Annexure D

S.K. Joshi
Director (IC & SD)
Tele/FAX No. 24362387

भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS

D.O. No. 4(2)/12/97-IC & SD-I

Dated: 7th March 2003

Dear Dr Burra,

Please refer to the proposed UNDP/GEF project entitled "Removal of Barriers to Energy Efficiency Improvement in the Steel Re-rolling Mill Sector in India".

This is to convey endorsement of the operational focal point in India to the above project.

With regards,

Yours sincerely,

(S.K. Joshi)

Dr. Neera Burra,
ARR, UNDP,
55, Lodi Estate,
New Delhi – 110 003.

FAX No. 24627984

Annexure E

ज्वाइन्ट प्लान्ट कमिटि
(भारत सरकार द्वारा गठित)
JOINT PLANT COMMITTEE
(Constituted by Govt of India)
Phone: 91 (033) 461 - 4066/4068/4062/4068 Fax: 461 4063 E-mail : jpc@wb.nic.in Website: www.jpcindiansteel.org

No.JPC/F&A/SDF/Policy/02-03/2215 October 11, 2002

Shri S Dewan
National Project Manager
Project Management Cell
UNDP/GEF
C/o Economic Research Unit
301-306, Aurobindo Place
Hauz Khas
New Delhi – 16.

Sub: Decision taken in 40th SDF Managing Committee meeting.

Dear Sir,

This is to inform you that 40th meeting of SDF Managing Committee was held on 29.8.02 in the Steel Room, Ministry of Steel, Udyog Bhavan, New Delhi. An extract of minutes of the 40th meeting at agenda Item No.13 related to UNDP/GEF is annexed herewith for your information and record.

You are requested to take suitable action as per the directive given by the SDF Managing Committee in the stated minutes.

Thanking you,

Yours faithfully,

(A K Dasgupta)
Sr.Manager (F&A)/incharge.

Enclo: as above.

Copy to:
Shri J P Singh, Jt. Secretary and Member Secretary, SDF Managing Committee/Chairman JPC, Ministry of Steel, Udyog Bhavan, New Delhi – for his kind information please

Sdf_Misc_to

AN EXTRACT FROM MINUTES OF 40TH MEETING OF SDF MANAGING COMMITTEE HELD ON 29TH AUGUST, 2002.

AGENDA ITEM NO. 13: **Proposal for grant GEF/UNDP Projects**

The Committee discussed the Agenda Item in detail. It was pointed out that the Project initiated by UNDP was very much essential as the primary objective of this project is to introduce energy efficient technology packages for the steel re-rolling sector of India and thereby facilitate removal of barriers to energy efficiency and energy conservation in the sector.

The Committee approved, in principle, the Proposal of Project Management Cell, GEF/UNDP Project for a Grant from Steel Development Fund to the tune of Rs.35.00 Crores over a period of five years against the activities shown in the Proposal, subject to final approval on the total Project by UNDP/GEF.

It was also decided that Project Management Cell, GEF/UNDP Project shall intimate from time to time the final sanction, any change in the Project cost and any subsequent changes in the financial allocation of different activities as proposed now.

Fund will be released every quarter in advance on the basis of the annual budget approved by the project steering committee.

TBSE **Technology Bureau for Small Enterprises**

August 21, 2002

Mr. K. S. Rajendra Kumar
Joint Secretary, DC&IS and NPD
UNDP / GEF Project, Ministry of Steel
Udyog Bhawan
New Delhi - 110 011

Dear Sir,

UNDP/GEF Assisted Government of India Programme for Energy Efficiency Improvement in Steel Re-rolling Sector

As you are aware Technology Bureau for Small Enterprises (TBSE) is an off-shoot of Small Industries Development Bank of India (SIDBI) set up in collaboration with the United Nations-Asian and Pacific Centre for Transfer of Technology to render mainly technology promotion and finance syndication services. The key manpower in TBSE including the undersigned is on deputation from SIDBI. TBSE has been closely associated with the above programme and is represented on the Project Steering Committee. We understand that in order to address and facilitate removal of barriers to encourage investments in energy efficiency projects a corpus of fund may be created under the above programme. In this regard TBSE would be interested to offer its services to manage the fund on behalf of SIDBI within the mutually approved and acceptable guidelines. TBSE can act as the nodal agency to channelise support to identified units in steel re-rolling sector. We will develop and propose a mechanism envisaging placing of fund with SIDBI and its effective utilisation keeping in view the objectives of the national programme. It may be mentioned that plans are afoot to convert TBSE into a subsidiary of SIDBI.

As regards providing financial assistance to small scale units identified under the above national programme in consonant we advise that SIDBI may consider such proposal on merits subject to its meeting the norms, parameters of the scheme and on applicable terms and conditions thereof.

