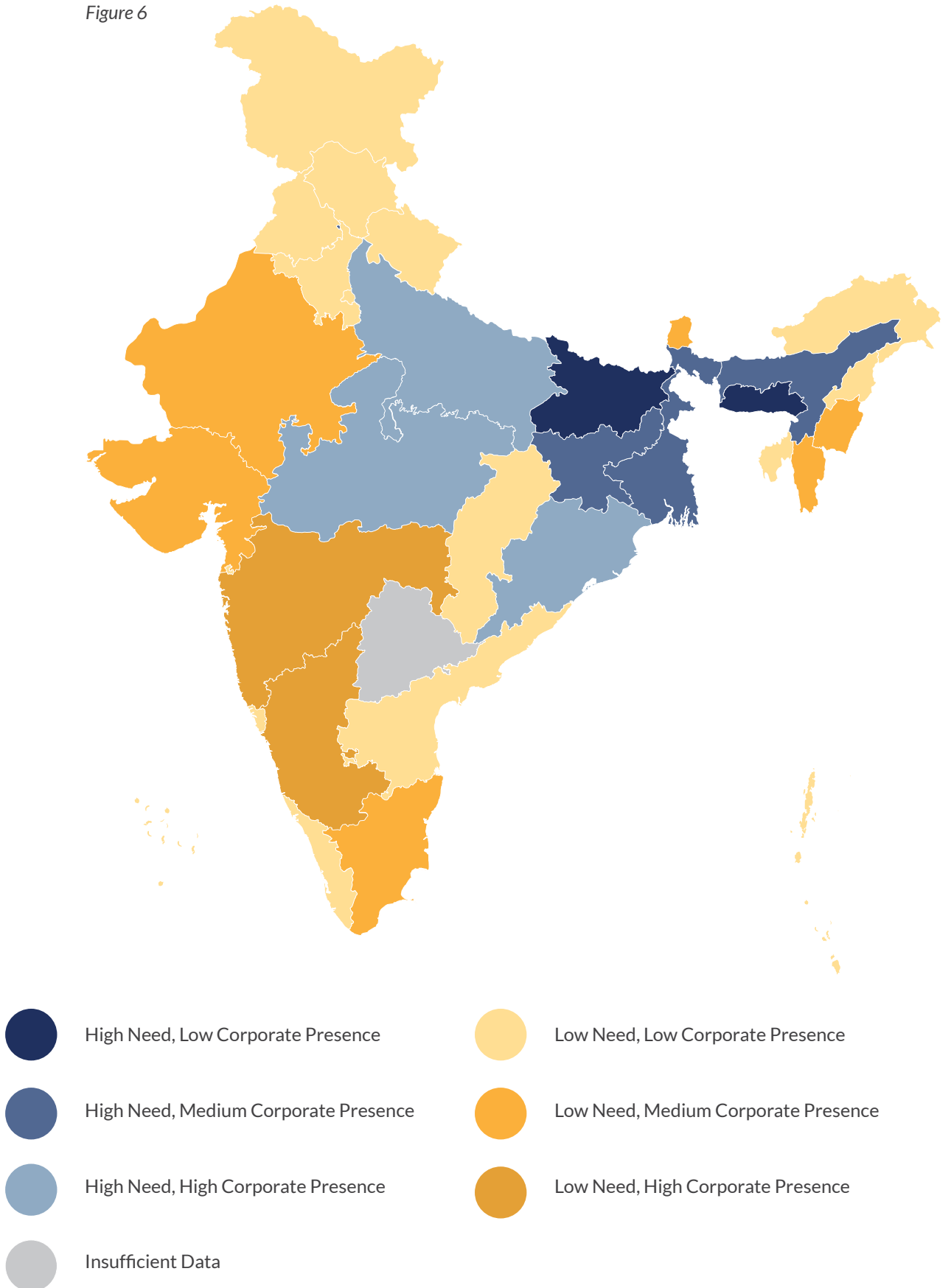
²⁵ <http://www.renewable-energysources.com/biomass.html>, <http://blogs.ei.columbia.edu/2011/08/18/is-biomass-really-renewable/>

²⁶ <https://ultra.news/s-k/26853/4-5%C2%A2-per-unit-solar-achieves-grid-parity-india-coal-power>

²⁷ <https://www.renewableresourcescoalition.org/solar-energy-pros-cons/>

²⁸ While the UN has provided multiple indicators to track progress on SDG 7 and access to energy, government data was not available on most indicators except for one- percentage of population with access to electricity'. The study acknowledges acknowledge that the progress made due to recent drive towards electrification may have changed the data, though no reliable source was found with recent data. While the GARV Grameen Vidyutikaran data is more recent, it was not considered for this analysis as it is based on crowdsourcing of data and does not cover all the states and union territories of India.

