



1. Project Data

Project ID

P100530

Project Name

IN: Egy Effcy at MSMEs

Country

India

Practice Area(Lead)

Environment, Natural Resources & the Blue Economy

L/C/TF Number(s)

TF-10422,TF-97126

Closing Date (Original)

31-Dec-2014

Total Project Cost (USD)

14,078,742.71

Bank Approval Date

27-May-2010

Closing Date (Actual)

04-May-2019

| | IBRD/IDA (USD) | Grants (USD) |
|---------------------|----------------|---------------|
| Original Commitment | 17,005,000.00 | 17,005,000.00 |
| Revised Commitment | 16,490,000.00 | 14,078,742.71 |
| Actual | 14,078,742.71 | 14,078,742.71 |

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2. Project Objectives and Components

a. Objectives

The Project Development Objectives (PDOs) in the Global Environment Facility Grant Agreement were "to increase demand for energy efficient investments in target micro, small and medium enterprise (MSME) clusters and to build their capacity to access commercial finance" (Schedule 1).

For purposes of assessing the extent to which the PDO was achieved in Section 4 of this review the PDO has been parsed into two objectives as follows:



Objective 1: Increase demand for energy efficient investments in target micro, small, and medium enterprise (MSME) clusters.

Objective 2: Build the capacity of MSMEs to access commercial finance.

According to the ICR (footnote 5, pp. 8-9), in this project, a cluster was defined as "a group of end-users who share similar energy use characteristics" (and) "includes both a sector specific and a technology focus and a geographic focus for grouping enterprises and may include several industrial categories which share similar potentials for specific technical interventions." The ICR also indicated (footnote 4, pg. 8) that "selection criteria included number of MSMEs, energy usage and intensity, energy efficiency (EE) potential and availability of EE technologies, MSME financial health and ability to access finance, strength of potential apex organizations, and replication potential. These represented four major categories of industries --chemical, forging, foundry, and lime kilns -- in addition to mixed clusters."

The Global Environment Objective (GEO), as indicated in the PAD (para. 26) was to help stabilize atmospheric concentrations of greenhouse gases (GHGs) through an increase in energy efficient (EE) investments and resulting energy savings.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

No

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Activities to Build Capacity and Awareness for Energy Efficiency (EE) (Appraisal cost: US\$3.909 million from the Global Environment Facility (GEF) grant; Actual cost: US\$2.909 million). This component would focus on increasing awareness of EE at the cluster and plant level on a large scale through the implementation of outreach and mobilization efforts, dissemination of information on successful projects and packaging potential investment proposals in EE for financing by local banks or other sources in five designated clusters (Kolhapur Foundry -- 350 units; Pune Forging -- 160 units; Tirunelveli Lime kilns -- 100 units; Alkleshwar -- 1,200 units; and Faridabad Mixed -- 2,000 units). This component would also include the provision of customized support to local banks for scaling up demand for existing schemes for EE financing, national and local marketing support to increase awareness of current schemes and loan offerings, detailed training support through Indian Bank Training Institutes of local branch offices and head units to identify and appraise EE projects, and widespread dissemination of success stories and impacts of EE project implementation. It would likewise support uptake of existing risk management instruments such as guarantees which were currently available in the Indian market.

Component 2: Activities to Increase Investment in EE (Appraisal cost: US\$51.868 million, of which US 46.000 million was expected to be private sector finance mobilized by MSMEs and US\$5.868 million from the GEF grant; Actual cost: US\$62.851, of which)based on the ICR, page 2) US\$51,933 million mobilized from the private sector and US\$10.918 million from the GEF grant including the Additional



Financing of US\$5.19 million approved in December 2016). This component would provide grant support to cover the "soft costs" of an initial pipeline of approximately 500 projects, including at least 1,000 initial project assessments, and funding for a limited number of incentives for demonstration projects/early adopters of appropriate EE technologies where required.

Component 3: Program Knowledge Management: (Appraisal cost: US\$1.0 million from the GEF grant; Actual cost: US\$1.625 million). This component would consist of a broad Programmatic Knowledge Management effort, explicitly requested by the Bureau of Energy Efficiency (BEE) for monitoring and evaluation (M&E), collection of best practice examples, dissemination, and policy development functions with the goal of ensuring effective implementation and replication of this project and BEE's entire EE effort implemented with GEF support. It was expected to provide key cross-cutting inputs to help better inform Government of India (GoI) policy making and implementation of the entire GEF programmatic effort on improving EE in India.