Thanking you and with best regards,

Yours sincerely

Utpal Bezbo
GM, SIDBI
(on deputation)

इरेडा
IREDA
भारतीय अक्षय ऊर्जा विकास संस्था लिमिटेड
(भारत सरकार का उद्यम)
Indian Renewable Energy Development Agency Limited
(A Government of India Enterprise)

Speed Post

Ref. No. 221/1846/EEC/2002-IREDA/5328 Dated: 13/08/2002

Mr.K.S.Rajendra Kumar,
Joint Secretary, DCI&S and NPD,
UNDP/GEF Project,
Ministry of Steel,
Udyog Bhavan,
New Delhi – 110 011

Sub: Proposal for IREDA Support to Steel Rerolling Mill Sector - Reg.

Dear Sir,

This refers to your letter dated 25/07/2002 on above subject. In this connection, kindly note that IREDA is currently operating a scheme of financing of energy efficiency/ conservation projects and we are open to consider extension of financial assistance to steel re-rolling sector for improving the energy efficiency subject to the terms and conditions applicable at the time of receipt of the loan application and also availability of funds at that time.

We have enclosed a copy of our current financing guidelines for your kind reference.

Thanking You,

Yours faithfully,

for Indian Renewable Energy Development Agency Limited

(Debashish Majumdar)
Director(Technical)

Encl. a/a

Regd. & Head Office : India Habitat Centre, Core-4 'A' East Court, 1st Floor, Lodhi Road, New Delhi 110003 Phone : 4682214-21
Fax : 011-4682202, Gram : ALTERNATE-ND-3, E-mail : mdireda@rediffmail.com Website : http://ireda.nic.in

• ENERGY FOR EVER

भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
वैज्ञानिक और औद्योगिक अनुसंधान विभाग
टेक्नोलाजी भवन, नया महरौली मार्ग, नई दिल्ली-110016

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
Department of Scientific & Industrial Research
Technology Bhawan, New Mehrauli Road,
New Delhi-110016

तार/Telegram SCIENCTECH
दूरभाष/Telephone 6567373, 6562135 (PABX)
टेलेक्स/Telex 73381, 73317, 73280
फैक्स/Fax 6960629, 6868607, 6561682, 6863847, 6862418, 6516078
ई मेल/Email hareeshai@alpha.nic.in

Ref. No.: DSIR/PATSER/Misc.-02

Date: October 16, 2002

To:

Sh. K S Rajendra Kumar
Jt. Secretary
Govt. of India
Min. of Steel, Udyog Bhavan
New Delhi - 110 011

Sir,

Sub: UNDP Project on Energy Efficient Improvement in the Steel Rerolling Sector

This has reference to your D.O. letter addressed to Secretary, DSIR, on the subject mentioned above, letter No. D.O.4(1)2001 TW-VolI dated May 14, 2002. This Department is actively involved in encouraging the R&D activities of Indian Industries and has evolved several measures in this direction, one such measure being the granting, through a Plan Scheme, of partial financial assistance to R&D projects taken up by industries. We are open to consider applications from industries, in any area of activity, for financial assistance to take up R&D projects which lead to development of commercialisable technology/product. The industries involved in your projects too may approach us with their proposals. Such proposals would be considered on their merit subject to the terms and conditions applicable at that time as well as the availability of funds.

Thanking you,

Yours faithfully,

(Dr. Hareesha Iddya)
Sc. "F" / Director

भारत सरकार
प्रौद्योगिकी विकास बोर्ड
विज्ञान एवं प्रौद्योगिकी विभाग
विज्ञान एवं प्रौद्योगिकी मंत्रालय
टेक्नोलॉजी भवन, नया महरौली मार्ग, नई दिल्ली-110016

GOVT. OF INDIA
TECHNOLOGY DEVELOPMENT BOARD
DEPARTMENT OF SCIENCE & TECHNOLOGY
MINISTRY OF SCIENCE & TECHNOLOGY
TECHNOLOGY BHAVAN, NEW MEHRAULI ROAD, NEW DELHI-110016

तार/Telegraph : SCIENCTECH
दूरभाष/Telephone : 6516073, 6862513/6567373
6562134 (EPABX)
सीधा / Direct : 6967338, 6525049
फैक्स/Fax : (91) 011-6857643
(91) 011-6853847
(91) 011-6524858
Website : www.technologydevelopmentboard.org

F.No.TDB/Z-5/1/02-03

23rd September 2002

Shri K.S. Rajendra Kumar
Joint Secretary
DCI&S & NPD
UNDP / GEF Project
Project Management Cell
ERU / JPC, 301 306 Aurobindo Place
Hauz Khas
New Delhi – 110 016