Figure 6



Bihar and Meghalaya showed high need for access to energy initiatives but recorded low corporate presence.

According to the 2011 census, approximately 83 per cent of the population in Bihar was using lighting sourced from sub-optimal sources or lacked access to electricity altogether. While more recent data suggests that Bihar has made progress in increasing electrification since then, the electrification rates are still one of the lowest in the country, leaving millions in darkness. In a similar position is the Northeastern state of Meghalaya²⁸.

Assam, Jharkhand and West Bengal also emerged as states that had a fairly significant population that did not have access to energy as compared to other states in the country and yet saw not more than eight companies each.

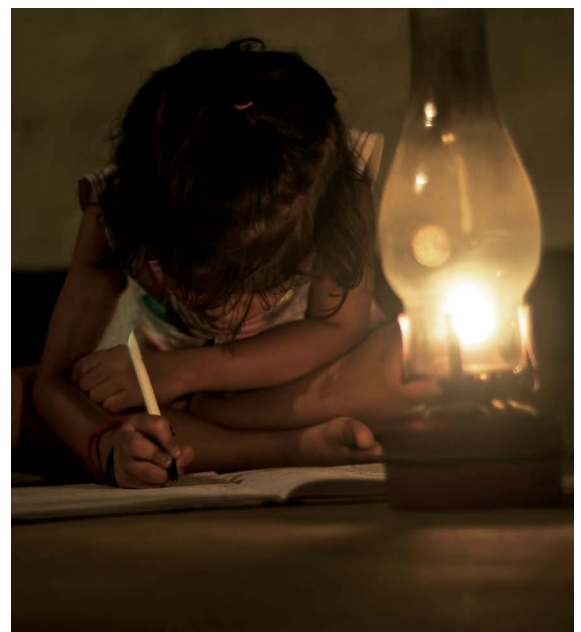
States which had a high need for energy and high corporate presence were Uttar Pradesh, Madhya Pradesh and Odisha. While UP and MP have seen very favourable state government initiatives, Odisha happened to be at the intersection of high need and right type of orientation and support from power and mining companies for energy programmes.

Research revealed that both UP and MP have progressive state policies across multiple parameters that encourage the deployment of renewable energy. For instance, the MP Government has a time bound policy to approve renewable energy programmes. As the state is a part of the 'green corridor', there are several additional incentives available for renewable energy players such as a waiver of water charges for solar projects, exemption from approvals from local bodies and land inspection etc. In the case of UP, several incentives were offered during the period of 2013-2017, including 30 percent financial assistance from MNRE for solar projects. The favourable policy environment could have contributed to higher corporate participation in these states.

In states such as Karnataka and Maharashtra, which have a high concentration of companies, the need for access to energy solutions was low. Only 9-14 per cent of the population in these states lacked electricity and yet saw a high number of companies executing energy programmes.

For CSR managers, knowing where the mismatches occur could help them during several stages of the lifecycle of their CSR initiatives:

- They could select locations for their access to energy programmes so as to better serve regions where there is a high need for these programmes and align their CSR strategies to a larger national goal.
- The examples of other programmes pursued by companies across India offer examples of the kinds of renewable energy such as biomass in high vegetation areas, small hydro power projects in certain regions. CSR managers could benefit from the ability to leverage geographical context to decide what kind of renewable energy to use for access to energy programmes.



²⁸ 2011 Census data is not available for Telangana so it is not coloured on the map