Component 4: Project Management (Appraisal cost: US\$0.523 million from the GEF grant; Actual cost: US\$1.038 million). This component would provide support for the two Project Management Units (PMUs) -- a new one at BEE and the other in the existing Project Management Department (PMD) at the Small Industries Development Bank of India (SIDBI) to implement the cluster-focused activities -- that would jointly implement the project.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: Total project cost was anticipated in the PAD to be on the order of US\$57.563 million, of which US\$46.0 million would be mobilized by participating MSMEs. Actual total cost according to Annex 3 in the ICR and confirmed by the Bank task team was US\$68.423 million or 120 percent of the appraisal amount, including US\$51.933 million provided by the country's financial intermediaries, or 113 percent of the amount originally anticipated at appraisal.

Financing: The initial GEF grant was for US\$11.3 million and the PAD also mentions a DFID grant of US\$63,300 to SIDBI for awareness and capacity building mobilized by this bank, but there is no mention of this in the ICR. In connection with the estimated US\$46.0 million financing from the private sector the PAD also mentions that IBRD sources provided Additional Financing from the SME Financing and Development Project (P102767). However, apparently this did not occur.

On the other hand, an Additional Financing from the GEF of US\$5.19 million was provided in December 2016 (ICR, para. 20, pg. 10), resulting from the reallocation of unused grant funds from the India Chiller Energy Efficiency Project, which had closed in December 2014. Of these additional resources, US\$0.650 million were allocated to Component 1, US\$3.25 million to Component 2, US\$0.890 million to Component 3, and US 0.400 million to Component 4.

Total GEF funding approved for the project, therefore, was US\$16.490 million, of which US\$14,079 million, or 86.4 percent, was disbursed according to the ICR Basic Data (pg. 2) or the entire grant commitment according to Annex 3. Thus, the ICR is internally inconsistent in this regard. The project team subsequently clarified to IEG that the figure in Annex 3 was correct one and, thus, that the GEF grant was fully disbursed.



Borrower Contribution: According to the PAD, at appraisal, the borrower contribution was expected to be US\$200,000. However, although this was not mentioned in the ICR, in IEG's subsequent discussion and email exchange with the project team, it was affirmed that most likely the Small Industries Development Bank of India's (SIDBI's) and the Bureau of Energy's (BEE's) actual contribution through their awareness and communication activities was actually significantly higher than the US\$200,000 estimated at appraisal but that there was no separate accounting by these two agencies of the amounts specifically spent from their own funds in relation to the project's 26 MSME clusters.

Dates and Restructuring: The project was approved on May 2, 2010 and became effective on October 28, 2010. The Mid-term Review (MTR) occurred in December 2013. The project was restructured in December 2014 when the original closing date (December 31, 2014) was extended to December 30, 2016 and accrued savings of US\$3.365 million went toward establishment of a revolving fund (RF) to further spur demand for high-value but high-impact investments in five additional clusters, and there was a geographical and numerical expansion of outreach of EE measures to more enterprises (ICR, para 19). As already noted above Additional Financing of US\$5.19 million was provided in December 2016 which allowed the project's scope to be scaled-up to include: (i) adjustment of targets of results indicators committing to a higher reduction (nearly doubling the target) in potential cumulative lifetime GHG emissions as a result of the project; (ii) facilitating more EE investments (additional US\$25 million) through private sector for which an additional US\$2.5 million allocated to RF; and (iii) extending the loan closing date to May 4, 2019 to ensure synergy of results and meet the emerging EE investments demand from additional 16 MSME clusters (ICR, page 20). These changes raised the level of ambition of the project and hence there was no logical rationale for conducting a split evaluation on account of changes in the project's PDO indicators.

3. Relevance of Objectives

Rationale

This project's objective was stated as "to increase demand for energy efficient investments in target micro, small, and medium enterprise (MSME) clusters and to build their capacity to access commercial finance." Although the objective of increasing the demand for energy efficient investments on its own was unambiguous, the target of a demand from 500 MSMEs was arguably a considerable task and quite ambitious. The following text will indicate why this review considers that the relevance of this project's objectives was High.