Sir

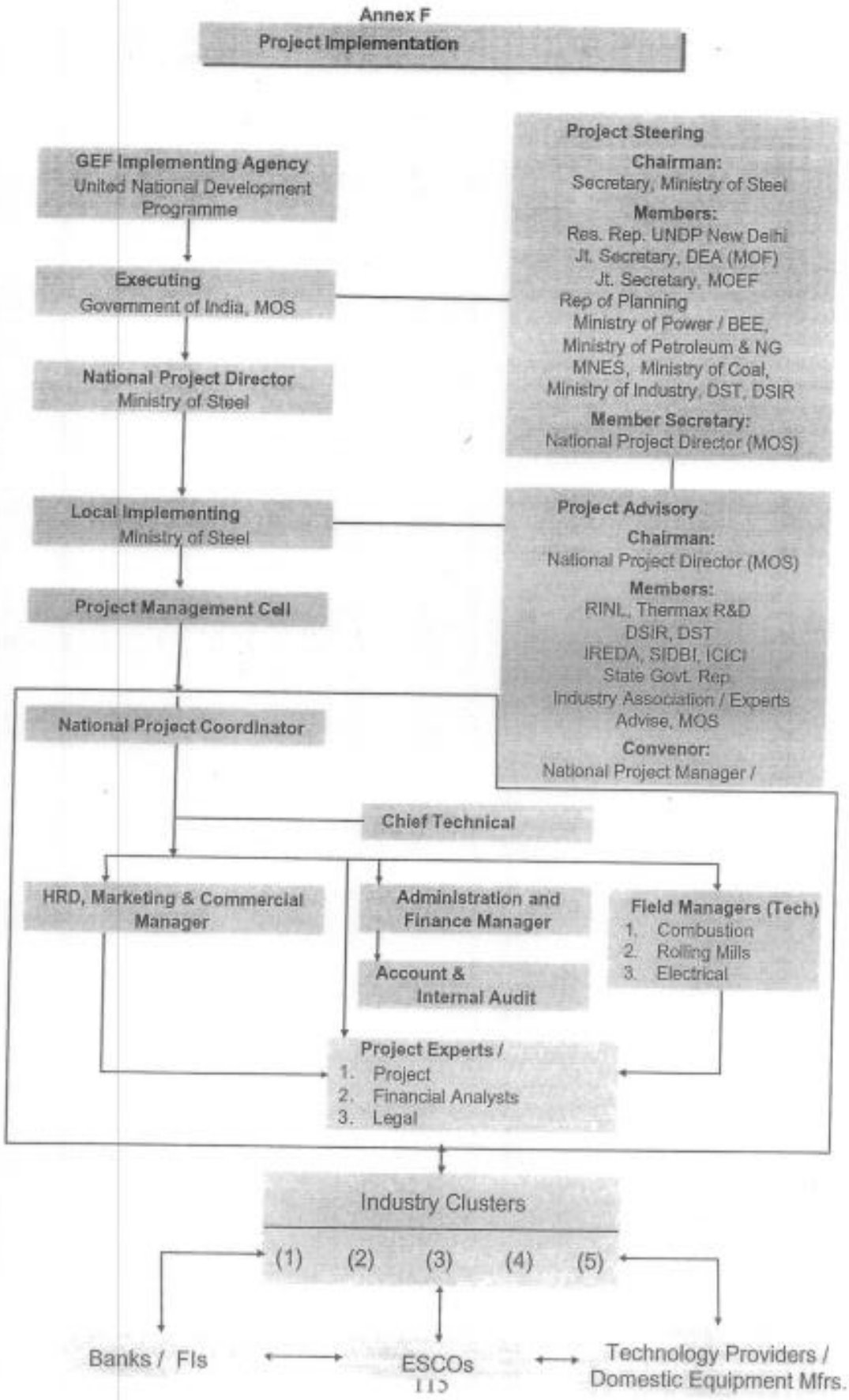
Kindly refer to your letter dated 2nd July 2002. We note that under the UNDP / GEF project, Ministry of Steel is aiming at developing 30 energy efficient model units in the steel re-rolling sector. The Technology Development Board's mandate is to promote and support development and commercialisation of indigenous technologies and adaptation of imported technologies for wider domestic application. We would therefore be glad to examine suitable proposals under your programme within the para-meters of scope of our activities.

Yours faithfully

(S.K. GUPTA)
Secretary

Please quote our Reference Number in future correspondence

Annex F


Project Implementation
GEF Implementing Agency
United National Development Programme
Executing
Government of India, MOS
National Project Director
Ministry of Steel
Local Implementing
Ministry of Steel
Project Management Cell
National Project Coordinator
Project Steering
Chairman:
Secretary, Ministry of Steel
Members:
Res. Rep. UNDP New Delhi
Jt. Secretary, DEA (MOF)
Jt. Secretary, MOEF
Rep of Planning
Ministry of Power / BEE,
Ministry of Petroleum & NG
MNES, Ministry of Coal,
Ministry of Industry, DST, DSIR
Member Secretary:
National Project Director (MOS)
Project Advisory
Chairman:
National Project Director (MOS)
Members:
RINL, Thermax R&D
DSIR, DST
IREDA, SIDBI, ICICI
State Govt. Rep.
Industry Association / Experts
Advise, MOS
Convenor:
National Project Manager /
Chief Technical
HRD, Marketing & Commercial Manager
Administration and Finance Manager
Account & Internal Audit
Field Managers (Tech)
1. Combustion
2. Rolling Mills
3. Electrical
Project Experts /
1. Project
2. Financial Analysts
3. Legal
Industry Clusters
(1) (2) (3) (4) (5)
Banks / FIs
ESCOs
Technology Providers / Domestic Equipment Mfrs.