07. WITH WHOM DO COMPANIES PREFER TO IMPLEMENT THEIR CSR PROJECTS IN CLEAN ENERGY?

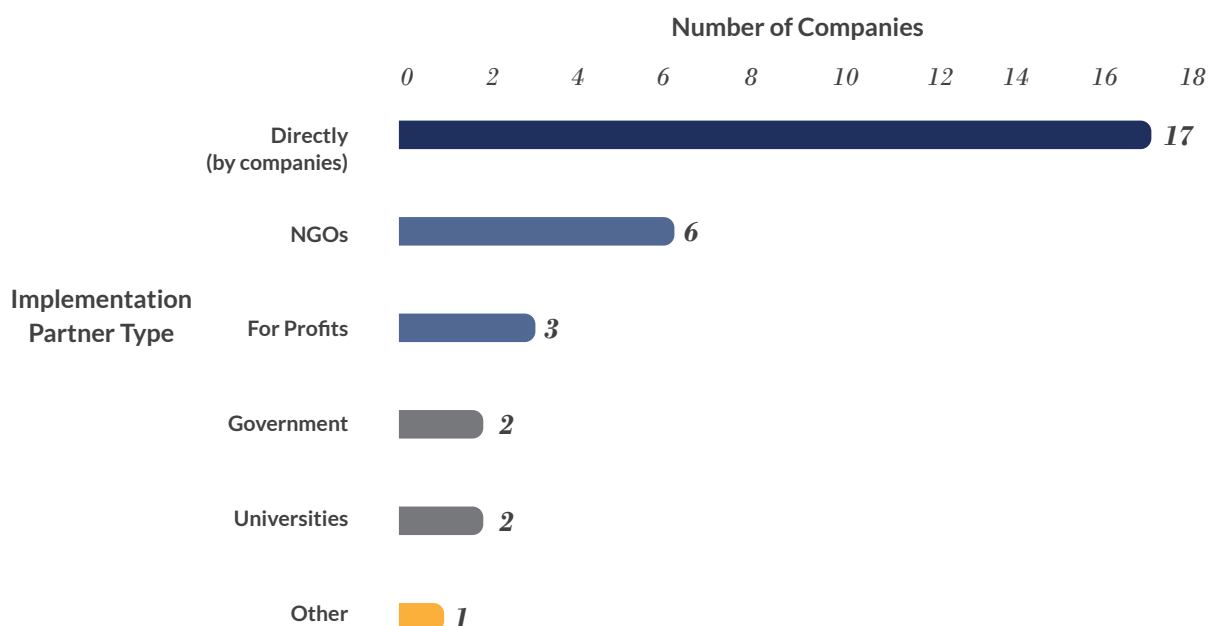


Figure 8: Most companies preferred to implement CSR programmes through their CSR teams and/or foundations. Note: Companies work with multiple implementation partners.

Out of the 39 companies that had programmes in access to energy, only 27 companies provided details on their implementation partners. 17 companies preferred to implement CSR programmes in access to energy directly through their own CSR teams and / or foundations.

Out of these 17, 12 were from the power, oil and gas, and manufacturing industries. Interviews with companies in these industries revealed that they possessed significant in-house technical capabilities and expertise to understand, conceptualise/design and implement access to energy programmes on their own.

NGOs emerged as the next preferred alternative with six companies opting for such partnerships, while two companies partnered with academic institutes. Samhita’s interactions with companies highlighted that credibility,

track record and technical soundness, were the three most important factors that companies considered when selecting partners in this. A few companies expressed an explicit preference for a collaboration between NGOs and academic and engineering institutes such as TERI, Indian Institute of Technology - Bombay, etc., wherein the NGO brings experience of working in rural communities and the engineering institutes lend technical robustness and quality assurance to the programme.

Three companies reported partnering with small private sector companies and social enterprises. There is a strong presence of for-profit social enterprises in the energy sector, either as manufacturers or last mile distributors of products, especially solar and as Energy Service Companies (ESCOs)²⁹.

²⁹ <http://thecleannetwork.org/downloads/115-State-of-the-Sector-Report.pdf>

However, not many companies have partnered with such organisations; interviews highlighted a few reasons for this:

- Section 135 has been ambiguous on the involvement of social enterprises in CSR, causing companies to exercise caution.
- Companies also feel that engaging with these enterprises that have predominantly product-based portfolios and for-profit status, would send the wrong signals to their stakeholders. For example, the perception that CSR funds are being used to create profit for enterprises by buying their products rather than to generate direct impact.

As companies progress on the energy ladder³⁰, it may be necessary for them to partner with an array of partners, each bringing to the table certain skill sets. A robust project management team would be required to ensure that quality and the time taken for service delivery does not suffer. For CSR teams that are putting together their access to energy programmes, the ladder serves as a guide for them to assess the kind of implementation partners they require based on the complexity of the programme they choose.