Prior analysis by the World Bank showed that energy consumption by MSMEs, of which there were an estimated 36 million at the time the project was appraised, represented between 33 and 75 percent (depending on the sub-sector) of total industrial energy consumption in energy intensive sub-sectors in India and that large numbers of these MSMEs had inefficient and outmoded technologies. At the time the project closed, it had responded to several of the priorities of India's Three Year Action Agenda for 2017-2020, including demonstrating emission reductions from MSMEs and energy efficiency (EE) improvements in the industrial sector, which is also was a key element in the country's Nationally Determined Contributions (NDCs) for the December 2015 Paris Agreement of the United Nations Framework



Convention on Climate Change (UNFCCC). Its objectives are likewise very relevant in relation to the World Bank Group's most recent Country Partnership Framework (CPF) for India (for FY 2018-2022) by contributing to two of its three focus areas: (i) promoting resource-efficient growth; and (ii) enhancing competitiveness and job creation. More specifically, according to the ICR (para. 32), its objectives contributed to those of the CPF by, *inter alia*, leading to more resource efficient production in several MSME sectors, thereby increasing their competitiveness and creating a market for EE demands of the MSME sector, while also reducing GHG emissions due to MSME adoption of low-cost and replicable technologies.

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To increase demand for energy efficiency investments in target micro, small, and medium enterprise (MSME) clusters.

Rationale

Theory of Change. This objective was expected to be achieved by convincing MSMEs that EE measures would help their businesses to grow more rapidly and increase their profitability and by boosting their access to commercial finance for EE investments by also demonstrating to national and local financial intermediaries (FIs) that MSMEs seeking to introduce EE improvements would be viable clients. This goal would be achieved through the provision of technical assistance (TA) both to targeted MSMEs in energy-intensive industrial sectors (initially including foundries, forging, chemical, and lime kiln subsectors) and geographic clusters, and later expanding this approach elsewhere, as well as to pertinent FIs. In the case of the MSMEs this support would include undertaking energy audits and preparing investment grade detailed project reports (IGDPRs) and by involving industry associations, certified energy auditors, and training MSMEs to understand the value of energy audits and EE measures, training vendors of EE technologies, and adapting existing EE technologies for larger enterprises to the specific needs of MSMEs to increase their demand for EE investments.

Outputs (based on the ICR, paras. 37 to 46 and Annex 1)

- 1,257 IGDPRs prepared for an equal number of MSMEs as part energy audits, compared with an initial target of 500 and a revised target (with Additional Financing) of 730.
- 1,120 experts from 75 FIs and 750 energy auditors were trained to develop energy audit reports on the basis of which commercial finance could be sought.
- 67 early adopters of EE interventions provided a one-time cash payment of up to INR 900,000 (US\$ 19,270 equivalent) on 75% of the capital expenditure upon demonstration of achievement of actual



energy savings due to EE interventions contained in their IGDPs through Performance Linked Grants (PLGs).

- A Revolving Fund (RF) was established by the first Level 2 project restructuring in December 2014 provided an interest subsidy of 2.5 percent, later increased to 3.85 percent in April-May 2019, to facilitate MSMEs' possibility to take up high-cost EE measures.
- Measurement and Verification (M&E) services provided to 637 enterprises that implemented EE measures.
- Several knowledge products were generated (actual number not identified in the ICR) including establishment of a web-based portal to help promote further adoption of EE products and technologies, demonstration videos, good practice notes, information on human and technological resources, EE equipment suppliers and vendors, finance schemes and other support systems drawn from projects managed by the World Bank and other UN organizations under GEF's overall programmatic framework for Energy Efficiency in India, an Energy Savings Assessment tool for MSMEs, FIs, and EE service providers, among others, but there was no specific target established at appraisal.
- 11 EE demonstration videos were developed, compared with a target of 6 at the time of the AF.
- 14 vendor interfaces as opposed to a target of 19 at the time of the AF.

Outcomes (based on ICR, paras. 37 to 46 and Annex 1)

- INR 3,322 million (US\$47.5 million) aggregate value of direct EE investments as the result of customized financial solutions by commercial banks to promote EE and Resource Efficiency and Cleaner Production (RECP) measures and increase the appetite of MSMEs to implement high cost investments, compared with an appraisal target of INR 2,148 million (US\$30.5 million) and a formally revised target of INR 1,660 million at the time of the AF.
- INR 16,971 million (US\$241 million) in estimated replicable investments by MSMEs implementing EE and RECP measures, compared with INR 611 million (US\$8.7 million) at appraisal and a formally revised target of INR 3,900 million (US\$55.4 million) with the AF.
- 16.06 million tons of lifetime CO₂ equivalent emission reductions (ERs) and 13.34 million tons of estimated potential and replicable CO₂e lifetime emission reductions (ICR, para. 55). The former figure includes estimated lifetime ERs through direct investments of INR 3,222 million (US\$45.8 million) and the second potential cumulative lifetime carbon ERs that would result from estimated replicable investments of INR 16,971 million (US\$241 million). These figures compare with targets of 4.6 million tons and 3.6 million tons, respectively, at appraisal and 9.15 million tons and 6.6 million tons, respectively, with the AF.
- 48 MSMEs implemented measures needed to achieve ISO50001 (International Standards Organization energy management performance framework), compared with a target of 40 added at the time of the AF.
- 534 energy conservation awards granted, compared with a target of 140 added at the time of the AF.
- 133 beneficiaries of on-job EE training as opposed to a target of 150 added at the time of AF.