United Nations Development Programme
Global Environment Facility

21 October 2003

Dear Mr. Good,

Subject: **CC/OP 5: IND/03/G31"Removal of Barriers to Energy Efficiency Improvement in the Steel Rerolling Mill Sector in India" – PIMS No. 1515**

I am pleased to attach herewith the above-mentioned project document , letters of commitment from the Technology Bureau for Small Enterprise, SIDBI, Indian Renewable Energy Development Agency Limited, Government of India Ministry of Science &Technology. Also attached is response to comments from the Swiss, German and French Council Members. The brief was approved at the GEF Executive Council Meeting in May 2003.

As per paragraph 29 and 30 of the GEF Project Cycle, we are submitting this project document for circulation to the members of the GEF Executive Council and, subsequently, for your final endorsement.

Thank you in advance for expediting the review and endorsement of this project.

Yours sincerely,

Warm regards.

Frank Pinto
Executive Coordinator

Mr. Leonard Good
Chief Executive Officer and Chairman
Global Environment Facility
Room G6005
1776 G Street
Washington D.C. 20433

c.c: Richard Hosier, Principal Technical Adviser
c.c. Usha Rao, Programme Officer, UNDP, India

GEF

Global Environment Facility

1818 H Street, NW
Washington, DC 20433 USA
Tel: 202.473.0508
Fax: 202.522.3240/3245
Internet: www.gefweb.org

February 11, 2004

Dear Council Member,

UNDP, as the Implementing Agency for the project, ***India: Removal of Barriers to Energy Efficiency Improvement in the Steel Rerolling Mill Sector***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in May 2003, and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by UNDP satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of the World Bank or UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

Leonard Good
Chief Executive Officer and Chairman

cc: Alternate, Implementing Agencies, STAP

WORK PROGRAM: COMMENTS FROM COUNCIL MEMBERS
(Reference to GEF/C.21/Inf.14 May 14-16, 2003)

RESPONSE TO GEF COUNCIL COMMENTS

UNDP: Removal of Barriers to Energy Efficiency Improvement in the Steel Rerolling Mill Sector in India

GEF Council Comments (France)	Response
The project aims at promoting and at causing an evolution in the sector of the small rolling mills on the energy level. This sector counts approximately 1200 units exploited within the framework of SMEs. The total production is important (20 million tons per annum) and accounts for approximately 70% of Indian consumption in long products. Energy represents the third of the production costs. Technical improvements can bring to reduce by a third this consumption. The return on investment ranges between 2 and 4 years according to the selection of the technologies. About thirty units is targeted within the framework, the project to be used as initial point of change. The GEF would finance primarily the technical assistance and various operations necessary for (i) the reinforcement of the organization of this sector, (ii) the technical council and the training, (iii) the support for new ESCOs, and with for the dissemination of information.	No comments
Opinion: This project is part of an approach of an energy sector improvement. However answers should be brought to the following aspects: It is hard to appreciate in the document the general competitiveness of these SME and their processes vis-à-vis with the large industrial rolling mills, which appear to be the standard at the international level and to constitute the best solutions in energy term.	The competitiveness of the SME mills in India has been assessed vis-à-vis large integrated mills in terms of 11 major determinants such as cost, responsiveness to market, product diversification and quality, product design, Just-in Time (JIT) delivery, after sales service, distribution network, training, managerial initiative, R&D and innovation, and information technology. In India, the overall competitive index is in favor of SME steel mills, due to reasons as follows: - Integrated mills are situated at locations (in proximity to coal and iron ore mines), at distances far off from the major steel consumption centers in the country. Given the relatively high in-land transportation cost, abolition of freight equalization fund and unfavorable logistics, integrated mills are less responsive to local markets. - Majority of the integrated mills are producing flat steel whereas steel rerolling mill (SRRM) sector caters to almost 100 % long product (LP) steel products. The SRRM sector being flexible units is able to meet low volume requirement in variety of steel grades and LP shapes and sizes to large number of variety of customers-a characteristic feature of the local steel markets in India. Integrated mills on the other hand are bulk

