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**Improved Electricity Access to Indian Slum Dwellers Project
(also known as the Slum Electrification and Loss Reduction
Program or SELR)**

Operations Manual

8 October 2008



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CURRENCY EQUIVALENTS
 (Exchange Rate Effective 11 August, 2008)
 Currency Unit = Indian Rupees (Rs)
 Rs. 42.07 = US\$1
 US\$0.0237 = Rs.1

ABBREVIATIONS AND ACRONYMS

ARR	Annual revenue requirement
CAS	Country Assistance Strategy
CBO	Community-Based Organization
CFL	Compact Fluorescent Lamp
DfID	United Kingdom Department for International Development
DSM	Demand-side Management
DU	Dwelling Units
EC	Electrical Contractors
FTL	Fluorescent Tube Lights
GPOBA	Global Partnership for Output-Based Aid
GOI	Government of India
(hh)	Households
ICA	International Copper Association
ICPCI	International Copper Promotion Council (India)
IEAISD	Improved Electricity Access to Indian Slum Dwellers
IIEC	International Institute for Energy Conservation
IIT-B	Indian Institute of Technology – Bombay
IVC	Independent Verification Contractor
LECs	Licensed electrical contractors
MCGM	Municipal Corporation of Greater Mumbai
MERC	Maharashtra Electricity Regulatory Commission
MFI	Micro-finance Institutions
M&V	Monitoring & Verification
NGO	Non-Government Organization
OBA	Output Based Aid
OM	Operations Manual
REL	Reliance Energy or Reliance Infrastructure Limited
SELR	Slum Electrification and Loss Reduction Project
SRS	Slum Rehabilitation Society
USAID	United States Agency for International Development

1. INTRODUCTION

This Operations Manual (OM) sets out the details of the Improved Electricity Access to Indian Slum Dwellers (IEAISD) Project funded by GPOBA together with the institutional arrangements, roles and responsibilities of each of the parties involved. It is intended to be a reference document that can be used by all stakeholders to the project. Any changes to the OM will need to be approved by the World Bank.

1.1 Objectives

The objective of the project is to demonstrate the use of an output-based aid (OBA) approach to make a significant difference to the level of access to safe and adequate electricity supply in the Indian slum context. Successful demonstration will lead to substantial potential for scale-up in slum communities in Mumbai and across India. This scheme benefits from considerable upfront support from USAID via a community outreach and education program.

The project uses an innovative design to tie in all the key stakeholders. All stakeholders have to demonstrate performance before being paid (except for the 10% upfront payment which would be made against a commercial bank guarantee).

Aspects of the project design to note are:

- The customer will make the application and select his licensed electricity contractor (LEC). This helps to keep the project community driven and allows the community on an individual basis to determine which licensed electricity contractors provide the business.
- Proportions of the payment are withheld until sustained reliable operation is verified. Good performance over time requires that Reliance Infrastructure Limited (branded as Reliance Energy) carries out much needed network improvements. Reliance Energy has to ensure that it meets Standards of Performance (SoP) specified by the Regulator.
- GPOBA would be subsidizing a portion of the costs to the end user for connection, wiring to the house and internal wiring. It will not be subsidizing Reliance Energy.
- Due to the timing and action required for flow of funds to take place, the incentives for all stakeholders are aligned towards carrying out connections as early as possible.

Key project performance indicators will be:

Take-up of connections

- The extent of take-up of connections within this scheme.
- The extent to which Reliance Energy carries out sufficient and appropriate upstream investment to fulfill the need to provide reliable electricity supply to the new connections over a sustained period of time.

The benefits of the investment

- Economic benefits – the extent to which consumers pay less for electricity with new legalized electricity.
- Improved safety - quantification where possible.
- Improved health - for a number of reasons (increased use of fans to reduce indoor air pollution by kerosene cooking, keeping out mosquitoes and reducing electricity accidents).

The IEAISD/SELR project envisages payments once the following *outputs* have been verified:

- Working connections from Reliance Energy point of supply to the home using technical specifications that meet Indian government standards and internal wiring within the home using technical specifications that meet Indian government standards and which meet the basic needs of the customer – i.e. 4.5 points (two lights, one fan, one TV and one spare plug) – see Annex H for further details. The additional costs of moving to 5.5 or more points are to be fully met by the end-users.
- Evidence of sustained delivery of electricity to the meter serving the connection for the first 6 months.

1.2 Target area

The proposed project subsidizes the cost of connections from the point of supply to the house and for internal wiring. One specific slum area has initially been targeted: Shivajinagar. Details of eligible zone can be found in section 2.4.

1.3 Project Components

The Project components funded by GPOBA are as follows:

COMPONENT 1: SUBSIDIES. Reliance Energy will be the recipient of US\$1,500,000 (one million five hundred thousand dollars) or approximately Rs. 63 million for the financing of eligible expenditures per household aimed at making new connections or regularizing existing connections. It is intended that a total of 26,250 connections will be subsidized. The amount payable per household will consist of internal wiring, the connection between the Reliance Energy point of supply and the house, and a portion of the connection service fee due to Reliance Energy (this last portion will not apply for regularizations). The subsidy between the point of supply and the house will be determined by distance, and will be paid out at a unit cost per meter distance. Payment will be made up to a maximum distance of 20 meters.

COMPONENT 2: INDEPENDENT VERIFICATION. An amount of US\$150,000 (one hundred and fifty thousand) or approximately Rs. 6.31 million for the selection of a specialist consultant to undertake the activities of the Independent Verification Contractor.

In addition, the Project component funded by USAID is as follows:

Promoting awareness on use of safe, legal and adequate quantities of electricity - developing a community awareness program involving the participation of CBOs, NGOs and LECs together with the implementing agencies of Reliance Energy, ICPCI and Nexant for the purposes of, inter-alia, educating slum dwellers in Mumbai on the benefits of access to safe and adequate supply of electricity.

1.4 Structure of Operations Manual

The rest of this OM is structured as follows:

- Section 2 contains a description of the project including the sequence of activities.
- Section 3 contains the project pre-implementation requirements
- Section 4 contains the project implementation arrangements

There are 8 annexes:

- Annex A contains the MOU between Reliance Energy, ICPCI and Nexant (acting for USAID) originally signed in August 2006.
- Annex B contains Financial Management review and requirements
- Annex C contains the procurement review and requirements
- Annex D Information to be provided on forms used for project
- Annex E contains requirements for Monitoring and evaluation
- Annex F has a sample format for quarterly reporting by Reliance Energy
- Annex G contains key extracts from the Reliance Energy Detailed Project Reports.
- Annex H contains specifications for wiring and
- Annex I contains a summary of the unit cost calculations.

2. PROJECT DESCRIPTION

GPOBA will sign a grant agreement with Reliance Infrastructure Limited (Reliance Energy), the main implementing agency. A memorandum of understanding is required between Reliance Energy, USAID and International Copper Promotion Council (India) or ICPCI. Under the terms of this MOU, each of these three parties are required to carry out a number of functions in relation to this project. These are described below.

Reliance Energy assumes responsibility for installing the wiring and meters for the legal connection up to the point of supply where its legal responsibility ends. In order to provide the service for each connection, Reliance Energy will undertake adequate upstream investment to the distribution network prior to the connection being requested. Installation of the wiring from point of supply to the house and the internal wiring will be undertaken by Licensed Electricity Contractors (LECs) who will be hired directly by end-users.

USAID and ICPCI will be responsible for organizing the community outreach and education programs that lead to efficient and safe use of electricity. Participating CBOs and NGOs will be coordinated by USAID¹ and will serve as the primary interface between the slum dwellers and the key project implementing partners.

This section sets out roles, responsibilities and project process details.

2.1 Project Institutional and Contractual Arrangements

The formal institutional roles for these three parties, as well as the other stakeholders to the project are set out below.

Reliance Infrastructure Limited (branded as Reliance Energy): Reliance Energy would have primary responsibility for implementing the project. Reliance Energy will prepare and implement an upgrade of their distribution network to support the new connections and ensure improved, reliable service. Reliance Energy will also support community outreach, provide information on the program, identify (and agree with GPOBA) additional project sites for program expansion, provide an installment payment scheme for new connections (which has been discussed with MERC), seek all regulatory approvals for the project, submit periodic implementation reports to GPOBA and USAID, address any implementation issues which may arise, provide data to allow for project evaluations and the dissemination of project experiences and lessons learned. Provide staff to process information provided by customers, LECs and IVC and make payments appropriately. Submit quarterly reports to GPOBA to allow disbursement of funds and provide IVC reports upon request.

United States Agency for International Development (USAID): USAID would have primary responsibility for overall project coordination as well as implementation of the demand-side management (DSM) and socio-economic aspects to the project. This would include preparation of the project, providing training to CBOs and NGOs mobilizing community-based organizations (CBOs) to facilitate legalization of connections and reduction in theft, promotion of end-use energy efficiency measures, outreach and training and discussions with key partners and government officials on policy implications for project implementation and future scale-up and replication.

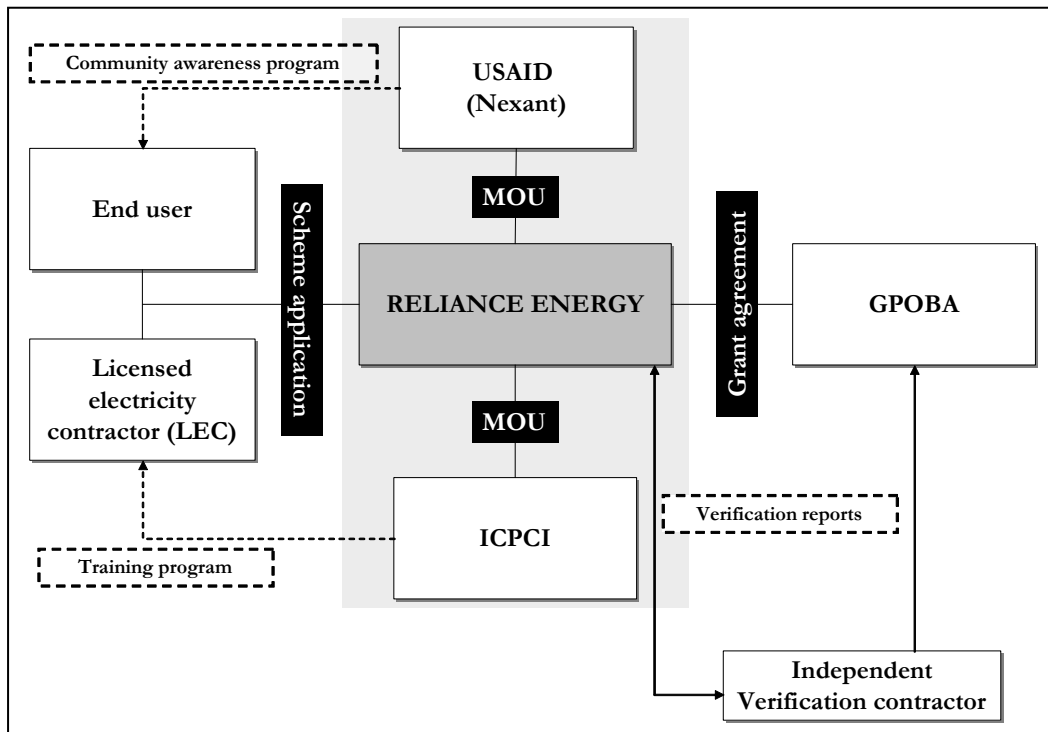
¹ As part of the USAID engagements, MFIs may offer wider credit options to slum dwellers for end user portions of the project. USAID, under its obligations of the MOU with REL, will enter into the necessary agreements to ensure that the project objectives are met.