For the vast majority of output and outcome indicators, the project significantly exceeded their targets and, thus, succeeded in increasing demand for energy efficiency among its targeted MSMEs. Financial resource savings had already permitted an expansion from 5 to 10 clusters prior to the Additional Financing, but the additional resources made available to the project in December 2016, together with an extension of its closing



date until May 2019, allowed it to incorporate an additional 16 MSME clusters in various other parts of the country.

Given the considerable increase in the demand (met by the AF) for energy efficiency investments in micro, small, and medium enterprise clusters above the original target this review has rated the achievement of Objective 1 as High.

Rating

High

OBJECTIVE 2

Objective

To build the capacity of MSMEs to access commercial finance.

Rationale

Theory of Change. In order to enable MSMEs to make investments to improve their energy efficiency increased access to commercial finance would be necessary. This, in turn, required increased capacity on the part of the MSMEs in question to access such finance. The project therefore would seek to boost that capacity by providing technical assistance and training to MSMEs with respect to commercial bank requirements in this regard and by helping them to undertake energy audits and to prepare investment grade detailed project reports (IGDRPs).

Outputs (based on ICR, paras. 47 to 55 and Annex 1)

- 5,226 activities promoting EE in MSMEs, compared with an appraisal target of 2,800. In addition to assistance in the preparation of IGDRPs, capacity building activities for MSME entrepreneurs and managers included their participation in business-to-business exhibitions, seminars and talks, one-to-one interactions, exposure visits, and orientation and training programs covering various aspects of EE interventions.
- 750 energy auditors trained versus an appraisal target of 150 and a revised (with AF) target of 700.
- 1,120 financial intermediary personnel trained, compared with an appraisal target of 1,000. Through 36 training programs covering all of the target MSME clusters, the staff of 75 Financial Intermediaries (FIs), including a mix of national and local banks from the public and private sectors, received specialized training in understanding EE business and options and undertaking enhanced analyses of EE project applications from IGDRPs shared by MSMEs. This training was supplemented by a manual specifically that provided examples of EE support schemes and typical EE projects for MSMEs, together with guidance on bankers' appraisal of EE projects at MSMEs and case studies.

Outcomes (based on ICR, paras. 47 to 55 and Annex 1)

- 9,167 MSME entrepreneurs trained, compared with an appraisal target of 400 and a revised target (with AF) of 1,800. Through its capacity building activities the project sought to address the practical gaps that discouraged MSMEs from spending on EE investments and/or placed barriers for them to access commercial finance. According to the ICR (para 47), "extensive consultations with MSMEs, EE



service providers, and FIs led to creation of an optimal set of tools and strategic approaches that broke down these barriers, including the myth among MSMEs that EE investments were for the sole purpose of meeting regulatory compliances (sic) rather being actually good for business."

- Based on this training, the project successfully enhanced the capacity of its targeted MSMEs to access commercial finance by using a combination of technical assistance, training, and, in some cases, financial incentives (ICR, para 48).
- The project's specialized training and support for the staff of 75 FIs enabled them to expand their outreach to a larger number of MSMEs and to support more financially feasible EE investments in the increased number of MSME clusters (ICR, para 49).
- The results achieved were reflected in the 1,257 investment grade detailed project reports (IGDPRs) prepared (as noted under "Outputs") and in the increased number of MSMEs and MSME clusters that were successfully able to implement EE investments through improved access to commercial support (both on the demand and supply sides) as a result of project support.(ICR, para 52)

For the reasons indicated above, this review also assesses achievement of its capacity building objective as High.

Rating

High

OVERALL EFFICACY

Rationale

The project development objectives -- i.e. increasing demand for energy efficiency(EE) improvements and enhancing the capacity of targeted MSMEs to access commercial finance for this purpose -- were both successfully achieved. Most associated targets were surpassed even after they had been (in some cases substantially) increased in response to the additional US\$5.19 million of reallocated GEF grant resources through Additional Financing in December 2016. The project also exceeded its target in terms of GHG emissions reductions as a result of the EE improvements in the significantly increased targeted number of MSME clusters that it was able to support. This target was included in the project to assess its performance in relation to its Global Environmental Objective (GEO), which was to contribute to the stabilization of atmospheric concentrations of GHG through an increase in EE investments and resulting energy savings.