	producers and fail to meet instant low tonnage requirement of majority of customers. Thus, over the years, SRRM sector has graduated to become an indispensable link in the overall supply chain of steel in the country. - The SRRM sector by and large now produces steel products that meet national BIS standards. Product quality is largely driven by the market rather than by the scale of operations. The SRRM's long products now occupy more than 70% of the automobile component market (both OEM and replacement), whereas SRRM construction steel also supplies nearly 85% of the rural and semi-urban market. On quality front, the SRRM sector is continuously diversifying into higher end products such as import substitution steels, production of special and engineering steels for export, steels required for metro and other infrastructure projects, TMT steels and coated rebar for construction. - Since quality has a premium in the market, product innovation is more visible in the sector than the energy innovation. The present composite mills are now using 70 to 90% of sponge iron in their charge mix to produce international quality of steel. The project is further reinforcing the concept of quality and productivity improvement through implementation of the technology packages. - Being next-door mills, instant / just in time delivery is generally the norm of supply of long product steel to variety of local customers. After sales service is also superior in case of these SME steel mills. Taking advantage of the situation, many integrated steel mills have appointed these SME mills as their agents.
In its "soft" part ", the project appears expensive (6.75 M$) taking into consideration its duration and its contents and should thus be argued.	The project covers five major geographical clusters of SME mills in the country covering thirteen major states. GEF contribution is limited to about 60% of the costs of program component. The balance funds shared by the Government of India and the industry. The investment component would be 100% financed by the non-GEF sources. The budget is based on detailed costing of all the activities, both in the program component and the investment component. The GEF funds would be catalytic and leverage additional resources, which is in the ratio of about 5: 1. The overall project design is based on various cost optimization models such as linear programming, multiple utility cost attribute analysis, and selection of least cost "win-win" nature of low GHG emitting technologies with an objective to expand EE investments in the sector. The project is based on a barriers removal framework and has been designed on the premise that investments in the suggested energy efficiency improvements are cost effective with low investment to saving ratios on annualized basis (0.5 to 2 maximum) resulting in short pay back periods (within one to two years), and that ensures high "willingness to pay" for the industry to propel investments provided the barriers are removed.

The proposed Technical Assistance Programme (supported by both the GEF and GOI) are linked to facilitating cost effective investments across the whole SRRM sector in India. This innovative institutional cost optimization model adopted is expected to secure large-scale replication. Initially the model will use GEF funds to leverage SDF, ECO and S&T funds, that is, non-GEF funds to meet contingent liability and associated up-front costs with objectives to provide interest draw down support and this, in turn, would leverage private sector funds for implementation of 30 model units. Thereafter, the model will focus on streamlining credit review, development of 'bankable' projects, appraisal and administrative functions within the TA component and moving the model closer to commercial terms and reducing the level of concessional funds for large-scale future replications.

The proposed model would be adapted to many small and medium scale through establishing and/or extending knowledge/ business networks which benefit all network partners, relies on established institutions and reliable public funding sources as well as commercial local debt and will be implemented in steel mill clusters that effectively lowers transaction cost. (Pls. Refer to GEFSEC review).

Since the project involves SMEs and private capital, it is considered *sine quo non* to ensure cost effectiveness at every stage of the project. For every component or output of the project, cost-to-output relationships have been analyzed and the one that gives least cost to output ratio has been adopted in developing the project design. Various stakeholders have been consulted including cost and project management experts in the process. The cost effectiveness of the project was assessed primarily at three stages:

1) At the conceptual level, alternative strategies to address the problems were assessed.
2) Various activities and outputs and outcomes of the proposed strategy were assessed for various funding options – This led to cost effectiveness of each output.
3) Time series distribution of various costs and work in a manner those results in least present value of the project.

In the first phase, various alternate strategies were considered namely, Policy Enforcement of Energy Standards, Domestic Equipment Manufacturers' Route, Energy Service Company Route and Removal of Barriers Approach. In the last case, which is the proposed project case, though cost index is 10% to 19% higher, but output index increases from 20% to 38% thus giving least cost to output ratio for the proposed project design under consideration.

Taking into account that these mills are in clusters, it reduces the transaction costs of replication. The assessment shows that every dollar of GEF spent results in nearly 10 times the EE investments in the SRRM sector in the first five years of the

	project. The same reaches nearly 13 times in the next five years, 18 times in the next five years and again 10 times in the 20th year of project cycle, thus, reaching an overall level of 51 times. This is shown in the table below: Cost in Million US $ **Project Cycle** Year >>> | 5th | 10th | 15th | 20th | Total GEF (Program component) | 6.75 | - | - | - | 6.75 Project | 25.45 | - | - | - | 25.45 Replication | 41.00 | 88.00 | 121.00 | 68.00 | 318.00 **Total** | **73.20** | **88.00** | **121.00** | **68.00** | **350.20** Initially the project covers the investment component of US $ 0.54 million per working mill (Rs.25.4 million). Subsequently with the reduction in the transaction costs and build up of EE market, the same reduces to US $ 0.44 million (Rs. 20.60 million) per working mill- a factor considered responsible for accelerating investments in the SRRM sector. In the third stage, distribution of GEF costs and workload has been done in a manner that it results in lowest of the costs in terms of its present value. For example, taking 12% discount rate (as applicable to India), the NPV of GEF contribution (US $ 6.75 million), in effective terms, works out to US $ 4.79 million.
Germany	
During the project implementation the attention should be laid on measures that can be easily disseminated within the sector.	Accepted.
The Bureau of Energy Efficiency (BEE), the project partner of the Indian-German Energy Efficiency Project is already part of the steering committee. An exchange of experiences with the Indian-German project should be included into the project planning.	Key functions of the Steering committee include facilitating inter-Ministerial/Department coordination and exchange of experience.
It is recommended to take the above comments into account during further project planning and implementation.	Suggestions Accepted. The project would take into account the experiences of the past while planning and implementation.