International Copper Promotion Council of India (ICPCI): ICPCI would assume lead responsibility for technical issues surrounding the wiring upgrades. This includes development of technical specifications for wiring upgrade packages, technical support to assessing installation contractor qualifications and wiring schemes, training to contractors on safe wiring practices, and training to participating CBOs/NGOs on safe wiring. ICPCI will also take the lead in negotiating bulk equipment prices for the project from which LECs will have the option to purchase. Details of ICPCI's responsibilities are set out in an MOU with Reliance Energy as part of the grant agreement.

Slum Dwellers: Dwelling units (DUs) represent the physical infrastructure of which slum dwellers are inhabitants. The slum dwellers would assume responsibility for agreeing to apply for legal connections and ensuring timely payment of utility bills in order to participate in the project. They will also pay the costs of connection that are not being subsidized.

Licensed electrical contractors (LECs): LECs are the registered electrical contractors from the Public Works Department (PWD), Government of Maharashtra. They are responsible for installing wiring from the utility electrical meters to the DUs and internal household wiring. Under the project, the LECs would receive training from ICPCI in relation to the project, eligible customers, and how the payments would work. LECs would be paid by Reliance Energy after adequate working connections or upgrades have been verified by the Independent Verification Contractor (IVC). LECs will compete with each other for business from customers.

Figure 1 Institutional arrangements



Independent Verification Contractor (IVC): The IVC role at the time of project commencement consists of ensuring that the selected household does in fact meet the conditions for eligibility of the project. It will also be responsible for reporting working connections and upgrades of verified quality to Reliance Energy. Reliance Energy will subsequently prepare invoices for payment to GPOBA on a quarterly basis in order to trigger payments to Reliance Energy. The IVC will certify quarterly

reports produced by Reliance Energy and provided to the Bank in order to trigger GPOBA payments. The IVC will also verify levels of service provided by Reliance Energy (on a sample basis) after six months in order to allow the final portion of the payments to Reliance Energy to be made. At all times, reports from the IVC will be available to GPOBA upon request.

CBOs/NGOs: CBOs will be mobilized by USAID, in close consultation with Reliance Energy, to work with the selected communities and slum dwellers to encourage those with no or illegal electricity connections to apply for legal services. These groups will support customers in any negotiation with LECs and will identify concerns raised by slum dwellers regarding legalized connections and service levels for discussion with Reliance Energy in order to facilitate dialogue and negotiate acceptable solutions for all parties. These organizations will also convene periodic community meetings to allow external groups (such as Reliance Energy, ICPCI, MFIs, etc.) to offer information and training to the slum dwellers on topics such as the importance of legal connections, wire safety, financial literacy training, energy efficiency and conservation, etc. CBOs/NGOs will receive training organized by USAID prior to program implementation. After they have provided training to the customers of the program, they will be available to support customers during the appointment of LECs. CBOs will also periodically spot check wiring to ensure that there is no collusion between the LEC and the IVC. The CBOs/NGOs will also help seek resolution to issues that arise during implementation.

2.2 Project process and sequence of activities

This section sets out the detailed steps to be followed by the project:

A. Preparation activities:

1. In order to supply reliable electricity to the new connections, Reliance Energy has estimated that it will need to carry out substantial prior investment. Reliance Energy will undertake all investments required to connect electricity to the slum areas, including upgrading the utility network (LT and DT) and substations; putting in new drop lines from the substation to the meter; and installing/upgrading meter panel and household meters. Reliance Energy shall provide a commercial bank guarantee in the standard form used by the ICICI Bank (subject to the approval of the World Bank). The guarantee will specify that evidence of requisite investment work will be carried out within 120 days of Grant effectiveness.
2. Extracts of Reliance Energy Detailed Project Reports with information on works to be carried out and timing are set out in Annex G. Such investments would need to be approved by the regulator, MERC, and evidence would need to be provided to the World Bank.
3. USAID will arrange for CBOs/NGOs, together with Reliance Energy, to conduct outreach sessions in the communities to inform slum dwellers about the project and its components. Slum dwellers will be encouraged to participate and will be educated about the benefits of legalized electricity connections and upgraded wiring schemes, as well as the benefits available under the program which include the subsidy payments, credit options, training on energy efficiency and productive uses, etc. Details of this program – which will be implemented by the Slum Rehabilitation Society – are set out in section 3.1.
4. ICPCI will inform the PWD, Government of Maharashtra about the program. ICPCI will coordinate to ensure that the PWD adequately informs LECs about the program requirements and benefits. ICPCI will also independently organize training programs. Reliance Energy will support this process. Details of this program are set out in sections 3.3 and 3.4.
5. Reliance Energy and ICPCI will together negotiate with materials suppliers to agree on bulk rates that can be used by LECs. Details of this program are set out in section 3.5.

B. End-user application process and pre-financing:

- 6 CBOs will take the lead in informing their communities about the program and its provisions. LECs will be trained by ICPCI on the project and will go out in the (targeted) geographic areas where the scheme applies and sign up customers. The CBOs can also provide lists of LECs to interested slum dwellers. The geographic areas where the scheme applies are set out in section 2.4.
- 7 Customers will contract directly with licensed electricity contractors (LECs) to carry out connection work from the point of supply (where Reliance Energy's responsibility for carrying out connections ends) to the house and for internal wiring. The customer will be free to choose any LEC. Customers will be strongly encouraged to ask for multiple quotations (3 or more recommended) to ensure competition and avoid excessive charges by any individual LEC. Once a pricing agreement is reached between the customer and the LEC, the LECs will work with the customer to prepare application forms and compile the pre-specified documentation. The chosen LEC will supply a customer application to Reliance Energy.
- 8 Payments to LECs by the customer will vary depending on the distance from the point of supply to the house and the nature of the competition between the LECs in the area. Customers will agree to pay the LECs the cost of connection and/or internal wiring (depending on work carried out) *minus* fixed subsidy payments made by GPOBA (Table 1). The consumer shall pay his portion of the connection fee directly to Reliance Energy as per schedule of charges specified by MERC. (see description of customer installment payment program in section 2.5).
- 9 Payment by the customer will be agreed using a standard program form (available from Reliance Energy – see Annex D). It will be filled in by the customer and the LEC (with support from CBOs if required) and serves as the 'contract' for the work. Part of this form is supplied to Reliance Energy and the IVC (discussed below). The portion of the form kept by the customer sets out how much will be paid to the LEC by REL (i.e. the GPOBA subsidy) for the connection and that the customer should endeavor to get multiple (ideally 3) independent quotes (this will be explained during the workshops provided to potential customers as part of this project).
- 10 LECs, together with their customers, would then submit the application to Reliance Energy for approval. The application will be submitted to **Progress Department/New Connection Department based at the respective Divisional Reliance Energy offices located at Divisional Office near Sahakar Cinema, Tilak Nagar for Shivajinagar area.**
- 11 Before accepting the consumer's portion of the connection fee, Reliance Energy will ensure that the customer is within the project geographic area and have no other arrears to Reliance Energy. The Consumer and LEC would have agreed to the performance agreement. Reliance Energy would then issue a payment receipt for the application which constitutes Reliance Energy's consent for the LEC to proceed with the wiring (for those consumers who opt into this project). The LEC should then proceed within two weeks of receipt.
- 12 *Customer installment payment program:* In order to facilitate the uptake of the program, Reliance Energy, as discussed with MERC, shall offer an optional mechanism to consumers whereby the customer portion of the connection costs (i.e. the Reliance Energy regulated connections charge) would be paid by Reliance Energy and recovered in monthly installments through the utility bill over a 6 month period.

C. Connection activity

- 13 Reliance Energy shall provide the address/contact details of the IVC in the TOR for the LEC. Prior to the commencement of the household (hh) installation work, LECs will submit to the IVC the Reliance Energy payment receipt and copy of signed performance agreement to inform them that work will be undertaken in that hh. Within 24 hours of receiving the receipt from Reliance Energy, LEC will submit it to the IVC. After submitting this receipt to the IVC, LECs would begin the wiring from the Reliance Energy point of supply to the household and/or

internal wiring (within 2 weeks). LEC shall follow the quality standards as specified in the wiring specifications **and ToR for LEC document** (see Annex H).

- 14 LECs would be given the option to purchase the needed supplies and hardware from equipment suppliers for which the project (Reliance Energy & IPCPI) has pre-negotiated bulk rates. The contact details for these suppliers and the charges for the materials will be provided to the LECs in the TOR for the LECs (see Section 3.5).
- 15 Upon the LEC completing an individual connection, Reliance Energy will proceed to install the meter and complete the connections as per the 'New Connection' norms under SoP (annexure H to this document).
- 16 Reliance Energy would make payments to the LEC once the connections have been verified by the IVC and a report has been provided to Reliance Energy.

D. Payment process

- 17 Upon LEC completing an individual connection and Reliance Energy making the connection, LEC's would submit the "Work completion and test report" and the "invoice" to IVC for inspection. The IVC would then have up to 3 days to review the wiring and operation of the connection and certify that the work meets pre-defined specifications and then submit the "Work completion and test report" and the "invoice" to Reliance Energy with a recommendation for release of payment. LECs will receive payment from Reliance Energy (as set out by the GPOBA subsidy amounts in Table 1). Reliance Energy will pay out once the IVC has reported that the work has been carried out satisfactorily. The IVC report will detail the type of connection (new or regularization), whether internal wiring has been carried out to adequate quality and the length of wiring connection between the point of supply and the house (see Annex F).
- 18 Reliance Energy will proceed to pay the LECs within a period of 15 working days after receipt of the IVC report. In case of delayed payments, Reliance Energy will pay an additional interest as per State Bank of India (SBI) PLR rate prevailing on the first day of the month per day on the outstanding amount to the LECs.
- 19 According to the agreement signed between the LEC and the customer prior to the connection being carried out, the customer would be responsible for paying any remaining balances to the LEC, which works out to the total cost less the GPOBA subsidy.
- 20 Reliance Energy and the CBOs shall periodically (typically every quarter) spot-check a sample of the wiring to ensure that all the required quality standards have been met. If these standards are not met, steps will be taken to replace the IVC.