³⁰ <http://www.sciencedirect.com/science/article/pii/S1364032112006594>

³¹ <http://www.samhita.org/transforming-india-the-csr-opportunity/>

08. HOW DO COMPANIES ENGAGE WITH CLEAN ENERGY OUTSIDE OF CSR?

Although the terms CSR and sustainability are often used interchangeably, they differ in scope and application, especially with regards to CSR as described by the Companies Act, 2013. The focus of CSR is determining the use of profits. On the other hand, sustainability is about factoring the social and environmental impact of conducting business, that is, how profits are made³¹.

The importance of this distinction within clean energy is evidenced by the following findings. Although CSR projects in clean energy were reported by only 39 out of 100 companies, 88 companies reported considering energy efficiency and conservation as part of their internal operations and sustainability agenda; further, 54 companies implemented energy efficiency in their internal management but not as their CSR.

		Sustainability (n: 88)	
		YES	NO
CSR (n: 39)	YES	34	5
	NO	54	7

Figure 9: 88 of the 100 companies surveyed had clean energy initiatives as part of their sustainability agenda. 88 of the companies surveyed had clean energy as part of their sustainability agenda.

The reporting on energy efficiency was mainly driven by regulatory requirements under Section 134(3)(m) of the Companies Act, 2013. As a consequence, data on initiatives taken by companies to manage their sustainability was available across all companies surveyed.

Companies have the freedom to choose the type of energy conservation measure that they think is appropriate for their operational footprint. The study revealed that companies preferred energy efficiency measures over other modes of clean energy. Energy efficiency included a variety of activities from generic initiatives such as installing energy efficient appliances like air conditioners in offices, solar panels on roofs, replacement of conventional light fittings with sensor-based LED light fittings to solar streetlights in campuses.

Examples of business-specific interventions included commissioning of flare gas recovery compressor for one oil and gas company; or a facility to burn vegetable oil residue (by-product from operations) for steam generation, instead of furnace oil for an FMCG company. Many of these initiatives lead to reducing carbon emissions from commercial activities, reducing the risk of stranded assets that become obsolete because of changing technologies and/ or regulation around climate change (see Case Study Box 3 for more details) and also enabling some cost saving in the long run.

The clean energy sector in India requires both sustainability and CSR initiatives. Greening one's own operations and promoting energy efficiency is absolutely essential if India has to meet its announced commitments for the Paris Agreement

on Climate Change, and for the corporate sector to remain competitive. At the same time, there is scope for companies to address the macro issue of 'access' for energy-dark communities in rural and remote areas of the country through CSR projects.

CASE STUDY 3:

STRANDED ASSETS - PROTECTING BUSINESSES FROM CLIMATE CHANGE RISKS

Given the Paris Agreement of 2016, a majority of the countries in the world have realised the importance of combating climate change and keeping world temperatures from increasing beyond 2 degrees Celsius (within the global carbon dioxide budget). With India signing the agreement, the commitment to a low carbon economy has immediate implications for multiple stakeholders.

In particular, the commitment to a low carbon future will entail the closure of assets that do not align with the national and international goals. For example, states with high carbon footprint are at risk of performing assets, such as plants and equipment used in carbon intensive activities, getting 'stranded' as they move towards lowering their carbon footprint. Stranded assets are defined as assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities and they can be caused by a variety of risks. These risks can vary from global carbon regulations that limit the use of fossil fuels (carbon pricing, Paris Agreement) or increased use of renewable energy. At this stage in India's energy policy history, there is a nationwide commitment to move towards renewable energy and reduce dependence on fossil fuels; a decision influenced by climate change, energy security and costs.

In such a context, companies will need to face the prospect of assets facing a premature write-down and potential losses on their balance sheets. Therefore, actively pursuing renewable energy becomes a key priority for companies to minimise stranded assets risk through sustainability management.

In addition to this, states with a high carbon footprint face a greater responsibility in developing a roadmap towards a low carbon economy and this will impact companies that do business in those states. CSR in clean energy initiatives could be harnessed as a starting point in that strategy.

09. WHAT CONSTITUTES AN IMPACTFUL CSR PROGRAMME IN CLEAN ENERGY?

To identify components that stimulated higher CSR participation and also yielded higher social return, the study reviewed programme models in use by a few companies and large implementation partners in the clean energy sector. These components have been summarised here:

CREDIBILITY AND TECHNICAL ROBUSTNESS

Successful programmes were observed to be backed by credible partners who combined a deep understanding of the communities with on-ground realities and technical expertise. Some organisations also collaborated with engineering and technological institutes for technical expertise.