Overall Efficacy Rating

High

5. Efficiency



Economic efficiency. The PAD did not undertake an economic analysis *per se* although it did present financial and incremental cost analyses. It stated (para. 62), however, that the project would support "MSME renovation and rehabilitation projects whose primary financial benefit will be derived from energy savings" and that "analysis shows that the majority of EE investments identified in the energy audit reports are financially justified, especially at current energy prices which are expected to prevail or increase in the medium-term." The PAD also argued that "as coal, fuel oil or primarily coal-based grid power are the dominant energy sources for the target industry units, the economic justification for energy efficiency investment is even stronger because of the significant environmental benefits expected from EE investments, resulting in economic internal rates of return (EIRRs) that are higher than the estimated financial internal rates of return (FIRRs)." It likewise added (para. 63) that "Based on analysis carried out during the market assessment and on the results of investments previously financed by IREDA (Indian Renewable Energy Development Agency) and other financial institutions, EE investments in SMEs routinely achieve FIRRs of 30% and above."

Based on the appraisal assumptions that the project would catalyze an additional EE investment valued at US\$90 million during the project's lifetime and avoid 7.3 million tons of CO₂ emissions over the lifetime of the project's interventions resulting in energy savings of approximately US\$72 million, the ICR (para. 71) "reconstructed" an estimated economic internal rate of return (EIRR) of 16.8 percent.

At project completion based on actual project costs, which included the GEF grant and the leveraged commercial bank loans and MSME self-finance for EE investments, the ICR estimated an ex-post financial internal rate of return (FIRR) of 33.3 percent and a net financial present value for the project of INR13.681 million (US\$194.28 million), as detailed in Annex 4, Table 4.2. Likewise including all project costs, the ICR calculated an economic benefit-cost ratio of 6.15, an EIRR of 68.13 percent, and a net present value of INR158,855 million or US\$2,255.92 million (Annex 4, Table 4.3). Thus, the actual economic rate of return substantially exceeded the reconstructed estimate based on the appraisal assumptions.

Implementation efficiency. The project's nine year implementation period was justified given the Additional Financing approved in December 2016. However, it did face initial implementation delays due in part to a general downturn in the national economy which hindered increased demand for financing to adopt energy efficiency improvements. As a result, at the time of the first Level 2 restructuring on December 30, 2014, just one day before the project was originally scheduled to close, only 38.1 percent of the original GEF grant had been disbursed and on October 12, 2016 when the second Level 2 restructuring was approved only 67.7 percent of the original grant had been disbursed although it was reduced to 46.4 percent when the Additional Financing of US\$5.19 million (one of the main justifications for a further 30 month extension of the closing date) was approved. From then on the disbursement percentage improved.

On the basis of collective achievements mentioned above the project's efficiency is rated Substantial.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:



| | Rate Available? | Point value (%) | *Coverage/Scope (%) |
|--------------|-----------------|-----------------|---|
| Appraisal | | 0 | 0 <input type="checkbox"/> Not Applicable |
| ICR Estimate | ✓ | 68.13 | 100.00 <input type="checkbox"/> Not Applicable |

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

As Relevance of Objectives and Efficacy are rated High and Efficiency is rated Substantial, in accordance with IEG guidelines, overall outcome of the project is rated Highly Satisfactory. The project achieved its development objectives and significantly surpassed many of its performance targets, while also positively contributing to the achievement of its Global Environment Objective.

a. Outcome Rating

Highly Satisfactory

7. Risk to Development Outcome

The risk to development outcome is low because the vast majority of the participating MSMEs are benefiting financially from the more energy efficient and other resource-conserving technologies they have incorporated in their production processes due to the project. As the ICR points out (para. 133), moreover, adequate capacity and information has been absorbed by the MSMEs in the targeted clusters, a pool of local EE experts and equipment vendors has been established, market-based mechanisms for EE interventions have been created, both BEE and SIDBI have internalized the approaches and models for EE and RECP introduced by the project over the past decade in their future work plans. As the ICR states "These developments will ensure that the process of adoption of EE and RECP measures by FEEMP will continue beyond the project period and the market size and the initiatives are expected to rise in the coming years" (para. 64). At the time the project closed there was a robust pipeline of additional EE investments estimated to result in a further 13.34 million tons of GHG emission reductions beyond the project period.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project design represented an innovative approach to promoting the adoption of EE technologies in selected MSME clusters in various parts of the country. The ICR (para. 126) attributes this design to the Bank team in consultation with BEE and SIDBI "to cover the risks associated with working with MSMEs." However, it does not provide more specific information in this regard. Nor does it identify the staff and



consultants that participated in project preparation. In addition, as will be further discussed in the section on safeguards below, it does not appear that project preparation and appraisal were entirely adequate with respect to this matter. This possible shortcoming notwithstanding and considering that no major changes in project design were required during implementation, quality at entry is rated Satisfactory.