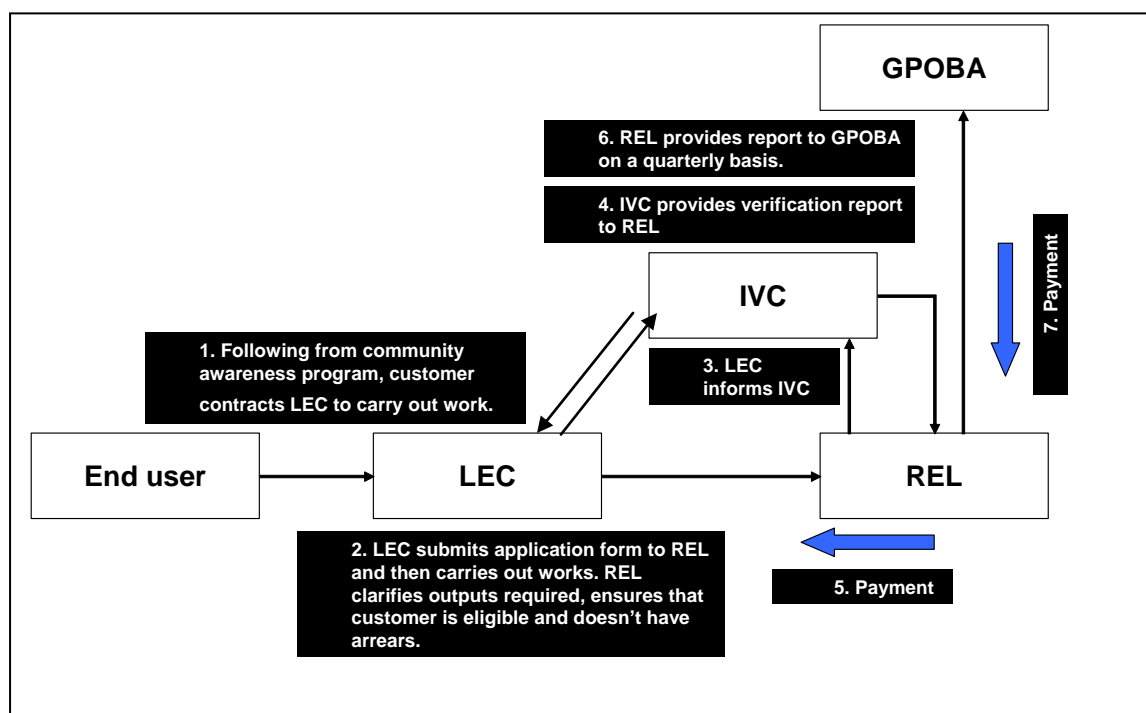
F. GPOBA payments

- 21 GPOBA will make an upfront payment of 10% to Reliance Energy upon effectiveness of the grant agreement. This payment would be against a commercial bank guarantee acceptable to GPOBA and be used to capitalize the 'revolving fund' from which Reliance Energy would provide the optional financing scheme (as discussed with MERC) and pay LECs.
- 22 IVCs would independently verify the status of connections made by Reliance Energy to ensure that they are working. These verifications will be used by Reliance Energy to compile a report for all connections carried out on a quarterly basis (to be certified by IVC). The quarterly Reliance Energy report will be submitted to GPOBA to trigger the payment (per connection) to Reliance Energy. In case IVC fails to verify and send the report within the specified time limit, payments will not be disbursed by Reliance Energy. In the case that the IVC is systematically not performing, Reliance Energy will take steps to appoint a third party verifier (with agreement of GPOBA) to ensure that the LECs are not penalized.
- 23 Reliance Energy will submit a quarterly report (certified by IVC) made up from the independent verifications (Output Verification Reports) submitted by the IVC. The individual IVC verifications would be made available to GPOBA upon request. Payment would be 70% of entire cost of connection after the connection is made.

24 The IVC would verify on a sample basis the quality of working services at the Point of Supply 6 months after the initial connection and whether regular billing has taken place. Submission of the Reliance Energy quarterly report (verified as true representation of output reports by IVC) will trigger a further GPOBA payment to Reliance Energy of 20% of the cost of the connection.

This process is summarized below:

Figure 2 Process description and flow of funds



2.3 Subsidy and Payment Indicators

Payments will be made in the following manner.

Table 1 GPOBA subsidy payments

Element of connection	New connection	Regularization
Payment to Reliance Energy as service connection fee	Rs. 375 in total	No payment
Connection from point of supply to house	Rs. 71/meter distance	Rs. 71/meter distance
Internal wiring	Rs. 1,032 in total	Rs. 1,032 in total

On average, GPOBA would be paying out Rs. 2,471 per household for a new connection and Rs. 2,096 per connection for regularization. For regularization, the subsidy for the regulated service fee would not be paid out as this charge would not be levied by Reliance Energy.

The subsidy payment for the wiring between the point of supply and the house will only be subsidized up to a maximum distance of 20 meters.

2.4 Project geographic target areas

Initially, the project consists of the slum cluster of Shivajinagar – as defined below. Further slum clusters will be selected by Reliance Energy and approved by GPOBA. Only households living within the geographic areas defined by the following description and future agreed zones deemed eligible will be able to participate in the scheme. The project may be expanded to new slum areas within the Reliance Energy service territory with the new geographic zones deemed eligible if funds are not fully used up in Shivajinagar. Any new zones will need approval of GPOBA. Reliance Energy investment proposal (DPR) also needs to be approved by MERC for such new areas.

Zone of eligibility within Shivajinagar

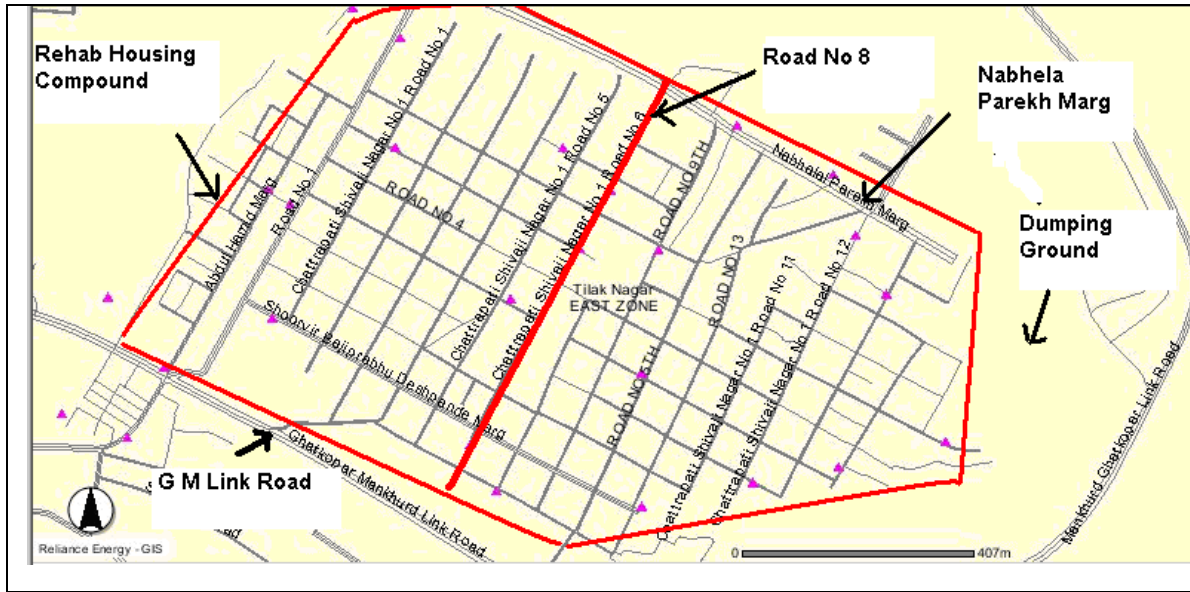
The Shivajinagar area can be marked by following boundary limits:

- Dumping Ground to the east of area.
- Rehab Housing Compound to the west of area.
- Ghatkopar Mankhurd Link Road to the south of area.
- Nabhela Parekh Marg to the north of area.

Figure 3 shows the map of Shivajinagar .This area is surrounded by dumping ground of MCGM authorities. Common Facilities provided by MCGM to this area are as follows:

- a) MCGM school (3 No's) located near Plot no 1, plot no 30 Baiganwadi. & plot no 49 Shivajinagar.
- b) BEST Bus depot: Old Bus depot is located at the rear end of Baji Pabhu Deshpande Marg, and New Bus depot is on Dumping road opposite to Shastri Nagar.
- c) MCGM hospital which is located in Shivajinagar near Ram Mandir.

Figure 3 Shivajinagar area map



The selected zone of Shivajinagar will likely not comprise adequate numbers of households to allow 26,250 connections to be made. Reliance Energy may therefore identify additional areas as per the criteria defined below for the scheme. These additional areas will require prior approval from GPOBA to become eligible.

Criteria for determining further eligible zones

Connecting all unserved slum dwellings within the Shivajinagar slum area will represent the first phase of the project. It is expected that this first phase will lead to about 8,000-12,000 new connections and 5,000 upgraded connections. However, in order to achieve the full 26,250 new and upgraded connections under the project, it will be necessary for Reliance Energy to identify additional sites that can be implemented under a second phase of the project. It has been agreed that Reliance Energy will identify additional site(s) towards the end of the implementation of the first phase and prepare a proposal for GPOBA consideration. Reliance Energy and GPOBA agreed to some broad criteria for selection of the second phase sites, as noted below:

- The proposal must identify one or more slum areas within Reliance Energy’s service area in Mumbai that would provide the additional connections (about 10,500-14,500) in order to meet the 26,250 target specified in the Grant Agreement;
- The slums areas must not be identified for possible upgrading in the Slum Rehabilitation Program of the Government of Maharashtra within the next 5 years.
- The slum areas selected are considered to have among the poorer of the slum dwellers in Mumbai (to be more precisely defined at a later date);
- Reliance Energy’s sub-distribution system shows relatively high combined technical and commercial losses (over 30%), which will help make the business case for an intervention in the area; and
- Reliance Energy is willing to present a parallel upstream investment plan to ensure that the quality of service to these areas will be strengthened to accommodate the anticipated new connections.

In addition to satisfying these criteria, Reliance Energy will also address the following aspects in their proposal:

- As noted previously, USAID has agreed to carry out a number of parallel efforts² under the first phase in order to help ensure the success of the project. Towards the end of the first phase, USAID has agreed to evaluate the project impacts and document results and lessons learned, which will be instrumental in guiding implementation plans for the second phase. For those parallel efforts deemed instrumental in the success of the first phase, Reliance Energy will include in its proposal specific plans indicating how it would propose to carry on those efforts under the second phase.
- Reliance Energy will undertake complementary upstream investments in their system to ensure the supply as per SoP for increased connections. Reliance Energy should also provide some indications in its proposal to GPOBA that its proposed parallel investment plan has been submitted to MERC and is expected to be, if not already has been, approved.
- Reliance Energy should indicate any other agreements expected to be in place during implementation of the second phase, such as a continued partnership with the International Copper Promotion Council (India) to support wiring safety and bulk purchases of wiring.

If there are any other proposed material changes to the project design, such as changes to the IVC scope of work, customer financing, selection or use of licensing contractors, or there are changes in the conditions (e.g., amendments to MERC regulations or Reliance Energy license agreement), these should be also clearly noted in the proposal.