COMPREHENSIVE MODEL

The programme models in most cases were found to be holistic, sophisticated and nuanced, involving multiple stakeholders across the value chain from manufacturing to distribution to delivery; and oriented towards addressing each stakeholder's needs and challenges. However, the complexity was distilled into a simple one-stop solution for companies. Many organisations had institutionalised the operating model by creating standardised, step-by-step processes that allowed them to respond to corporate requests with speed and efficiency.

DECENTRALISED NETWORKS FOR LAST MILE

Most models included working with local entrepreneurs to create last-mile distribution and after-sale support networks. Such models invested sufficient time and resources into identifying the right set of people, training them to become skilled entrepreneurs, establishing an enabling ecosystem of warehousing and suppliers, and facilitating access to credit. The interviews revealed a survival rate of entrepreneurs between 50-60 per cent after a year.

COMMUNITY OWNERSHIP

Successful models were able to build, nurture and sustain the participation of local communities in operations and maintenance of plants and equipment. While CSR funds supported costs related to capital expenditure, training, project planning and reporting, the cost of day-to-day operations and maintenance was borne by fees and charges collected from the users by the 'entrepreneurs'. This ensured that the user was invested enough to value the support received and use it optimally. It also implied that companies could smoothly exit the programme without having to worry about the sustainability or continuity of impact without their support.

Way Forward

While 39 per cent of companies surveyed are involved in clean energy from the CSR perspective, an overwhelming number of companies are involved in sustainability due to policy requirements. Both of these are indicative of a positive trend which shows that some of India's largest companies are involved in some form of clean energy or the other, thereby facilitating the transition to a low carbon economy on one hand and increasing the access to energy for underserved communities on the other hand.

This section seeks to build on the analysis conducted, Samhita's own experience in facilitating access to energy projects, and opinions from expert organisations, thus identifying the way forward for the key stakeholders—companies, NGOs, intermediaries and governments.



01. DEVELOPING AND SUPPORTING HOLISTIC INTERVENTIONS

Providing energy access to BoP, rural and last mile populations entails going beyond product distribution - which is necessary but insufficient to create impact. Any intervention in this sector is required to incorporate the features highlighted in the Case Study Box 2 i.e. generating a demand for such initiatives through information, education and communications strategies; using good quality products and creating decentralised solutions for after-sales services, repairs and maintenance (such as energy or village level entrepreneurs).

A related point is to graduate from simpler and one-off programmes to more comprehensive interventions that ultimately bring the households on the grid. While the onus of designing holistic solutions would be on implementation agencies, companies could work with their implementation partners to ensure that their support spans the entire value chain, addressing the gaps as needed, which may require a longer time frame and a more patient outlook to realise impact.

02. INTEGRATING CLEAN ENERGY INTO COMMUNITY DEVELOPMENT

Access to energy should not be viewed as a cause area unto itself, but as an issue that is strongly linked to the overall socioeconomic development of the country. Access to energy has a direct impact on the delivery of education, livelihood interventions and agricultural

productivity programmes, for example. The structuring of CSR programmes often misses this crucial link which then impedes the delivery of these programmes and hinders impact. Access to energy is a basic, fundamental necessity that can be used to catalyse development.

CASE STUDY 4: CATALYSING DEVELOPMENT THROUGH ENERGY ACCESS

Launched in 2015, Smart Power for Rural Development (SPRD) is a USD 75 million Rockefeller Foundation initiative aimed at accelerating socio-economic growth in India's least electrified states and last mile populations through decentralised renewable energy minigrids in UP and Bihar. SPRD strengthens the ecosystem by facilitating agreements between companies, ESCOs, investors and equipment providers and providing services such as project development, training and business modeling.

An impact report, commissioned by SPRD, clearly established the linkage between access to energy and overall community development. Access to reliable and consistent energy via these grids has enabled local businesses to increase their business hours and expand and diversify their business. SPRD's micro-enterprise customers have 13 per cent average increase in monthly revenue seen since early 2015. For example, a shopkeeper availing of power supply from a minigrid was able to have a functional and running refrigerator that allowed him to stock milk, bottled water and cold beverages. In time, the shopkeeper was able to expand his business further by adding a coffee vending machine, demonstrating the variety of revenue streams available to local entrepreneurs when there is access to energy.