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

Similarly, the ICR (para 127) observes that Bank supervision involved "close coordination" with BEE and SIDBI and provided the needed support for procurement and financial management, while also responding "to the concerns from the field from participating in the marketing outreach efforts to provide thrust to investments to reconditioning the selection criteria of MSMEs." Supervision missions included field visits and focused on building partnerships with project stakeholders, both on the service provision side and in the beneficiary MSME clusters. The two Level 2 restructurings -- although the first occurred just one day before the original closing date -- together extended the project for four and a half years, thereby allowing both the activities under the original GEF grant and the Additional Financing issued in December 2016 to be achieved, expanding its geographic coverage through the provision of support to 16 additional MSME clusters, including in other parts of the country, and introducing a Revolving Fund that allowed project resources to be recycled as the result of repayments from MSMEs that have received financing from it. The quality of Bank supervision is thus also rated Satisfactory.

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

M&E arrangements were generally adequate with the BEE and SIDBI PMUs sharing this responsibility for data collection and reporting. However, the ICR (para. 111) identified several ways in which the Results Framework could have been improved in order to better quantify energy savings and reduction of pollutants and by including indicators with respect to cleaner production and reduction of non-energy inputs and waste. The ICR added that with limited baseline data at appraisal, targets for estimated and potential lifetime carbon emissions reductions were based on small scale energy intensive industries using furnace, oil, coal and thermal power generated electricity only. Also, since the project established that energy efficiency cannot be maximized without reductions in input materials and wastages, inclusion of indicators



like the use of water, metals, chemicals, etc., at restructuring could have improved the M&E framework to assess the project's impact on the resource efficiency and cleaner production (RECP) agenda.

b. M&E Implementation

According to the ICR, project implementation included regular monitoring of the potential of investments and emissions reductions together with the awareness and capacity building activities for MSME beneficiaries and other stakeholders. It also involved use of the Measurement and Verification (M&V) system and reporting on the results of EE activities and the utilization of the Revolving Fund (RF) and other resources mobilized for this purpose (para. 112).

c. M&E Utilization

M&E data were utilized for regular project progress reporting and assessment of its results (ICR, para. 113). They also helped to provide the basis for its restructuring which entailed expanding project interventions and targets and extending its life and, thus, its ultimate effectiveness through the use of Additional Financing.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified in Category B at the time of appraisal and triggered OP 4.01 (Environmental Assessment). No social safeguards were triggered. According to the PAD (Annex 10), as concerns environmental compliance, "interventions to address potential environmental liability issues in the project will be undertaken at the project stage of initial assessment and during preparation of investment grade proposals [and initial walk through audits] will form one of the essential criteria for selection of SMEs for conducting unit level EE audits [and] preparation of investment proposals." In relation to project implementation, however, it states (pg. 87) that "the financing choice of selecting EE options will rest with the SME units and as a result the Bank has no implementation supervision responsibility or requirement as much of the investment will be financed from non-IBRD sources. However, as part of the proposed project component on capacity building, efforts will be made to sensitize the SMEs on energy and environment co-benefits of the project. Further, efforts will be made to sensitize banks/FIs to integrate environmental compliance as part of SME loan processing and appraisal. Such effort will draw from SIDBI's loan appraisal mechanism of using Environmental and Social Risk Management Framework (ESMF) for Bank funded project 'P102767 -- SME Financing and Development -- Additional Financing."

Furthermore, the PAD also states (pp. 87-88), "The institutional capacity for safeguards management was assessed at two levels: (i) TA implementing agencies -- BEE and SIDBI; and (ii) SMEs and their associations. As part of project implementation, BEE and SIDBI will establish Project Management Units with necessary staff resources with domain expertise on energy and environment. In the case of SIDBI,



institutional mechanisms are well established under Bank financed SME Financing and Development Project. With regard to BEE, the safeguards inputs will be limited to capacity building activities. In the case of SME associations and the SME units, the institutional capacity would be limited to regulatory compliance.