2.5 Details of customer installment payment program

The Reliance Energy connection fee approved by MERC is Rs. 1,500 (about \$35) per connection. Of this amount, GPOBA will be paying Rs. 375 (approx. \$ 8.91) as a subsidy. The remaining approx Rs. 1,125 (\$26.74) will be paid by the customer. Reliance Energy will offer a customer installment payment program for this remaining connection fee. As discussed with MERC, Reliance Energy will offer the customer an option to finance 100% of the remaining connection fee and recover it in 6 equal monthly installments from the customer through the monthly electricity bill. This installment payment program will be structured as follows:

- Reliance Energy will create a separate account for accepting monthly installments under its master billing system.
- Customers would apply for the scheme via the application form that they fill in and that is submitted to Reliance Energy by the LEC.
- Reliance Energy will issue formats to the consumers at the time of giving new connections.
- Consumers will sign the formats and undertake to pay the monthly installments as stipulated by Reliance Energy in the formats.
- The upfront payment by GPOBA will be deposited by Reliance Energy into this special account, which would be used to pay the up-front costs from the specific account.
- Consumers shall repay Reliance Energy in 6 equal monthly installments.
- Once the installments are paid, Reliance Energy shall remove the installment charge from the monthly bills to the consumers
- When the connection has been verified by the IVC, Reliance Energy will submit the report to GPOBA for payment of subsidized portion i.e. Rs. 375.

² These efforts included community mobilization and entering into MOUs with local CBOs, campaigns to encourage productive and efficient electricity use,

3. PROJECT PRE-IMPLEMENTATION REQUIREMENTS

Project partners need to carry out a number of activities prior to the connections being made. These are set out below.

3.1 USAID program for community awareness

USAID will contract the Slum Rehabilitation Society (SRS) to carry out the work of community awareness. This program includes capacity building activities that need to be conducted and organized for the communities, in the localities and through the local area network.

SRS shall be adopting the partnership and the community organizing approach for undertaking capacity building activities. The activities consist of conducting training programmes and workshops. These increase the self sustaining ability of people to recognize, analyze and solve their problems by more effectively controlling and using their own and external resources.

The training programmes are conducted for the CBOs, these programmes will be undertaken to ensure that the learning's are adopted and maintained by the local organization. The workshops will be conducted to empower the communities with knowledge and skills.

While the objective for the training programme is to develop the capability within each CBO to provide communication and awareness to all the slum dwellers in the slum areas, the objective for the workshops is to inform and educate slum dwellers on the benefits of legal electricity connections and safe wiring.

The workshop will inform the people about:

- The activities of the IEA/ISD/SELR Pilot project
- Benefits of legal connections
- Importance of safe and adequate wiring
- Benefits of efficient electricity use & DSM
- Requirements for legal electricity connection
- Potential benefits of the Pilot to the community and the individual dwelling units (explanation of the possible subsidy)

The training programmes will focus on:

- The activities of the IEA/ISD/SELR Pilot project
- Benefits of legal connections
- Importance of safe and adequate wiring
- Benefits of efficient electricity use & DSM
- Requirements for legal electricity connection
- Potential benefits of the Pilot to the community and the individual dwelling units (explanation of the possible subsidy)
- Cost benefits to the communities
- Use of electric appliances
- The institutional support required in the future plans

- The community connection issues on geographical basis
- Training the youth for electric failure emergencies
- Community based issues that may emerge from the environment action plan and the business investment plan

Methodology of capacity building

The total number of families will be about 40,000 slum dwellers spread over geographical areas.

Training programme

SRS knows that on average one CBO represents 500 families. SRS will conduct one training programme for two CBOs and the other representatives in the same area. This is in order to facilitate exchange of experiences between CBOs. Calculating on this yardstick SRS will undertake 40 training programmes. The participants will include committee members of the cooperative housing societies, mahila mandals, federations, shop owners, local NGOs and key members of the religious and political organizations. SRS intends to use our own contacts and the contacts of a well-known NGO to select and invite the participants.

Workshop

SRS intends to organize 44 workshops. The invitation to the workshops will be publicized through public announcements and by sending information to CBOs. To make sure the invitation are also sent out to the people who are illegal users, the data and contacts that are taken up by the study will be used. Besides the personal invitation the intention is to use announcement through posters on the sites. The workshops shall be organized thus:

- With approximately 50-75 people
- SRS wants to keep the time of the workshop bound for two hours
- Separate workshops for males and females

SRS decided to have separate workshop because:

- The males and females are most probably available on different timings
- Both groups will be exposed to the same information, but the focus will be different for males and females (see the table)

Tentative Schedule for Capacity Building

What	When	Who
Decide the subjects of the workshops & the responsible partners	September 2008	USAID/ Reliance/ ICPCI
Decide the material and the agenda for the workshops	September 2008	USAID/ Reliance/ SRS/ ICPCI
Start informing the CBO's for the capacity building	Late-September 2008	SRS
Start training CBOs	Early October 2008	SRS
Finish training CBO's	Middle of December 2008	SRS
Start with mobilizing the people for the workshops in Shivajinagar	Late September 2008	SRS
Start with the workshops	Beginning of Oct 2008	SRS
Finish the workshops	End of December 2008	SRS

SRS will start with the Capacity Building sessions in Shivajinagar in late-August 2008. SRS shall stay within the time limits outlined in the schedule above.

Thematic structure Capacity Building

Each training programme and workshop will follow the broad thematic structure as mentioned in the table below (difference between workshop and training is intended to be in the methodology and resource material used):

Capacity Building Proposal (which will be translated to Hindi)

Session	Topic	Organizations involved
Icebreaker		SRS
Opening	<ol style="list-style-type: none"> 1) The activities of the SELR Pilot project 2) Potential benefits of the Pilot to the community and the individual dwelling units 3) Need to negotiate and obtain multiple independent quotes. 4) Explanation of cost breakdown of works and subsidy element. 	SRS Reliance USAID ICPCI
Technical (male and females have a different focus)	<ol style="list-style-type: none"> 1) Benefits of legal connections 2) Importance of safe and adequate wiring 3) Requirements for legal electricity connection 4) Explain subsidy 	SRS ICPCI: technical information Reliance: procedure explanation and tariff explanation
Habits	<ol style="list-style-type: none"> 1) Benefits of efficient electricity use 2) Demand Side Management 	Reliance ICPCI SRS
Closure		

3.2 Reliance investment plan

The Reliance Energy investment plan is included in the DPR extracts shown in Annex G.

MERC approvals required

Reliance Energy has submitted the DPR to MERC for approval. Approval of all investment will require the approval of MERC. These approvals will be a condition of effectiveness of the grant agreement.

3.3 ICPCI training program for LECs

ICPCI will lead the training/awareness building for the LECs.

Objectives of training program

The seminar shall have following objectives:

1. To explain the objectives and scope of IEAISD/SELR Project
2. To explain Mechanism of implementation
3. To explain the package and subsidy
4. To explain cost and benefits to residents
5. To explain role of LEC's, IVC and other agencies
6. To explain charges and mechanism of payments.
7. To explain quality requirements of material and workmanship.
8. To explain the importance of providing genuine quotes for carrying out the work.

Reliance and SRS may add some other objectives depending on their requirement.

- *Target Audience* Approved LECs from each locality
- *Medium of Communication* Mostly Hindi in Shivajinagar area.
- *Expected Size of Audience* Every Seminar will be for about 20 to 30 Persons.
- *Seminar Duration* Each program shall be for about 3 to 4 hours. It will start with registration and will end with response and motivational address by community leader followed by Tea/ refreshments/ Lunch/ Dinner.
- *Faculty* There shall be different faculties from ICPCI, and Reliance. ICPCI shall cover most of the points listed above. Reliance and SRS may add some other objectives depending on their requirement.
- *Seminar arrangements* The seminar shall be organized in a hotel or Reliance seminar hall. Tea and snacks/Lunch/Dinner may be provided at the end of the seminar. Participants shall be given reading material specially prepared in line with the objectives listed above in Hindi/ Marathi as required. The presentation shall be carried out using Power Point presentation with Lap Top and LCD Projector. Assigned executives of the IVC agency shall be introduced to the attending LECs. ICPCI channel partners shall be provided opportunity to display their products if interested.
- *No of Seminars planned* Three

3.4 ICPCI training program for CBOs/NGOs

Objectives of training program

This training program will be conducted in conjunction with the training and capacity building workshops conducted by SRS. The training seminar shall have following objectives:

1. To explain the objectives and scope of IEA/SELR Project
2. To explain Mechanism of implementation
3. To explain the package and subsidy
4. To explain cost and benefits to residents
5. To introduce registered LEC's and other agencies to the residents
6. To register residents for the scheme with a token participation fee
7. To get forms filled

Reliance and SRS may add some other objectives depending on their requirement.

- *Target Audience* CBO/NGO from each locality with local influencers and opinion builders. One person from each family/ dwelling unit is expected to participate. We may use Ration card or some other residence proof for registration.
- *Medium of Communication* Mostly Hindi in Shivajinagar area
- *Expected Size of Audience* Every Seminar will be for about 50 to 60 Persons.
- *Seminar Duration* Each program shall be for about 1.5 to 2 hours. It will start with registration and will end with response and motivational address by community leader followed by Tea/ refreshments.
- *Faculty* There shall be different faculties from ICPCI, SRS, and Reliance. ICPCI shall cover the points 1-5 listed in the program objectives above. Reliance and SRS may add some other objectives depending on their requirement.
- *Seminar arrangements* The seminar shall be organized in the local school or social place. Tea and snacks shall be provided at the end of the seminar. Participants shall be given reading material specially prepared in line with the objectives listed above in Hindi/ Marathi as required. The presentation shall be carried out using Power Point presentation with Lap Top and LCD Projector. Approved LEC, approved shop representatives shall be invited to participate for registration. Residents shall be provided guidance to complete the project registration formalities. ICPCI channel partners shall be provided opportunity to display their products if interested.
- *No of seminars planned* Forty

3.5 Reliance/ICPCI negotiation with wholesale suppliers

A. LEC Equipment Procurement Procedure

LECs will be required to buy only approved makes of wires, accessories and other products required for the project appearing in the list of approved makes. Specifications will be provided by ICPCI. Rates of all the products appearing in the approved makes list will be negotiated with the manufacturers and these rates will be offered (on a voluntary basis) to the LECs through a comprehensive list of dealers. Upon receipt of the acknowledgement slip from Reliance Energy as a

token of approval and acceptance of application, LECs will submit the copy of the same to IVC and collect the discount coupons (special price coupons) for procurement of materials of approved makes from the list of selected dealers.

Dealers will issue the materials of approved makes to the LECs at the pre negotiated rates upon receipt of the discount coupons. Dealers will have to be paid by the LECs directly and LECs are free to negotiate the payment terms with them.

LECs will be responsible for procurement of defect free genuine materials from suppliers. Payments to LECs will be stopped, if found to be using defective or spurious materials during IVC inspection, in the internal as well as external wiring.

B. Proposed pricing scheme for LEC equipment

- *Approved manufacturers* Materials will be procured only from the authorized dealers of the approved manufacturers. Manufacturers will furnish the list of their authorised dealers for procurement of materials. Authorized dealers accepting discount coupon scheme will be highlighted. This list will be provided by Reliance Energy when the application is made.
- *Special price* Manufacturers will be offering special price keeping in view of the bulk size of the project purchases. Price variation clause will be considered for revision of price in both directions after every six months. However the reason for price variation needs to be validated by IEEMA index (or some reputed institution).
- *Taxes* Excise duty, sales tax, octroi etc. will be paid to the manufacturers at actual as procedural delay for removing the same is very lengthy and cumbersome.
- *Delivery* Materials will be made available by the manufacturers off the shelves at any point of time during the project execution period.
- *Payment* Payment will be paid by the LECs to the authorized dealers directly and payment terms will be mutually negotiated between them.