Data from 2016 indicate that SPRD villages experienced an USD 18.50 per capita increase in GDP. Of this, USD 3 is from an increase in per capita GDP and USD 15 is based on a valuation of social benefits, including additional leisure time and personal development activities. SPRD has improved the quality of life for women, including improved ease of chores, improved safety, health, and mobility. Villagers report that the combination of improved household and street lights has improved their mobility – within and outside their homes. Close to 87 per cent of women feel that their mobility has vastly improved after dark, due to reduced apprehensions about safety.

“ *The Rockefeller Foundation’s Smart Power For Rural Development (SPRD) initiative is focused on creating a robust energy ecosystem. It champions a decentralised energy solution that builds partnerships among various stakeholders, and ensures community buy-in with the goal of sustained and impactful community development. The initiative has boosted local economies through livelihood generation and entrepreneurial opportunities, and increased the standard of living in communities.* ”

—
Deepali Khanna

Director, Smart Power for Rural Development (SPRD), The Rockefeller Foundation

03. INVESTING IN COMMERCIALY SUSTAINABLE INNOVATIONS AND INDIRECT SOLUTIONS

It is easy to understand the desirability of direct, beneficiary-focused programmes such as solar lanterns or cooking stoves which create straight, visible and immediate outputs. However, it is equally important to support the indirect and invisible parts of the ecosystem.

This study unearthed some concerns around the possibility of CSR grants disrupting market incentives. By fully subsidising energy solutions (i.e. giving it for free) smaller social enterprises and rural ESCOs working in the BoP market could be affected, leading to the crowding-out of other type of private investments in some geographies. To mitigate this risk and to ensure that CSR

complements but does not substitute other types of investment, alternative, innovative and indirect funding models could be considered. For instance:

SUPPORTING INNOVATION

Companies, especially those with business or strategic alignment with clean energy, could partner with leading think-tanks, expert agencies and engineering institutes to promote and encourage innovation in BoP technologies. They could also support in commercialisation of innovative solutions by supporting social

enterprises working in this sector through innovation challenges and grants or even non-financial support for mentoring, piloting etc.

B2B MODELS

Companies can consider fostering social enterprises by partnering with intermediaries such as technology incubators and making available seed funding or guarantee capital to such enterprises. Having an incubator serves a dual purpose –one, it helps the company in ensuring that the CSR funds are spent in compliance with Section 135; second, it helps social enterprises in using the seed capital efficiently by providing complementary resources such as market research and access, networking opportunities, shared space, mentoring etc. Since Section 135 prohibits the ploughing back of any type of return on CSR funds into business, any return on the seed capital (if it is made available as a soft loan) can be used to constitute a revolving fund that reaches out to a larger number of enterprises.

CREATING UNIQUE INSTRUMENTS SUCH AS POOLED FUNDS

Similar to a mutual fund, companies with similar interests or geographies can consider pooling funds together and appointing an expert intermediary to invest these funds, in compliance with Section 135, in the best possible way. The fund can also leverage resources from impact investors. The portfolio can be divided into direct and indirect interventions. Especially since each company's funds need to be invested in a delineated and attributable manner, with appropriate governance and reporting structure. The advantages of a pooled structure include: services of a sector expert to create maximum social returns, impact at scale, ability to reach out to wider set of beneficiaries and enterprises, spreading of risks in new and innovative programmes and a meaningful engagement with the clean energy sector that addresses the major gaps.



CASE STUDY 5:
**TO DEMONSTRATE INNOVATIVE CSR
 MODELS IN THE CLEAN ENERGY SECTOR**

Bajaj Electricals, a consumer durables and electrical manufacturing company with a product portfolio spanning lighting, luminaries and appliances among others, adopted an indirect but catalytic and strategic approach to CSR. With IIM Ahmedabad's Centre for Innovation Incubation and Entrepreneurship (CIIE) as an intermediary, the company provided CSR funding to ONergy, a social enterprise that provides clean energy products for solar lighting, cooking and electrification. Bajaj's funding was intended to help ONergy scale up its work in North East, one of the most neglected areas of the country. In addition to funding, the strategic alignment also helped leverage Bajaj's core business competencies and its employees to provide expertise to ONergy.

By supporting ONergy through CIIE, Bajaj Electricals not only ensured compliance with Section 135 but more importantly demonstrated a progressive vision of using CSR funds to support social enterprises with the much needed capital and thereby bring about innovation in the access to energy ecosystem. ONergy today in present in more than 12 states, saved 30,000 tonnes of carbon emissions and touched 500,000 lives.