These statements in the PAD raise a number of questions and suggest that no specific ESMF may have been prepared for this project, which included micro as well as small and medium enterprises (i.e., MSMEs) and not just SMEs, which presumably have less capacity to implement environmental and social mitigation measures, including workers health and safety measures. At least there is no mention either in the PAD or the ICR that such an ESMF was developed. In addition, as the external financing and self-financing by MSMEs of EE interventions was considered part of the project as presented in the PAD and essential for achieving project objectives, the environmental impacts associated with the interventions so financed should have been required to comply with World Bank environmental safeguards as well as Indian Government regulations and been supervised by the Bank. In addition, according to the ICR (Annex 4, Tables 4.2 and 4.3), most of the EE investments associated with the project were self-financed by the participating MSMEs themselves and some were financed by sources other than SIBDI, which by itself accounted for only 47.2 percent of total external and self-financing for these interventions.

The ICR (para. 116) nevertheless claims that "the risks envisaged were well addressed systematically since they were factored in the project implementation cycle from the beginning [and] efforts were made to sensitize FIs to integrate environmental compliance as part of SME loan processing and appraisal." It then affirms in paragraph 118 that "the impacts of safeguards compliance are embedded in the web portal (<http://indiasavesenergy.in/>) developed as part of [the] knowledge management product and it concludes that "overall, the safeguards performance of the project is 'Highly Satisfactory.'" However, when visiting this website no information about environmental safeguard compliance could be readily found. Thus, the ICR is not clear whether either the extent to which compliance with Bank safeguard requirements in relation to the EE interventions in MSMEs supported by the project was, in fact, adequately supervised by the Bank or if there had been any issues during implementation in this regard, and, if so, how they were handled.

The Bank project team subsequently provided satisfactory additional information to IEG regarding the way compliance with environmental safeguards was verified and supervised during project implementation so as to ensure that all participating MSMEs adequately complied with government environmental regulations.

b. Fiduciary Compliance

Procurement. The ICR (para 122) states that the "bidding and selection process were (sic) conducted in a fair and transparent manner without any significant complaints on the procurement cycle management." However, it also acknowledges that some procurement delays were experienced in BEE during the later stages of the project due to "frequent change of procurement expert" and that "contracts management potential was an issue in BEE that contributed time overruns in several cases," while payment delays were also observed in several project progress reports. Elsewhere, however, (para. 125), the ICR attributes the procurement delays during the last two years of implementation to "change in management of BEE which was responsible for decision making" together with "low supervision by BEE



management," so the ICR is somewhat inconsistent in this regard. On the other hand, no such problems were registered in relation to procurement activities by SIDBI, which made up most of the activities of the project.

Financial Management. Similarly, the ICR (paras. 119-121) affirms satisfactory FM performance throughout project implementation during which no significant issues were encountered. This positive experience is attributed primarily to: (i) simplified FM arrangements; (ii) use of the government's mainstream treasury systems by BEE; (iii) sustained availability of experienced and qualified accounting staff in both BEE and SIDBI; and (iv) effective oversight and control by both agencies. Overall, submission of quarterly interim financial reports, disbursement claims, and internal and external audit reports was timely and the ICR reports no irregularities or qualifications, although it also acknowledges that "Grant disbursements were very slow during initial period and following the restructuring with additional financing, the disbursements marginally increased over a period."

c. Unintended impacts (Positive or Negative)

d. Other

Gender. The project "could show some progress in mainstreaming gender in the MSME sector," according to the ICR (para. 77) even though "project design did not include gender as a concern, possibly because the women are not seen as mainstay participants in energy-intensive MSME units/clusters." This notwithstanding, the project is reported to have trained 216 women staff of FIs and 45 women energy auditors, "who have entered the profession not traditionally known to employ women," and supported 112 enterprises partly or fully owned by women. It likewise "supported general awareness about basic amenities such as provision of separate toilets for women, designated space for resting and personal hygiene, and focused campaigns on safe and respectable work space." Women workers were also reportedly particularly benefited by RECP (Resource Efficiency and Clean Production) measures taken by some participating MSMEs including reduction in exposure to radiation heat, prevention of exposure to safety hazards in cutting and polishing of plastic products, elimination of exposure to fine dust and acid fumes in printed circuit boards, adoption of safe stitching methods, and fabric dust free environments in the garment industry, among others.