Switzerland	
General Commentaries This project seeks to reduce greenhouse gas (GHG) emissions by providing technical assistance to the small and medium sized steel-rerolling mills (SRRM) in India to enable them to adapt more energy efficient and environmentally friendly technologies. To date, these cleaner and more efficient practices have not been widely adopted in India and in particular not in the small-scale sector for a number of reasons. The project was conceived in 1998 based on extensive consultations with stakeholders initiated by the Ministry of Steel. The steel rerolling mill (SSRM) sector is unique to India, especially due to its widespread application, and a large number of small mills (1200). The capability of small-scale enterprises to invest in cleaner EcoTech options is limited, last but not least due to comparatively high interest rates prevailing in India. Since the launch of economic reforms, the market share of medium and small mills has been increasing from 65% in 1991 to 70% at present with a perspective of reaching 85% in 20 years. This trend made the STAP review suggesting improvements in project design taking into consideration the economic robustness of this trend, the development of a more plausible forecast for the long term development within the sector (strengthening the case why small mills gain market shares in India, while trends in South Korea, China and Japan or the EU are towards larger more efficient units) and the impact on programme design. Compared to Europe and Japan, India's SRRM are a factor 2-3 less energy efficient. The project implementation is government-driven, involving a wide range of stakeholders targeting to promote showcase energy efficiency innovations in the small-scale sector. The TIRFAC (Technology Information Research Facilitation Center) shall play a pivotal role between the SMEs project developing consultants/ESCOs, and the project management/steering committee. The extent to which the 7-output implementation strategy is capable to really remove the barriers prevailing in India's SME sector is not convincingly answered. Institutions such as IREDA, SIDBI, ICICI have in the past faced considerable constraints in reaching out to India's small-scale sector.	Following are a few points that highlight the inter and intra cost competitiveness of the SRRM sector in India, and low priority accorded for EE improvements when compared to the mills in Japan, Korea, or US: • Low Capital and operating costs - SME mills and furnaces are locally made by domestic equipment manufacturers (DEMs) and have exceedingly low capital costs. Design and local consultants and service providers provide engineering, again at costs nearly one–fifth of that by big/international consultants/firms (not burdened with technology & know-how as well as equipment imports, which are 4 to 5 times the unit costs). Of late India has been exporting large number of such SME mills to various developing countries; Low labor costs; Low works and administrative overhead costs; Almost "zero" inventory levels • Exceedingly low gestation periods • These mills fulfills the market niche, that is meeting low volume tonnage (from 500 kg to 500 tonne) requirement of large variety of customers in different steel specifications, sizes and shapes (nearly 2500 in India) • Being small, the mills are flexible with quick switch over options from one grade to another, from one size to another, including special sections needed by the customers (even bulk steel producers off-load their raw materials to these SMEs for conversion to get a foothold in the steel market) • Major cost element is raw material, that is ingot/billet and these mills have access to variety of sources including low cost ship breaking rerolling scrap meeting Lloyd's specifications, surpluses blooms/billets from big steel plants • Much more market innovative in character than the larger ones • More than 95 % of the mills exist in 5 geographical clusters in India having local associations Like in many other countries, EE market is strongly biased against SME sectors. This together with low and asymmetric information base, low availability of advanced design and engineering at local costs, absence of market based mechanisms, poor institutional infrastructure, low capacity building, bounded rationality and poor access to capital constituted the main barriers to EE improvement in the sector. The project design factors all these barriers at micro level and energy efficiency is mainstreamed at the nodal ministry, which would be implementing the project. Financial institutions by and large have limited capacity to address these barriers. The project design has considered large number of EE options (13 in furnace and 19 in electrics and mills) with international experts and organizations and developed them into 5 different technology packages. Willing to pay (WTP) have been assessed based on paybacks ranging between 1 and less than 2 years. SMEs in the sector have shown wide acceptance of the options and some of them have gone ahead, albeit, in piece-meal manner even at the PDF stage. They are likely to go ahead in a

