

Findings and Lessons Learnt

Derived from the Terminal Evaluation Report
UNDP/GEF Project:
Removal of Barriers to Energy Efficiency in the
Steel Re-Rolling Mill Sector in India (PIMS 1515)

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4.1 RECOMMENDATIONS

Recommendation 1: Use remaining resources of the SRRMP (assumed to be available to December 31, 2013) towards enabling the nominated technological information resource and facilitation center (TIRFAC) to continue technical assistance and financial support to the SRRMs after the end of the Project. The 15TH PAC meeting of September 3 recommended NISST as the best option for a TIRFAC. As such, the Project should focus its attention and remaining resources on the following:

- Providing technical assistance IN CLOSE COLLABORATION WITH NISST towards design and implementation of EE measures for the entire SRRM sector. This would include:
 - a technical consultancy focus towards measures that have been demonstrated by the 31 model units as well as those that have excellent benefit cost potential but have not been replicated on a large scale³⁶;
 - implementation support for complex high-end Eco-Tech options³⁷.
- Setup of a program for the training of all SRRM staff levels notably shop-level personnel through an industry cluster mapping approach in which 30 to 40 units within a 100 km radius are covered;
- Implementing building capacity activities of the TIRFAC with Performance Improvement Training (PIT) and 5S training with implementation support, and more workshops on SOP, SMP and electrical audits.

³⁶This would include a) highly replicated options: high efficiency recuperator, use of pulverized coal as fuel, rolling mill technology packages; b) low replicated but establishes options: lump coal to producer gas, coal bed methane, biomass to producer gas, direct rolling and roll pass design; and c) potential options that need demonstration: oxy fuel combustion system and top and bottom firing system

³⁷This would include the high efficiency recuperator, use of pulverized coal as fuel, rolling mill technology options, lump coal to producer gas, coal bed methane, automation, biomass as fuel, direct rolling and roll pass design, and oxy fuel combustion system

Recommendation 2: After completion of SRRMP and using post-project resources available from UNDP and co-financing from MoS, implement the training programme for all SRRM staff members and for building the capacity of NISST as the succeeding TIRFAC agency with the following considerations:

- The activities to build the capacity of NISST should be designed through consultations with experts and SRRM trainers;
- Capacity building activities should include analysis and identification of SRRM needs, identification of SRRMs willing to be industrial representatives, how the succeeding agency will build SRRM capacity through various modes (i.e. classroom, on-the-job training, training of trainers, etc.) and collecting feedback on capacity building activities for improvements;
- NISST TA activities should be de-centralized to more than 6 clusters making the TA accessible to all SRRMs throughout India. The current two resident missions in Nagpur and Mandi Gobindarh are clearly not sufficient to affect market transformation of the SRRMs;
- The Bureau of Energy Efficiency (BEE) needs to be included as one of the stakeholders in the post-SRRMP project. Their presence and experience will accelerate the advancement of S&L for the numerous SRRM equipment and appliances, and possibly provide assistance in its enforcement of the S&L initiative;
- Improve the MRV capacities of the MoS notwithstanding the difficulties of obtaining accurate data from SRRM enterprises. If energy and production data is monitored, verified and reported by 200 SRRMs, the sector can achieve a 90% confidence in its GHG reduction reporting that can be replicated in other industrial and commercial sectors in India. Thus far, the Project has managed to obtain this data for over 31 SRRMs with another 40 in the pipeline;

With the assistance of UNDP, NISST should carefully evaluate its options on investing more efforts on ESCOs with SRRMs. There does not seem to be any indication from the SRRM stakeholder meetings of May 2013 that an ESCO would be successfully engaged to implement EE measures for SRRMs. Given the lack of ESCO operations in India, nature of SRRM's commercial operation, significant risks are involved in the use of UNDP resources to develop an ESCO implementation model even with the extension of Project activities to December 2014.

Many of these considerations are consistent with the PWC Exit Strategy. With the availability of USD 1.575 million from UNDP resources to the end of 2014 (an additional 12 to 18 months after EOP), NISST may develop sufficient capacity to undertake a nationwide program to transform the SRRM sector into a viable energy efficient industry. However, if possible, additional resources should be secured to ensure appropriate capacity building activities for NISST.

4.3 LESSONS LEARNED

- A concise Project planning matrix with identified risks and assumptions is essential for effective project implementation. The lack of a concise log-frame on SRRMP led to a number of problems including:
 - A loss of focus on building the capacity of government institutions for the TIRFAC and resident missions that would provide TA for SRRMs after the end of the Project;
 - Lack of guidance to formulate strategies to engage stakeholders and

soliciting stakeholder feedback to improve and respond to SRRM needs. Feedback from stakeholders would have included the difficulties of claiming capital subsidies, the decreased importance of the subsidy to the survival of the SRRMs, and the increased importance and convenience of the resident missions in providing TA to the SRRM clusters. The acceptance of the Project by stakeholders was not an assumption on the PPM;

- Disproportionate efforts being placed on less important activities such as subsidy disbursement.
- UNDP Country Offices should exercise flexibility in resetting component outcomes and outputs. There is a common misconception that a PPM cannot be changed during the course of a project. However, during the course of many projects, circumstances change justifying the need to change a PPM, namely its outputs and targets. Changes to the PPM can be implemented with the guidance of mid-term evaluators or the Regional Technical Advisors. In the case of this Project, the CO was not encouraged to change the PPM notwithstanding the fact that the PPM did not meet certain standards for clarity. The lack of changes to the PPM for the SRRMP led the Project team (both the PSC and the PMC) to manage the Project under a PPM with issues detailed in the aforementioned bullet points;
- A capital subsidy program needs to be efficiently administered so that the intended purpose of the subsidy which would be to catalyze investment into a particular technology. On SRRMP, the capital subsidy did catalyze investment. However, if the conditions for claiming the subsidy were less onerous, there likely would have been further EE investments by SRRMs, more utilization of the SDF funds, and a higher percentage of Gol co-financing.
- Projects involving energy conservation with SMEs need to carefully design project interventions that will bring immediate benefits and reductions to their operational costs. SRRMP did not originally do this when they provided an interest rate subsidy without any consideration that most SRRMs seldom use bank financing services. This was later changed to a capital subsidy at the urging of the SRRM sector.
- Partnerships between donor agencies and governments in developing countries with a large SME and informal industrial sector are extremely important if they are to become energy efficient. In the absence of the commercial financing sector who view loans to the informal sector as high risk, donor agencies fill a large assistance gap by playing an important financing support role to assist informal industry in a structured approach to implementing energy efficiency.