Institutional Strengthening. The project enabled and strengthened the capacity of BEE and SIDBI to work together toward an outcome-oriented approach and both agencies are reported (ICR, para 81) to have used this enhanced capacity and the tools developed during project implementation to expand their outreach and business in EE. SIDBI, for example, established Green Climate and Sustainable Development Initiatives in 2018 to promote EE and cleaner production among MSMEs through green financing and has introduced the "4 E" (End-to-End Energy Efficiency) solutions program introduced under the project to MSMEs throughout India using its own financing. Thus, the project was instrumental in introducing the concepts of lean, clean, green, and resource efficiency (RE) in SIDBI's lending approach. It likewise reportedly (ICR, para. 85) "streamlined the process of improving efficiencies at MSMEs by developing IGDPs (Investment Grade Detailed Project Reports) in place of regular detailed energy audit (including information on resource assessments as well) reports," and developed a free mobile application for Resource Efficiency Assessment (REA), called SIDBIREA, which "reduced REA time at MSMEs by half while still maintaining the standards of being investor/financier friendly." This tool was used during the AF phase of the project. In



addition, the project launched a web-based portal (<http://indiasavesenergy.in/>) as a knowledge product and a web-based Energy Savings Assessment tool (<http://eetool.istsl.in>) to create awareness regarding the importance of EE and to enable stakeholders to assess business opportunities. Thus, these contributions may have been among the project's most significant outputs.

11. Ratings

| Ratings | ICR | IEG | Reason for Disagreements/Comment |
|------------------|---------------------|---------------------|---|
| Outcome | Highly Satisfactory | Highly Satisfactory | |
| Bank Performance | Highly Satisfactory | Satisfactory | Both quality at entry and quality of supervision were of generally good quality but the ICR does not provide sufficient information to justify a Highly Satisfactory rating |
| Quality of M&E | Substantial | Substantial | |
| Quality of ICR | --- | Substantial | |

12. Lessons

The ICR proposes several lessons. Among the most important with general application to similar projects were the following:

- 1. *Given a well designed and implemented project, it is possible to show that "good environment is good business too."*** In fact, the key to convincing entrepreneurs, independently of the size of their establishments, to adopt EE and other environmentally-friendly technologies and practices is to be able to demonstrate that this will result in reduced costs and greater profits in the future. The lesson is that this project was successfully able to do this for key energy-intensive MSME clusters.
- 2. *The model of a partnership between a financial institution (such as SIDBI) and a technical organization (such as BEE) provides an effective environment for larger interventions in MSMEs across the country and in multiple sectors.*** In the present project, this partnership proved to be an effective way of first piloting then expanding an innovative approach to working with MSMEs in various parts of India and then possibly scaling up these interventions and creating a market for EE improvements in various industrial subsectors. The lesson is that institutions with different roles but common objectives can collaborate on complex development challenges.
- 3. *Financial incentives along with ensuring a financial stake of MSMEs at the initial stage can spur an effective EE market.*** Experience under this project revealed that the greater the financial stake that an MSME has in implementing EE improvement and other clean production measures, the more likely is its commitment to complete the required investments in a meaningful way. The



lesson is that well designed financial incentives can stimulate environmentally beneficial investments.

4. Intermediaries such as Industry Associations and local leaders can play a key role in building trust among MSMEs that need or seek EE and/or clean production solutions and service providers. Here too, this project's experience showed that the role of such intermediaries was important also in helping the implementing agencies and the Bank to understand the nature of the problems and barriers faced by MSMEs that needed to be overcome and to identify "first-movers" and communicate positive results of pilot projects to their member MSMEs. The lesson is that engaging appropriate intermediaries can enhance a project's outcomes by helping all stakeholders (i.e., the ultimate beneficiaries, implementing agencies, and the Bank) to better understand and address key obstacles to their achievement.

IEG suggests another lesson.

5. Timely Additional Financing can play an essential role both in increasing the outputs and enhancing the outcomes of a project and extending its life and, thus, its effective use of the available external and domestic resources in pursuit of its objectives. In the present case, it should be recalled that only 38 percent of the original GEF grant had been disbursed by the time of the original closing date and 67 percent was disbursed by the time of the second two years later. The AF permitted the addition of another two and a half years to the life of the project as well as more resources, thereby permitting its geographic expansion and greater ultimate use of a larger volume of grant resources. The lesson is that strategic additional financing providing more time for the use of existing resources as well as additional resources can have exponential benefits for a well-managed project.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is well-written and of generally good quality. However, there were also a few shortcomings. The ICR did not provide sufficient justification to support the proposed Highly Satisfactory rating for Bank performance and actual project cost information was incomplete and not broken down by component. This was subsequently clarified for IEG in writing by the Bank's task team as reflected in Section 2 of this review. In addition, the ICR failed to identify the staff and consultants involved in project preparation, reportedly due to "problems with the system." On the other hand, the ICR provided a comprehensive discussion of project outputs and outcomes, including not only in relation to its PDO and intermediate outcome indicators, whose targets were appropriately adjusted upwards during implementation to reflect the Additional Financing provided in December 2016, but also, *inter alia*, with respect to gender and institutional strengthening.



a. Quality of ICR Rating
Substantial