04. CONDUCTING IMPACT ASSESSMENTS

To achieve robustness in the delivery of programmes and to understand where possible gaps exist, companies and implementation partners must measure outcomes and report on them. The measurement of social impact due to clean energy programmes on education, health, productivity,

safety, etc. can help stakeholders gauge the true value addition of an initiative in this ecosystem. In addition to this, for implementation partners, impact assessments indicate their credibility, rigor of their programme and a willingness to learn and improve.

05. INVESTING IN INTERMEDIARIES TO DEVELOP AN ECOSYSTEM

Intermediary organisations are entities such as foundations, think tanks, academia and incubators, who play an important role in joining the dots within the ecosystems and creating a conducive environment for impactful initiatives. Their macro-level knowledge and expertise (in many cases, this knowledge may span both social and technical fronts) and their network could help grow and nurture the sector. Intermediaries undertake a few important functions, for which they need support from companies and other partners:

■ COLLABORATIONS

The strength of most intermediary organisations is their ability to build collaborations across different types of partners to meet a mandate or finish a project.

■ KNOWLEDGE

Occupying a central role between multiple stakeholders, an intermediary organisation is well placed to build a repository of knowledge and best practices that can be leveraged in programmes. In some cases, intermediaries have also contributed to creating marketplaces that bring together and showcase NGOs and social enterprises working in clean energy to address information asymmetry.

■ CAPACITY BUILDING

Intermediary organisations are often best placed to sense the gaps and opportunities present in the sector because of their positioning. This helps them use their knowledge for capacity building of the various players so as to ensure an enabling ecosystem. Examples of capacity building for companies include donor education, identification of NGOs and relationship management, needs assessment, transfer of knowledge and expertise required for projects along the clean energy CSR continuum. For NGOs, this could include support in seeking appropriate partners, providing incubation support, etc.

■ POLICY ADVOCACY

The most underrated but critical aspect of promoting access to energy is working with governments to create and execute an enabling policy environment that can catalyse CSR. An example of such initiatives includes the work done in Uttar Pradesh by Shakti Sustainable Energy Foundation. While companies may be wary of direct advocacy efforts, CSR funds can be used to create evidence-backed research that can help usher in some changes.



ROLE OF STAKEHOLDERS IN THE ENERGY ACCESS ECOSYSTEM

Activity	Companies	Implementation partners	Intermediaries
Developing and supporting holistic interventions	Primary	Primary	Primary
Integrating energy into community development	Primary	Primary	Support
Supporting innovative and indirect solutions	Primary	Support	Primary
Driving collaboration	Support	Support	Primary
Focusing on impact assessment	Support	Primary	Support
Collating and curating relevant knowledge	Support	Support	Primary
Capacity building	Support	Support	Primary
General evidence for policy-making	Support	Support	Primary

Conclusion



India is forecasted to surpass China's population by 2022, making it the most populous country in the world. Clean energy is potentially one of the most important sustainable and eco-friendly ways to ensure that the nation's growth and socio-economic development do not suffer missteps, while also meeting the basic needs of citizens.

In such a context, and with economies and businesses across the world transitioning to low carbon and green energy, it is critical to build a robust clean energy ecosystem to remain competitive globally, protect the environment and promote equitable growth. There is an added urgency to this, keeping in mind the risks that climate change will bring to bear on businesses.

To build this ecosystem, stakeholders need to ensure a diverse portfolio of products, services, various funding channels, as well as availability of suppliers and distributors and consumer buy-in.

Through India's mandate on CSR, companies can play a key role in developing this ecosystem.

The report reveals that a number of companies are involved in clean energy in some form or the other - products and services, CSR or sustainability. However, it also says that product-based interventions and policy might prove ineffective without softer interventions focused on awareness building and behaviour change. These softer interventions help the beneficiaries understand the utility and benefits of the clean energy solution, and are a deciding factor on whether the programme will deliver short-term outcomes or sustained community development.

Appendix

CSR Spend (INR Crore) of companies surveyed in the report (FY 2015-16). Highlighted companies have CSR programmes in clean energy.