4. IMPLEMENTATION ARRANGEMENTS

The following arrangements will be used for delivering the project.

4.1 Disbursement of funds

Subsidy payment will be made by GPOBA to Reliance Energy upon submission by Reliance Energy of quarterly reports (verified by the IVC) to the World Bank (as set out in the Disbursement Letter to this project - see Annex F for sample reporting format for quarterly reports).

1. whether the connection has been activated by Reliance Energy;
 - the number of new legal connections and the number of regularizations;
 - the length of these connections from the point of supply to the house (to determine how much subsidy needs to be provided for the line from the point of supply to the house);
 - number of 4.5 point internal wirings carried out during that period;
2. for connections carried out over 6 months ago, whether supply is of adequate quality to the meter and whether regular billing has taken place.

GPOBA will disburse agreed amounts (based on amounts per connection set out in Table 1) on the basis of the following:

Signing of grant agreement (upon effectiveness) between GPOBA and Reliance Energy – 10% of entire grant agreement i.e. US\$150,000 or approximately RS 6.3 million against a Bank guarantee payable to GPOBA setting out performance requirements by Reliance Energy. The commercial bank guarantee will be in favor of The World Bank and will be provided by Reliance Energy. Since this payment is not performance based, the guarantee will specify the conditions under which it would be called i.e. the guarantee can be called if Reliance Energy has not undertaken upstream investment in line with the Detailed Project Report submitted to the Maharashtra Electricity Regulatory Commission and to the satisfaction of the Bank within a period not to exceed 120 days from grant agreement effectiveness or that successful payment for new connections or regularizations is lower than even very pessimistic estimates for take up.

Subsequent to this initial payment, further payments will be based on performance and verified outputs and will be according to the following schedule:

- 70% of the cost of each connection (based on unit costs) upon receipt of independent verification that connection and/or internal wiring has been carried out and that connection has been made by Reliance Energy and is operational;
- 20% of the cost of connection (based on unit costs) for internal wiring and/or connection after independent verification of 6 months of service delivery to appropriate quality levels to the meter.

After the initial disbursement (at project effectiveness), all other disbursement requests will be based on the submission of Interim Financial Reports (IFR) (which will be included in the quarterly reports) certified by the Independent Verification consultants for the purposes of disbursement. The formats of the IFRs will be finalized based on the following template. Please refer to Annex F for further specific information requirements.

IFR I : Interim Financial Report for Disbursement for the period 01.01.09 to 31.03.09

New Connection no.	Regularized Connection no.	Is there internal wiring?	Length of connection to the house?	Agreed Unit Cost (based on whether internal wiring is carried out).		Total Disbursement sought for Qtr 01.01.09 to 31.03.09		Cumulative Disbursement sought till date			
				3	4	A=1*3 *L	B=2*4 *L	No of New Connections	No of Regularized Connections	Agreed Unit Cost	Cumulative Disbursement to date
1	2		L	3	4	A=1*3 *L	B=2*4 *L				

The following timetable of disbursement is envisaged:

Estimated Disbursement Schedule (Amounts in USD)

Quarter	Number of Connections	Amount Rs. Million (US\$)	Cumulative Amount Rs. Million (US\$)
Oct. 2008 (Initial 10% payment)	0	6.31 (150,000)	6.31 (150,000)
Oct. – Dec. 2008	4,000	6.39 (151,980)	12.7 (301,980)
Jan. – Mar. 2009	7,500	12.45 (295,881)	25.15 (597,861)
Apr. – June 2009	8,100	15.57 (370,213)	40.73 (968,075)
July – Sept. 2009	6,650	15.06 (357,950)	55.79 (1,326,026)
Oct. – Dec. 2009	0	3.93 (93,368)	59.71 (1,419,395)
Jan. – Mar. 2010	0	3.29 (78,118)	63.00 (1,497,513)

4.2 Project Accounting

Separate project statement of accounts will be prepared and audited. The accounts for the GPOBA project will comprise IFR I.

An Interim Financial Report (IFR) will be submitted (as part of the Quarterly report) to the Bank quarterly for Disbursement. This will be called the IFR for Disbursement. This will comprise the following:

- number of connections and/or internal wiring forecast for the next quarter;
- number of working connections actually made and independently verified during the quarter that has just passed (connections and/or internal wiring);
- length of wiring from the point of supply to the house;
- number of connections and/or internal wiring for which 6 months of independently verified delivery and billing has taken place.

In addition to the IFR I submitted for disbursement which will provide the information above, there will be an additional (annual) exercise to review actual costs of connections incurred by the LECs for new connections and regularizations. This information will comprise IFR II. This will not be considered for the purpose of specific disbursements but the information will be useful from the point of view of better understanding consumer connection costs and the extent to which the subsidy is supporting.

For the purposes of compiling IFR II, Reliance will facilitate in gathering information on actual costs incurred for the project as follows:

Portion of connection charge being subsidized	Who determines the actual cost?	How will this actual cost be reviewed?
Regulated connection charge	Regulator (MERC) based on assessment of Reliance costs.	Reliance Energy to report any change in regulated connection charge
Cost of Wiring (per meter distance) from Point of Supply to the house	LEC and consumer agree on price	Reliance Energy to provide summary information on an annual basis using documentation provided to Reliance by consumer and LEC as part of the project (see Annex D (B)).
Internal house wiring	LEC and customer agree on price	Reliance Energy to provide summary information on an annual basis using documentation provided to Reliance by consumer and LEC as part of the project (see Annex D (B)).

Separately, information on Reliance Energy upstream works will also be used to determine whether Reliance Energy has met the quality of performance standards as required by MERC. Inadequate quality of performance could result in the upfront 10% payment being returned to GPOBA and only being paid out once Reliance Energy meets the required performance standards.

4.3 Financial Management Arrangements

See Annex B for details

4.4 Procurement

See Annex C for details

4.5 Monitoring Indicators

See Annex E for details.

4.6 Environmental and Social Safeguard Compliance

USAID will develop an Information, Education and Communication (IEC) program to ensure that the slum dwellers clearly understand the project interventions and benefits to be derived from the project. Reliance Energy will ensure that USAID engages CBOs and NGOs to undertake IEC activities and mobilize the slum communities. Part of these tasks will need to assess and address potential conflicts that could undermine the benefits that the poor/vulnerable poor households could derive from the project.

Environmental safeguards: There are reportedly a number of cottage industries running within the slums, such as waste plastic palletizing units, thread weaving and dyeing, stitching and tailoring etc. Some of these cottage units operate in extremely confined space posing health and safety risks to inhabitants. At several locations there are free hanging live wires in the open, which the project will address as part of its objective to improve overall electrical safety by securing these connections and junctions. It is expected that the project would use consultation and communication tools to discourage residents from using the available electricity for non-domestic purposes within confined areas of slums.

Reliance Energy will capture for each slum (based on consultation with local communities) existing environmental baseline conditions, inventory of hazardous operations within slum areas, and assessment of environment, health and safety risks that may arise due to project implementation activities. An environmental audit was undertaken on the proposed slum locations, and Reliance Energy has developed an Environmental and Social Management Framework of 22 May 2007 to be implemented during the life of the project (internationally disclosed in draft form on 30 April 2007).

4.7 Arrangements for the independent verification contractor

Independent Verification Contractor (IVC) is a technical entity with the requisite capabilities to be able to carry out independent assessment and reporting of working connections being carried out (including the length of wiring between dwelling unit and the point of supply) and quality of connections (vis-à-vis Indian standards). Reliance Energy will carry out the procurement using a competitive selection process (with the evaluation and selection conducted by USAID and ICPCI in coordination with Reliance Energy). Terms of reference used will be agreed with GPOBA prior to the procurement process and GPOBA will need to provide no objection to the chosen IVC.

Annex A: Memorandum of Understanding between Reliance Energy, ICPCI and Nexant (acting on behalf of USAID)

Original MOU between Reliance Energy, ICPCI and NEXANT, dated August 2006.

MEMORANDUM OF UNDERSTANDING

Between

RELIANCE ENERGY LIMITED
INTERNATIONAL COPPER PROMOTION COUNCIL (INDIA)
AND
NEXANT, INC.

SLUM ELECTRIFICATION AND LOSS REDUCTION (SELR) PROGRAM

This Memorandum of Understanding (MOU) is made and entered into on this ___ day of August 06 2006 by and between:

- Reliance Energy Limited (REL), with its offices at Electricity House, Santa Cruz (E), Mumbai 400 055;
- International Copper Promotion Council of India (ICPCI), with offices at 602, Omega, Hiranandani Gardens, Powai, Mumbai 400 076, which is the Indian affiliate of the International Copper Association (ICA); and
- Nexant, Inc., a consulting firm under contract with the United States Agency for International Development (USAID) for the Slum Electrification and Loss Reduction (SELR) Program, with offices at 1015 18th St. NW, Suite 801, Washington DC 20036.

The purpose of this MOU is to signify the above parties' intention to arrive at an agreement to cooperate on a joint REL-USAID-ICPCI Slum Electrification and Loss Reduction (SELR) Program, including design, pilot project implementation, pilot project evaluation, and scale-up, and documents the agreed objectives, roles and responsibilities of the various parties.

1.0 Introduction and Background

- 1.1 The United States Agency for International Development (USAID), in cooperation with the International Copper Association (ICA) and its Indian affiliate, ICPCI, has launched the Slum Electrification and Loss Reduction (SELR) Program, a three-year program (which began in October 2005) on the theme of regularizing electricity services in slum areas. The primary objective is to develop, test, evaluate and scale-up customized approaches to improve electricity access and normalize services in slum areas in order to improve the economic opportunities and quality of life for slum dwellers. This Program is currently being carried out in India and Brazil, and lessons are expected to be shared globally. Program activities include developing and designing pilot projects with local utilities, government officials, slum communities, nongovernmental organizations (NGOs), and other stakeholders to address specific needs and barriers in order to develop customized approaches that can be replicated in these and other countries. USAID has appointed **Nexant, Inc.** a consulting firm, to develop and manage the SELR Program in India.

- 1.2 **Reliance Energy Ltd. (REL)** is India's leading integrated power utility company in the private sector. It has a significant presence in generation, transmission and distribution (T&D) of power in Maharashtra, Goa and Andhra Pradesh. In an effort to reduce the overall T&D losses and improve supply reliability, REL is in the process of designing and developing strategies to achieve 100 percent regularization and legalization of electricity connections in slum areas and improve the distribution infrastructure in these clusters. To test and evaluate various strategies to improve electricity access and normalize services in slum areas for large-scale implementation, REL has proposed to undertake a pilot project in 2 slum clusters in Mumbai.
- 1.3 **The International Copper Promotion Council (India), (ICPCI)** is the Indian center of the International Copper Association, the leading organization for the promotion and defense of copper worldwide. ICPCI is driven by the same objective as its parent organization, which is to promote the beneficial usage of copper for safety, health, environment and energy savings. ICPCI's activities focus on helping end-users to better understand and appreciate the positive attributes of Copper. ICPCI actively promotes copper through seminars, workshops and training programs throughout India, in collaboration with other organizations, institutions and trade bodies.
- 1.4 **The World Bank's Global Partnership for Output-Based Aid (GPOBA)** has approved in principle a grant to defray a portion of the customer connection costs and wiring upgrades. A separate grant agreement between GPOBA and REL will specify the various requirements and conditions for disbursement for these grants. It is currently proposed that a grant will be provided to all new, legal and valid connections for slum dwelling units that currently do not have a connection or have illegal and invalid connections, as well as a smaller grant to provide safe and reliable wiring from the meter box to dwelling units and internal wiring to all dwelling units in the target areas, including those with existing legal and valid connections and those without. The customers will be required to pay a portion of the costs and the Project may offer financing options for their portion of the payment.