	manner even at the PDF stage. They are likely to go ahead in a full-fledged manner once the project starts. It may be pointed out that in the steel industry, the larger are not necessary more efficient. There are many small and Mid-sized plants in the world that are front-runners in energy and cost efficiency and also please give us 5 years of time, we will prove this point in India as well. The energy conservation programmes in the past had limited or marginal effect primarily because none of the programmes addressed "barriers" in a comprehensive manner. The proposed project has taken note of various schemes operated by IREDA, SIDBI, ICICI (USAID ECO Fund), Govt sponsored S&T Funds and various other bilateral/multilateral agencies like Swiss Technical Co-operation for Energy Efficiency in Small Scale Sector, etc. Lessons learnt from past, ongoing projects and the Ministry's own 30 years of experience have been incorporated in designing the project activities. Since, the energy saving potential by itself is not large due to larger impact of prices of input stocks of steel, the project lays emphasis on following points: 1. EE programme incorporates combined effect of fossil fuels used for re-heating steel, power for rolling and material conservation arising from savings in burning loss and yield improvement, which is quite significant. 2. Multiplicity of factors affecting burning loss and yield were identified and relative impacts on cost was disseminated to industry. 3. The power consumption in rolling is affected by parameters like hot start and hot finish temperatures, roll pass design, rolling cycle time, mill delays, etc. The industry is, therefore, keen to invest for model units from its own resources and through commercial borrowings. There is no provision for contingent grant from GEF funds to the model units. Regarding the point on interest rates, these have come down in India to a level of 5-6 % but access to capital remains a key barrier. Further there is a provision of interest draw down support to front rank units (minimum 5 % depending upon the type of technology package) to incentivize the EE program. The technical assistance (TA) component covered by 7 output activities has been developed with reference to the identified barriers in consultation with all key stakeholders.
Main Concerns The main concerns relate to 2 key issues with regard to this project proposal: a) The project document outlines that the situation of the small and medium scale industry sector in India, the SRRMs in the steel sector, are unique. National circumstances do differ considerably from other threshold countries. The proposed approach however is designed as classical "top down" barrier removal project and	The STAP reviewer's comments have been addressed satisfactorily in the revised document. The barrier removal approach proposed in the project is based on

apparently (STAP review) does not sufficiently address the specific sectoral and regional barriers to technology transfer in small scale SRRM in India. The manner in which the project developers deal with the STAP reviewer comments regarding (i) Embedding the programme into existing organizational structures of the SRRM-industry through regional or local management organizations and	"participatory/industry driven" approaches evolved during the PDF phase. Embedding the programme into existing organizational structures of the SRRM-industry through regional or local management organization would be necessary from the sustainability point of view. Industry associations/various forums at local, regional and national levels have been seeking fiscal concessions in the form of customs/excise duties, sales tax, octroi, etc. A provision to develop a network of all stakeholders associated with SRRM sector, such as technology providers, domestic equipment manufacturers, FIs/Banks, Govt agencies / departments, etc. at local/regional level in each cluster would lead to institutional capacity building. These would be later integrated at national level through TIRFAC and will deal with issues concerning technology management, technology transfer, and development of low cost solutions to problems of industry of common interest. Efforts will also be made to associate professional institutions/technical experts from both India and abroad and develop leadership at local/regional level through the leading demonstration units.
(ii) The need for a cradle-to-grave technology transfer approach including extensive technical training at SME level in particular is not appropriate.	On the cradle-to-grave technology transfer approach, it may be emphasized that the project aims at promoting "life cycle costing" in the SRRM industry, where efforts are required to undertake regular technology/process/energy audits and continue the process of replacing/improving equipment and operating practices through TIRFAC for keeping pace with the changes in technology in the industry. The TIRFAC will provide a continuous research, technology development, and design and demonstration platform for new technologies, equipment, and devices, to facilitate technology transfer to SRRM units as an ongoing process. It will set up benchmarks and standards and also validate them from time to time basis. Operating performance will be regularly monitored and evaluated through process and technology audits. There is provision to develop standard operating practices (SOPs) and standard maintenance practices (SMPs) along with regular training of operating personnel in operation and maintenance of the system. Further, each technology will be continuously evaluated, implemented in the industry. Monitoring and evaluation system will ensure continuous collection of data, evaluation and the results/benefit derived by the industry on consistence basis.
The experience gained under Swiss technical cooperation for energy efficiency with the small scale sector in India endorse the STAP review's comments and suggest that the level of effort required in service institution building to make 30 show case demonstration projects a success seem rather underestimated. Given the level of prevailing	There are six main technology variants of the SRRM sector and number of operating SRRM units are over 1200 and the sector