ACC	31.16
Adani Ports & Special Economic Zone	40.81
Ambuja Cements	40.98
Asian Paints	34.44
Aurobindo Pharma	18.76
Axis Bank	137.41
Bajaj Auto	86.72
Bajaj Finance	21.36
Bharat Electronics Ltd. (BEL)	7.89
Bharat Forge	12.5
Bharat Heavy Electricals Ltd. (BHEL)	66.2
Bharat Petroleum	95.59
Bharti Airtel	43.46
Bharti Infratel	20.61
Bosch	19.71
Cadila Healthcare	16.46
Cairn	51.05

Castrol India	10.48
CESC Limited	16.59
Cipla	20.48
Coal India	73.26
Colgate-Palmolive (India)	14.33
Container Corporation of India	30.96
Cummins	13.73
Dabur	17.44
Dewan Housing Finance Corporation Limited	7.03
Divi's Laboratories	7.93
Dr. Reddy's Laboratories	41.2
Exide Industries	4.52
Federal Bank	12.3
GAIL India	104.83
GlaxoSmithKline Consumer Healthcare	10.36
GlaxoSmithKline Pharmaceuticals	14.7
Glenmark Pharmaceuticals	11.92
Godrej Consumer Products Ltd. (GCPL)	14.57
Grasim Industries	15.05
Gujarat Mineral Development Corporation Ltd. (GMDC)	66.03
Gujarat State Petronet	1.38
HCL Technologies	12.37
HDFC Bank	127.28

Hero MotoCorp	65
Hindalco Industries	34.15
Hindustan Petroleum Corporation	71.76
Hindustan Unilever (HUL)	92.12
Hindustan Zinc	63.25
ICICI Bank	172
IDBI Bank	9.44
Idea Cellular	18.47
IDFC	13.69
Indiabulls Housing Finance	10.53
Indian Oil Corporation	156.68
IndusInd Bank	27.32
Infosys	202.3
InterGlobe Aviation Ltd.	8.51
ITC	247.5
Jammu & Kashmir Bank	28.28
Jindal Steel and Power	26.71
JSW Energy	22.79
JSW Steel	51.36
Kotak Mahindra Bank	16.41
Larsen and Toubro (L&T)	119.89
Life Insurance Corporation (LIC) Housing Finance	11.74
Lupin	33.09

Mahindra & Mahindra Financial Services	29.06
Maruti Suzuki	78.46
Mcleod Russel	4.35
MOIL Ltd.	14.47
MRF (Madras Rubber Factory)	9.09
Muthoot Finance	14.62
NALCO	27.17
National Mineral Development Corporation (NMDC)	210.09
Nestle India	19.63
NHPC	72.68
NLC India	81.93
NTPC	491.8
Oberoi Realty Ltd	5.45
Oil and Natural Gas Corporation (ONGC)	419.07
Oil India	92.21
Oracle Financial Services	24.85
Petronet LNG	5.96
Power Finance Corporation	195.52
Power Grid Corporation of India	115.78
Reliance Industries	651.57
Reliance Infrastructure	32.5
Rural Electrification Corporation (REC)	128.2
Shree Cement	14.75

Shriram City Union Finance	6.5
SJVN Ltd.	28.88
Steel Authority of India	76.16
Sun TV Network	9.6
Tata Communications	13.85
Tata Consultancy Services (TCS)	294.23
Tata Power Company	29.01
Tata Steel	204.46
Tech Mahindra	46.91
Titan Company	17.42
Torrent Pharmaceuticals	16.91
Ultratech Cement	50.89
Wipro	159.82
YES Bank	29.52
Zee Entertainment Enterprises	22.83

■ COMPANIES INTERVIEWED

Aditya Birla Financial Services
Bajaj Electricals Ltd.
CRISIL Ltd.
DHL
IL&FS
Mahindra & Mahindra Ltd.

Reliance Foundation
YES Bank
Baytree
Dorf Ketal Chemicals
Navdrushti
Global Off-Grid Lighting Association

Contact

Samhita is a CSR consulting firm that collaborates with companies to develop impactful corporate social responsibility (CSR) initiatives. We shape strategies, design programmes, facilitate implementation, and assess the impact of sector projects.



Since its establishment, Samhita has created impact in multiple causes including healthcare, water and sanitation, education, energy access, community empowerment, vocational training, rural livelihoods and financial literacy. Our extensive grassroots network and strong relationships with social sector organisations across India, enable us to support the effective implementation and management of projects.



Samhita also works with international and domestic donor agencies and foundations like The Rockefeller Foundation, Tata Trusts, Bill & Melinda Gates Foundation and International Finance Corporation to bring multiple stakeholders together to address critical social issues collectively and on a large scale.

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