2.0 Objectives and Proposed Components of the SELR Program

- 2.1 The principal objective of USAID, ICPCI and REL in the SELR program is to develop, test, evaluate and scale-up customized approaches to improve electricity access, normalize services and improve the quality of life and economic opportunity in slum areas for wide-scale implementation. Based on discussions with a variety of local stakeholders, it is expected that the Program would seek to include a fully integrated approach to address the components and elements as noted below:
- Cooperation and collaboration with a broad range of interested organizations, including local distribution utilities, state and municipal agencies, community-based organizations (CBOs), NGOs, slum dwellers, and other stakeholders, with the creation of an Advisory Committee¹ as appropriate;
 - Development and implementation of plans for utility network upgrading, loss reduction, and additional measures to improve service quality, safety and reliability, which may include testing of new technologies and technical solutions from ICPCI;
 - Testing of alternative strategies and approaches to encourage slum residents to take legal connections which may include areas of metering and connection, billing and

¹ Members of the advisory Committee may include representatives of the Municipal Corporation of Greater Mumbai, Mumbai Transformation Project, NGO Council, MERC, National Slum Dwellers Federation, State Urban Development Department, State Energy Department, and USAID-India Mission.

collection, theft reduction, micro-finance, and customer education, involving local CBOs as appropriate;

- Testing alternative strategies and approaches for a variety of demand-side measures, including awareness raising for end-use energy efficiency, including internal wiring, and productive uses of energy services, in order to improve prospects for customers' ability to pay and to maximize socioeconomic benefits;
- Developing outreach and other strategies to encourage proper wiring from the utility meter boxes to the households, as well as internal wiring within the households, in order to improve safety of local residents and improve efficiency of the service;
- Identification and testing of options for related social efforts which may include community mobilization, slum dweller empowerment, and gender considerations; and
- Development of policy dialogue, strategies and plans for linking Program findings to other REL service territories, ongoing and new slum upgrading programs, and other utilities across India.

2.2 The Program will be carried out in two Phases:

- Phase 1 - Pilot Project in Golibar No. 3 and Shivajinagar slum clusters
- Phase 2 - Dissemination and scale-up of Pilot results.

3.0 Phase 1 - Pilot Project

3.1 The proposed pilot project will be carried out in the Golibar No. 3 and Shivajinagar slum clusters in the South and East Divisions of REL. These clusters have the following characteristics:

Table 1 - Characteristics of Selected Slum Clusters

Characteristics	Golibar #3	Shivajinagar
Location	South Division	East Division
Area	10,000 sq. meters	810,000 sq. meters
No. of Dwellings	2,600	19,000
Percent Illegal Connections	~30%	~40%
Estimated Losses	41%	52%
Installed Capacity	1600 kVA	12,325 kVA
No. of Electric Meters	1900	15,745

3.2 The design of the pilot project will incorporate cost-effective measures to address the components and elements as noted in Section 2.1, including the supply-side, demand-side and socioeconomic areas as identified. In addition, the pilot project will seek to test alternative approaches for these elements to address their viability and effectiveness for broader application.

3.4 The design of the Pilot Project will address, but not be limited to, following elements:

Supply-Side Considerations

- Network upgrading and loss reduction
- Reliable service supply
- Regulations and policies
- Metering and anti-theft connection
- Billing and collection
- Financing of connection costs

Demand-Side Considerations

- End-use energy efficiency
- Improved wiring from the meter cabins to the dwelling units
- Internal wiring safety, efficiency and reliability
- Financing of internal wiring costs

Socio-Economic Considerations

- Productive use and micro-enterprise development
- Community mobilization
- Gender issues

4.0 Phase 2 – Dissemination and Scale-Up

4.1 A critical aspect of the Program for all parties is the need to incorporate viable models and approaches into broader programs. Thus, the Program will explicitly include a wide range of stakeholders and parties (i.e., through an Advisory Committee and periodic broader consultation with and reporting to interested organizations) to ensure broad buy-in for the pilot project and ownership of the lessons learned for future dissemination. Phase 2 will include efforts to link the Program to broader policy dialogue with respect to slum upgrading, ongoing power sector reforms and policies, related training programs (e.g., USAID DRUM Project, Reliance Energy Management Institute), periodic technical exchanges (e.g., workshops, utility twinning, FOIR), etc. The need for information dissemination will also require clear documentation of project inputs, plans, impacts, etc. for the development of comprehensive case studies and other technical reports to support these efforts.

4.2 REL will implement SELR activities in other slum clusters in its service territory using project designs that incorporate the lessons learned from the Phase I Pilot Project.

5.0 Roles and Responsibilities

The roles and responsibilities of the various parties are summarized below:

5.1 Roles and responsibilities of REL: REL will be responsible for the following:

- Developing investment and implementation plans for the power supply (network expansion, network upgrading, loss reduction, reliability, theft reduction) to the target slum cluster in the Pilot Project;
- Working together with USAID and ICPCI to meet with the key stakeholders and provide inputs to develop a strategy to address issues associated with legalizing electricity connections in slum areas;
- Conducting technical survey of target area to determine loads and network capacities, number of legal and non-legal connections, status of meters and associated wiring, network upgradation needs, etc.
- Implementing the pilot project in conjunction with USAID, ICPCI and identified project partners (e.g., CBOs, NGOs), based on jointly agreed project design and components;
- Providing technical, financial and other information as needed in order to assess the baseline characteristics of the target areas, determining impacts of the pilot project, developing a case study, and replicating the project elsewhere (both within and outside Reliance service territory);
- Periodic reporting on project progress and results;
- Incorporating pilot project experiences within internal planning in order to adopt cost-effective and successful approaches for other slum areas within service territory; and
- Participating in subsequent dialogue with various stakeholders, including workshops and information exchanges, to help disseminate lessons learned and results;
- Negotiating and executing a grant agreement with GPOBA to meet the specified GPOBA requirements and to receive the grants for partial funding of connection and wiring improvement costs.

5.2 Roles and responsibilities of Nexant: Nexant, as a contractor for USAID, will be responsible for the following:

- Taking the lead in bringing stakeholders together to identify barriers to legal access of electricity services in slum areas and development of an integrated strategy for addressing them;
- Development of a detailed implementation plan, in conjunction with REL and ICPCI;
- Designing and implementing a household survey (through a survey subcontractor) to develop baseline conditions and provide information for detailed project components;
- Convening of an Advisory Committee, and organizing and coordinating meetings of this Committee to help guide project design and assist in subsequent project scale-up;
- Ensuring proper communications among the stakeholders during design and implementation of the pilot project;
- Engaging NGOs and CBOs to assist in design, implementation (including billing and collection, as appropriate), outreach, evaluation and scale-up and provide technical assistance and capacity building as needed;

- Engaging and subcontractors to meet the GPOBA requirements for verification of the reasonableness of REL costs, assessment and quantification of the economic benefits, and development of a detailed Operations Manual;
- Developing complementary plans which may include micro-finance, gender empowerment, demand-side management, training, etc.;
- Monitoring and evaluating the pilot project, with close cooperation with REL, ICPCI and other identified project partners, and producing a final report including an impact assessment;
- Convening of the project launch and post-project stakeholder meetings;
- Developing scale-up strategies and plans, including communication plans, case studies, training modules, etc.; and
- Conducting 2-3 workshops across India and formal presentations to key government agencies (e.g., MOP, FOIR) to disseminate results and foster policy dialogue.

5.3 Roles and responsibilities of ICPCI: ICPCI will be responsible for the following:

- Working together with USAID and REL to meet with various stakeholders and provide inputs to develop a strategy to address technical issues associated with legalizing electricity connections in slum areas;
- Providing technical support to REL's supply-side upgrading and loss reduction investments;
- Supporting REL's technical survey to assess the status of customer wiring (from meter junctions to households as well as internal wiring);
- Designing standard wiring packages for slum areas, based on survey findings, as well as estimating their costs and expected benefits (improved efficiency, safety, etc.);
- Supporting pilot project implementation in conjunction with REL, USAID and identified project partners (e.g., CBOs, NGOs, Advisory Committee), with emphasis on providing training to REL, electrical contractors, NGO and CBOs on measures to improve wire installation products and practices;
- Support to assess the impacts of the pilot project, with emphasis on the actual impacts of improved wiring;
- Participating in subsequent dialogue with various stakeholders, including workshops and information exchanges, to help disseminate lessons learned and results; and
- Assist in development of scale-up strategies and plans, including communication plans, case studies, training modules, etc.;

6.0 SELR Program Schedule

6.1 The proposed schedule for Phase 1 is as follows:

- Complete detailed project design – August 31, 2006
- Launch community survey – August 31, 2006

- Complete community survey and document findings – October 15, 2006
- Complete Technical Survey - October 15, 2006
- Develop detailed Project implementation plan – October 31, 2006
- Complete community survey and document findings – October 15, 2006
- Develop communication plan for project - October 31, 2006
- Complete economic analysis - October 31, 2006
- Complete assessment of Reliance cost estimates - October 31, 2006
- Prepare Operations Manual - October 31, 2006
- First Advisory Committee Meeting - November 1, 2006
- Formal project launch – November 15, 2006
- Complete implementation of first 8,000 to 10,000 units – May 31, 2007
- Conduct monitoring and evaluation – January 2007 to June 2008
- Stakeholder workshop to discuss implementation lessons learned – September 2007
- Complete implementation of all units – January 31, 2008
- Complete post-implementation survey - May 2008.
- Prepare final report and impact assessment – June 30, 2008

6.2 The proposed schedule for Phase 2 is as follows:

- Develop dissemination and scale-up plan – September 30, 2007
- Develop complementary communications strategy, which may include articles and information packages for dissemination to NGOs, publications in literature dealing with energy and slum policies and issues, press releases, etc. – September 30, 2007
- Prepare pilot project case study – January 31, 2008
- Develop training module for government and utility staff – January 31, 2008
- Initiate 2-3 regional workshops for utility managers, regulators, government officials, slum associations, NGOs, etc. to present the case study and engage in dialogue to replicate across India – October 2007 to April 2008
- Initiate formal presentations of case study to Ministry of Power, Federation of Indian Regulators, etc. to engage policy dialogue and discuss options for mainstreaming successful approaches nationally – January 31, 2008
- Monitor results from scale-up efforts and address arising issues – January to June 2008
- Support, as needed, REL roll-out of expanded slum electrification program in its service territory - January 2008 to June 2008.