uncertainties with respect to longer-term market trends, a smaller 1-2M USD GEF project demonstrating the proposed approach with 3-5 mills and submitting the full-scale implementation in a second step would be a clearly preferred option.	covers 5 geographical clusters in the India. Based on stakeholder consultations and feasibility studies, 30 units constituted a critical mass (or nucleus of the industry) for demonstration, replicability and interoperability.
b) Implementing the project in two phases is recommended as a preferred option also from a general climate change policy perspective:	The implementation aspects were examined in depth during PDF phase. The project in-principle adopts the recommended strategy and plans to implement the demonstration units in a phased manner. In the Ist year only 3 units are proposed with low risk technology packages. Based on success, the number of units will be enhanced to four (4) in the second year. The stage wise implementation will ensure adequate safeguards and lead to confidence building in the industry.
More than 90 developing countries have by now submitted their first national communication to UNFCCC. These National Communications contain information on climate change mitigation programmes reflecting the sectoral priorities of the Government with regard to GHG emission abatement (and the use of facilities such as the CDM). Many countries who already have submitted their national communications report difficulties in funding their national mitigation plans. As a general strategy, the GEF, in its climate change operational programme, is encouraged to give priority to funding of such projects which are prioritized in the respective national GHG mitigation plans.	India's initial National Communication is under prepartion. The necessary links have already been proposed and would be reflected at the time of submission of the National Communication report to the UNFCCC. Since the sector falls under small scale, the CDM prospects have not been estabished as yet.
c) This project document does not explicitly address the links between the priority of the project within India's industrial sector and the general GHG abatement strategy of GOI. India's project for the preparation of the first national communication has been approved in 1999, submitted by UNDP as implementing agency. UNDP should establish a link between the appraisals of mitigation options under India's NATCOM process and integrate the conclusions into this project document.	
Conclusions and Recommendations The project is recommended for approval of a phase I as specified in a revised project document. Phase I should fully take into consideration the comments made by the STAP review. Phase 2 should be submitted based on the experience gained by the implementation of 3-5 show cases and integrated into the mitigation plan of India's initial national communication.	The document mentions the proirioties of the industrial sector from the energy effeicncy perspective. Since the deregulation of the industry, it is influenced by the market forces. The project has been endorsed by the GOI with fundig support from the Ministry of Steel.
	The GEF grant is primarily for the TA activity, which needs to be carried out right at the beginning of the project and is

	essential for capacity building of all stakeholders covering SRRM industry, domestic equipment manufacturers, consultants, designers, FIs/Banks, ESCOs, etc. for the success of the project. The TA activities proposed are however not exclusively linked to the implementation of model units since a majority of the units are operating below the best baselines proposed for the project. Besides, the investments for development of model units are coming from the industry's own contribution and commercial borrowing with contingent / interest draw down support from Government of India contribution. Comments of the STAP reviewer have been addressed in the revised project document. The project will follow a phased implementation strategy as proposed in the revised document but would not be compartmentalized due to integrated nature of the project design based on the outcome of the PDF phase.

मुलाकाती का पास नं./VISITOR'S PASS NO. 710063

भारत सरकार/Government of India **U No.**

गृह मंत्रालय/Ministry of Home Affairs

(जिस अधिकारी से मुलाकात की गई हो, वह यह पास स्वागत अधिकारी को लौटा दें)

(The Officer visited should return the pass to the Reception Officer)

तारीख Date	24/07/06
मुलाकाती का नाम Visitor's Name	Mr. M. Ranade
उस अधिकारी का नाम, पदनाम जिससे मुलाकात की जानी है Name & Designation of Officer to be Visited	Mr KNS Jha
प्रयोजन Purpose	सरकारी ~~निजी~~ Official ~~Private~~

समय: 12/-

TIME:

जिस अधिकारी से मुलाकात की गई हो, उसके हस्ताक्षर
Signature
(Officer visited)

स्वागत अधिकारी के हस्ताक्षर
Signature
(Reception Officer)

MGIPMRND—5213HA—10,00,000—11.03.2004.

710064

मुलाकाती का पास नं०/VISITOR'S PASS NO.

भारत सरकार/Government of India

U No.

गृह मंत्रालय/Ministry of Home Affairs

(जिस अधिकारी से मुलाकात की गई हो, वह यह पास स्वागत अधिकारी को लौटा दें)
(The Officer visited should return the pass to the Reception Officer)

तारीख Date	24/07/16
मुलाकाती का नाम Visitor's Name	Mr S. Arora
उस अधिकारी का नाम, पदनाम जिससे मुलाकात की जानी है Name & Designation of Officer to be Visited	Mr KBS Rao
प्रयोजन Purpose	सरकारी Official ~~निजी~~ Private

समय:
TIME:

जिस अधिकारी से मुलाकात की गई हो, उसके हस्ताक्षर
Signature
(Officer visited)

स्वागत अधिकारी के हस्ताक्षर
Signature
(Reception Officer)

MGIPMRND—5213HA—10,00,000—11.03.2004.

मुलाकाती का पास नं०/VISITOR'S PASS NO.

भारत सरकार/Government of India

गृह मंत्रालय/Ministry of Home Affairs

U No. 710065

(जिस अधिकारी से मुलाकात की गई हो, वह यह पास स्वागत अधिकारी को लौटा दें)
(The Officer visited should return the pass to the Reception Officer)

तारीख Date	24/07/08
मुलाकाती का नाम Visitor's Name	[illegible] marwal
उस अधिकारी का नाम, पदनाम जिससे मुलाकात की जानी है Name & Designation of Officer to be Visited	[illegible] KAS [illegible]
प्रयोजन Purpose	सरकारी Official ✓ निजी Private
समय: TIME:	[illegible]
जिस अधिकारी से मुलाकात की गई हो, उसके हस्ताक्षर Signature (Officer visited)	स्वागत अधिकारी के हस्ताक्षर Signature (Reception Officer)

MGIPMRND—5213HA—10,00,000—11.03.2004.