7.0 Agreement of the Parties

Agreed to on this Twenty-Fifth day of August, 2006

Reliance Energy Limited:

Name: MADHUKAR MOOLWANEY

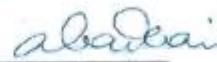
Signature: 

Title: Sr. V.P. (ASF)

Date: _____

ICPCI

Name: AJIT ADVANI


Signature: 

Title: CEO

Date: 25th Aug 2006

Nexant, Inc.

Name: Hugh McDermott

Signature: 

Title: Sr. Vice President

Date: 30 Aug 06

Annex B Financial Management review and requirements

The following was developed by the project Financial Management Specialist.

FM Assessment Note for GPOBA - Mumbai Slums Grant

Applicant: Reliance Infrastructure Limited
Funding Request: Window 3 for US\$1.5m
Date: June 28, 2006

1. Description

The city of Mumbai has over 6 million slum dwellers, many of whom do not have access to legal electricity service. Reliance Infrastructure Limited (branded as Reliance Energy) is a major private utility regulated by Maharashtra Electricity Regulatory Commission and has an obligation to provide an electricity connection to all slum dwellers upon their request, regardless of land tenure.

Reliance Energy is responsible for all costs (including increased capacity in the system) up to and including the point of supply and including the household meter. Customers are responsible for all internal wiring and wiring from the meter to the hutment. This customer cost is typically of the order of US\$103 which has proven to be unaffordable. This GPOBA pilot project seeks to subsidize regularized connections and new connections for 26,250 or more households (approximately 21,250 will be new connections and 5,000 will be regularizations), at an average GPOBA cost of about Rs. 2,471 per household for new connections and Rs. 2,096 per household for regularizations.

This GPOBA project anticipates that Reliance Energy will undertake all investments required to take electricity to the slum areas (including upgrades to the network, drop line from substation, meter panel and household meters), and the GPOBA subsidy would be used to cover the portion of the cost of a *new* connection and some regularization of connections. Under this subsidy arrangement, GPOBA would pay:

- *For new connections:* Rs. 375 per connection (towards the regulated service connection fee) and Rs. 71 per metre of distance between the point of supply and the house. GPOBA would also pay Rs. 1,032 for internal wiring. On average, GPOBA would be paying out Rs. 2,471 per household.
- *For regularizations:* Rs. 71 per metre of distance between the point of supply and the house. GPOBA would also pay Rs. 1,032 for internal wiring. On average, GPOBA would be paying out Rs. 2,096 per household.

The table overleaf summarizes the GPOBA share of the project costs.

Element of new connection	Total costs Rs	End-user Rs.	GPOBA Rs.
Payment to Reliance as service connection fee	1500	1,125	375
End-user connection to house (assumes that average distance from point of supply to the house is 15 metres)	1,330	266	1,064
Subtotal of Connection charges	2,830	1,391	1,439
Subtotal of End-user internal wiring (based on min. spec.)	1,720	688	1,032
Total	4,550	2,079	2,471

These figures are based on information provided by Reliance which was subsequently independently re-estimated by independent technical consultants hired by USAID (who are supporting the TA aspects of this project). The figures were also verified by the International Copper Association. Note that the final end-user contribution will vary depending on market conditions.

2. The Grant Recipient

Reliance Infrastructure Limited (branded as Reliance Energy), acting as facilitator for disbursement of payments to eligible consumers, will be the recipient of the grant and the implementing agency, and the GPOBA Grant Agreement will be executed between Reliance Infrastructure Ltd. and the Bank.

Reliance Infrastructure Ltd. is India's leading private sector utility with aggregate group revenues of Rs. 13,017 crore (US\$ 3 billion) and gross fixed assets of Rs. 12,166 crore (US \$ 2.8 billion). Reliance Energy is an integral part of the Reliance ADA Group, which ranks among India's top three business houses. Reliance Energy and its affiliate companies power 2 out of 3 homes in Mumbai and 1 out of 2 in Delhi and has a consumer base of 5 million catering to an estimated population of 25 million in Mumbai, Delhi and Orissa.

3. Objective of the Project:

The objective of the project is to demonstrate the use of an output-based aid (OBA) approach to make a significant difference to the level of access to safe and adequate legal electricity supply in the Indian slum context. Successful demonstration will lead to substantial potential for scale-up in slum communities in Mumbai and across India. This scheme benefits from considerable upfront support from USAID via a community outreach and education program.

4. Institutional arrangements for project implementation:

Reliance Energy will oversee compliance with the conditions agreed on with GPOBA. It will process and submit applications for funds to GPOBA, maintain accounting records for ex-post reviews and

manage the annual audit of GPOBA project (comprising IFR I and II) through a firm of private Chartered Accountants.

5. Administrative Arrangements

Reliance Energy will install wiring and meters for the legal connection up to the slum dwelling unit/structures point of supply and will undertake all investments required to connect electricity to the slum areas, including upgrades to the distribution system and installation of meter panels and household meters. Reliance Energy's legal responsibility for carrying out connections will end here. Individual connections to the houses and the internal wiring will have to be undertaken by certified contractors who will be hired by slum households themselves out of a list of Licensed Electrical Contractors empanelled with the Government of Maharashtra. This is because the Government of Maharashtra rules require that internal electrical wiring in households be done only by licensed contractors. ICPCI will request the Licensed Electrical Contractor (LEC) Association of Maharashtra to participate in the project. CBOs and NGOs will provide lists of LECs to slum households to choose from. Reliance Energy and ICPCI will also negotiate with suppliers and agree bulk rates of internal wiring equipment that LECs could choose to use.

LECs will work with customers to prepare applications, compile the pre-specified documentation and collect down payments. LECs, and their customers would submit applications for approval to Reliance Energy. Reliance Energy would ensure that the customers are within the project area and have no other arrears to Reliance Energy. Reliance Energy would then issue a receipt of the application which will constitute Reliance Energy's consent for the LEC to proceed with the wiring.

LEC will carry out the wiring. Thereafter Reliance Energy will provide with the connection and once it is complete, the LEC will be required to submit a "Work Completion and Test Report" and the "Invoice" to an Independent Verification Consultant (IVC) for inspection and certification. The IVC will certify that a new connection or regularization has been made and will certify the length of the new connection or regularization. Once the invoice is certified, Reliance Energy would pay the LECs. The IVCs who will certify outputs will be hired by Reliance Energy with the support of USAID (who are supporting several TA aspects of this program) and a "no objection" from GPOBA. Upon LEC completing an individual connection which has been certified by the IVC, Reliance Energy will proceed to install the household meter and complete the connections (within one week).

6. GPOBA Payments and Disbursement Arrangements

Reliance Energy will make payment requests to GPOBA upon completion of the output milestone agreed. Upon execution of the grant agreement with GPOBA (upon effectiveness), 10% of the total OBA award will be made. This will be provided to Reliance Energy against a Bank Guarantee which will be in favor of the World Bank and will be provided by Reliance Energy. Reliance Energy shall use the standard bank guarantee from its bank (ICICI Bank) – to be approved by World Bank. Since this payment is not performance based (i.e. not disbursed after independent verification of outputs being delivered has been received), the guarantee will specify the conditions under which it would be called (see section 4.1).

GPOBA will disburse based on outputs and the payment schedule will be linked to the following output based milestones:

- 10% initial payment backed by a Bank Guarantee (with a clawback arrangement as defined above)

- 70% of the cost of each connection (based on unit costs) upon receipt of independent verification that connection and/or internal wiring has been carried out and that connection has been made by Reliance Energy and is operational;
- 20% of the cost of connection (based on unit costs) for internal wiring and/or connection after independent verification of 6 months of service delivery to appropriate quality levels to the meter and regular billing.

An Interim Financial Report (IFR) will be submitted to the Bank quarterly for Disbursement. This will be called the IFR for Disbursement and will form part of the quarterly report (see Annex F).

This will comprise the following:

- number of connections and/or internal wiring forecast for the next quarter;
- number of working connections actually made and independently verified during the quarter that has just passed (connections and/or internal wiring);
- length of wiring from the point of supply to the house;
- number of connections and/or internal wiring for which 6 months of independently verified delivery and billing has taken place.

The indicative format of the Interim Financial Reports for the purposes of Disbursement will be as follows (It may be noted that the final version of the IFR will be finalized based on the following template):

IFR I : Interim Financial Report for Disbursement for the period 01.01.09 to 31.03.09											
New Connecti on no.	Regulariz ed Connectio n no.	Is there internal wiring?	Length of connect ion to the house?	Agreed Unit Cost (based on whether internal wiring is carried out).		Total Disbursement sought for Qtr 01.01.09 to 31.03.09		Cumulative Disbursement sought till date			
						A=1*3 *L	B=2*4 *L	No of New Connec tions	No of Regula rized Connec tions	Agreed Unit Cost	Cumulati ve Disburse ment to date
1	2		L	3	4						

It may be noted that the performance conditions based on which the initial 10% advance will be clawed back are as follows:

The guarantee can be called if Reliance Energy has not undertaken upstream investment in line with the Detailed Project Report submitted to the Maharashtra Electricity Regulatory Commission and to the satisfaction of the Bank within a period not to exceed 120 days from grant agreement effectiveness.

In addition to the IFR I submitted for disbursement which will provide the information above, there will be an additional (annual) exercise to review actual costs of connections incurred by the LECs for new connections and regularizations. This information will comprise IFR II. This will not be considered for the purpose of specific disbursements but the information will be useful from the point of view of better understanding consumer connection costs and the extent to which the subsidy is supporting.

For the purposes of compiling IFR II, Reliance will facilitate in gathering information on actual costs incurred for the project as follows:

Portion of connection charge being subsidized	Who determines the actual cost?	How will this actual cost be reviewed?
Regulated connection charge	Regulator (MERC) based on assessment of Reliance costs.	Reliance Energy to report any change in regulated connection charge
Cost of Wiring (per meter distance) from Point of Supply to the house	LEC and consumer agree on price	Reliance Energy to provide summary information on an annual basis using documentation provided to Reliance by consumer and LEC as part of the project (see Annex D (B)).
Internal house wiring	LEC and customer agree on price	Reliance Energy to provide summary information on an annual basis using documentation provided to Reliance by consumer and LEC as part of the project (see Annex D (B)).

Separately, information on Reliance Energy upstream works will also be used to determine whether Reliance Energy has met the quality of performance standards as required by MERC. Inadequate quality of performance could result in the upfront 10% payment being returned to GPOBA and only being paid out once Reliance Energy meets the required performance standards.

7. Financial Management Arrangements

Reliance Energy will maintain a separate Indian Rupee account in a commercial bank to receive OBA funds. This account will be designated as the Special Account.

The Bank account will be opened in ICICI Bank which India's second-largest bank with total assets of about Rs. 2,513.89 bn. (US\$ 56.3 bn.) at March 31, 2006 and profit after tax of Rs. 25.40 bn (US\$ 569 mn) for the year ended March 31, 2006. ICICI Bank is listed on the Bombay Stock Exchange, the National Stock Exchange of India Limited and its American Depositary Receipts (ADRs) are listed on the New York Stock Exchange (NYSE). The Bank has a strong and committed Code of Business Conduct and Ethics for its Directors and employees. In June 2006, ICICI Bank, with free

float market capitalization³ of about Rs. 480.00 billion (US\$ 10.8 billion) ranked third amongst all the companies listed on the Indian stock exchanges. It is important to mention that ICICI Bank is subject to the strong regulatory framework that is in place in India for all Banking Companies which implies that they have to comply with the relevant regulation of the RBI Act, Banking Regulation Act, Companies Act and Foreign Exchange Management Act.

All GPOBA disbursements on this project, except the initial advance will be on a per unit cost basis (which have been defined and independently verified by USAID’s consultants as a part of project preparation and are documented in Annex I) and predicated on the certified technical statements of agreed outputs by the Independent Verification Consultant (IVC). The use of IVC for independent verification of outputs will obviate the need for ex post operational audit. The initial advance, though not initially based on output, will be linked to subsequent performance targets (as set out in the Bank guarantee).

8. Financial Reporting

Separate project statement of accounts will be prepared and audited. The accounts for the GPOBA project will comprise IFR I and IFR II. IFR II will comprise the annual calculation of actual costs as described on page 40.

IFR I, included in the Quarterly report, will present the disbursement sought based on the numbers of new connections established and the rewiring done multiplied by the agreed unit costs (taking account of the applicable length of wiring). This statement will be prepared for the purposes of disbursement and will be based on the certifications made by the Independent Verification Consultants on the numbers of connections.

Interim Financial Reports (IFR); I (for disbursement) will be submitted to the Bank quarterly. The information presented in these will comprise the following:

- number of connections and/or internal wiring planned for the next quarter;
- number of working connections actually made and independently verified during the preceding quarter (connections and/or internal wiring);
- number of connections and/or internal wiring for which 6 months of independently verified delivery to the meter has taken place.

These quarterly reports will comprise the QPRs for the project. The purpose of these statements will be to provide an update to the task Team of the progress on the Grant.

9. Audit

The project envisages the audits specified in the Table below.

Agency	Audit Report	Audited by	By when
GPOBA Accounts Audit Report (separate	Project	Financial Audit by Price Waterhouse/any other	30 th September

³ Free float holding excludes all promoter holdings, strategic investments and cross holdings among public sector entities.

statement of accounts will be prepared and audited)		auditor acceptable to the Bank.	
Reliance Infrastructure Ltd. account in ICICI Bank	Special Account	Price Waterhouse	30 th September

Reliance Energy will have the IFR I for disbursement consolidated annually for the project account. Its format for reporting is set out below:

GPOBA Annual Summary of QPRs for the Year Ended 20XX

Regularized Connections by Location	IVR Cross Reference●	Unit Cost Decided per GPOBA	Total Payable	Actual Unit Cost Incurred	New Connections by Locations	IVR Cross Reference●	Unit Cost Decided per GPOBA	Total Payable	Actual Unit Cost Incurred

● IVR Cross Reference : Should include the locations of regularized connections and new connections.

Price Waterhouse, the Statutory auditors of Reliance Energy/ or any other firm of auditors acceptable to the Bank may be the auditors for the purposes of the project as well. The Terms of Reference for project audit will be agreed separately. The financial audit ToR will focus on aspects of financial and operational control which would include the selection of subcontractors. Auditors will verify that the payments as per the defined unit costs have been made to the subcontractors for the outputs certified by the Independent Verification Consultants. It may be noted that audit of project accounts will be conducted as a good practice to encourage accountability and to inform the design and standard costs of future OBA projects, but the audited accounts will not be used as a basis for disbursements.

In addition to the statutory audit, there will be an annual audit of the Special Account which will be held in ICICI Bank. The primary purpose of this audit will be to verify that the Bank account is used for the purposes intended, ie. for making project related payments to subcontractors and for subsidizing the connection charges.

Risk Rating:

The main risks on this OBA grant are that the quality of outputs may not be up to the required standards or that payments to subcontractors may be released without appropriate outputs being in place. These risks will be mitigated by the verifications carried out by the IVCs and by the selection criteria for subcontractors.

Overall, it is important to note that this grant is considered a low risk operation because of the small size of grant funds, the strong administering arrangements with Reliance Energy and the due diligence done by the Task Team in independently establishing the standard costs of outputs under the project.

Conclusion:

It may be concluded that the design of the project and due diligence done by the Task team (including to independently establish the standard cost of wiring for new connections and rewiring via USAID) is adequate to support output based payments on the grant.

Annex C Procurement

The following report was developed by the project procurement specialist.

A. General

The proposed pilot project of Mumbai Improved Electricity Access to Indian Slum Dwellers aims at providing new electricity connections to slum dwellers in the city of Mumbai, India. It is estimated that a total of 26,250 connections will be taken up. Of these, 21,250 will be new connections for customers who have either no service or have a form of illegal service. The remaining 5,000 connections will be for the first 5000 customers who apply under this program and who already have legal but sub standard connections.

Key characteristics of the Project

- Reliance Infrastructure limited (branded as Reliance Energy) which is a private sector utility company, will provide electricity connections in the target areas. They undertake all investments required to connect electricity to the slum areas, including upgrades to the distribution systems and installation of meter panels and household meters.
- The Community Based Organizations (CBOs/NGOs), together with Reliance Energy will conduct outreach sessions in the communities to inform the households about the projects and its components. They will encourage households to participate in the project and educate them about the benefits of legal electricity connections and upgraded wiring schemes. They would also provide lists of Licensed Electricity contractors (LECs) to the interested households. The Electricity Contractors are licensed by the Licensed Electrical Contractor (LEC) Association of Maharashtra.
- The CBOs/NGOs will be required to commence the outreach sessions well in advance so that the households are fully aware of the details and benefits of the project before LECs contact them on an individual basis and offer their services for providing wiring/connections.
- The households will be free to choose any of the licensed electricity contractors (LECs) operating in the target area on the basis of economy and efficiency and to contract with them for providing internal wiring in the houses and connection from the Reliance Energy service point to the houses. The LECs will buy materials for providing the wiring in the houses on a competitive basis from the market, or from the suppliers with whom rates have been pre-negotiated by Reliance Energy and International Copper Promotion Council (India) (ICPCI).
- It has been estimated that the cost of a new connection is Rs. 8,960(US\$213) per connection, of which Rs.4,627 (US\$110) will be incurred by Reliance as part of its upstream network investment and Rs.4,333 (US\$103) relates to costs that would typically have to be borne by the customer/household..
- An Independent Verification Contractor (IVC) will be hired by Reliance Energy under the project for carrying out independent verification of the works completed by the LECs.
- After LEC completes an individual connection, it would submit the “Work completion and test report” and the “invoice” to IVC for inspection. The IVC would then review the wiring,

certify that the work meets pre-defined specifications and then submit the “Work completion and test report” and the “invoice” to Reliance Energy.

- Reliance Energy would pay the LECs within a period of 15 working days on receipt of the IVC report. In case of delayed payments, Reliance Energy will pay additional interest as per SBI PLR to LECs.
- GPOBA subsidy for the works will consist of Rs. 1,032 for internal wiring, Rs. 71 per meter distance for the connection between the Reliance point of supply and the house and Rs. 375 towards the connection service fee due to Reliance (this last portion will not apply for regularizations as regularizations are not charged a connection fee).
- A customer instalment plan will be offered for payment of Reliance regulated service connection fee.
- GPOBA will make payments to Reliance Energy after independent verification has been completed by IVC.

B. Procurement Arrangements

Procurement of Licensed Electrical Contractors and materials required for wiring in the houses will be carried out by individual customers and LECs. Thus Reliance Energy will not carry out any procurement directly for the connections from point of supply to the house and internal wiring. However, Reliance Energy will hire the Consultant Services for the IVC on a competitive basis for carrying out verification of outputs.

B.1. IVC Services

IVC Services under this Project will include services to be provided by firms and individual consultants, such as monitoring and verification of outputs.

Procurement of these services will be conducted in accordance with the World Bank’s “Guidelines: Selection and Employment of Consultants by World Bank Borrowers,” dated May 2004, as revised in October 2006 and the provisions stipulated in the Grant Agreement.

The following selection procedures would be used for IVC Services:

Quality-and-Cost-based Selection (QCBS) or Selection based on Consultants’ Qualifications (CQS) will be used for hiring services for monitoring and verification of outputs.

The selection will be conducted using World Bank’s standard bidding documents/Request for proposals.

C. Assessment of Implementing Agency’s Capacity to Implement Procurement

Major Procurement Activities in this project comprises of hiring of the IVC services, and fixing of rates for wiring materials (which may or may not be used by the LECs), which will be undertaken by Reliance Energy and ICPCI. Hence, capacity assessment of Reliance Energy has been carried out.

The World Bank Procurement Analyst conducted procurement capacity assessment of Reliance Infrastructure Limited (branded as Reliance Energy) in January, 2007.

Reliance Energy is staffed by one Business Head and the Procurement unit is staffed by One Chief Manager (Procurement) and adequate support staff. Reliance Energy has laid down Purchasing Guidelines for the use of Central Procurement Group. Various materials procured by them are classified into A, B, and C class items. The Central Procurement Group maintains list of approved suppliers and their re-evaluation is carried out once in three years. The new suppliers are added after scrutiny and evaluation and the performance of existing suppliers is reviewed with a view to taking a corrective action, if required, like deletion of names from the approved list or issuing a warning for poor performance.

Cables/wires and other materials used in household wiring account for a major cost of materials in project implementation are categorized as A class item, and these are procured preferably from the manufacturers only. Reliance Energy invites offers comprising of technical and commercial bids in separate sealed cover. Technical bids are first evaluated and based on the evaluation commercial bids are opened and processed for contract award.

The overall project risk for procurement is low because of the small size of the Grant funds, the strong administering arrangements with Reliance Energy and the due diligence done by Task Team.

D. Procurement Plan

The procurement plan and IVC selection methods, estimated costs, prior review requirements and timeframe have been discussed and agreed between Reliance Energy and GPOBA. Should changes in the procurement plan become necessary during the project implementation, Reliance Energy will submit an updated plan to the World Bank for approval. Procurements to be undertaken in the project are summarized in the table below.

Contract Description	Estimated Contract Amount	Method	Prior Review?	Expected Contract Signing Date
1)Independent Verification Contractor	\$150,000	QCBS/CQS	Yes	Shortly after signing of the grant agreement.
2) Licensed Electrical Contractors for internal wiring (fee and material cost)	\$ 1,500,000	Shopping	No. Post Review	Immediately after signing of the grant agreement.
TOTAL	\$1,650,000			

E. Prior and Ex-Post Review

The World Bank will conduct prior review of contracts, if the value of the contract is more than USD 50,000 or equivalent for the selection of the consultant services.

F. Frequency of Procurement Supervision

Two Supervision Missions ie; one supervision mission at the middle of the project period and the second one before end of the project, for conduct post review of Contracts.

Procurement Plan Pro-forma

I. General

1. **Project information:** INDIA, Reliance Energy Limited, Mumbai, (GP OBA) Mumbai Improved Electricity Access to Indian Slum Dwellers Project, Grant No TF 058247 Global Partnership on Out put- based Aid.
2. **Bank's approval Date of the procurement Plan** [Original]
3. **Date of General Procurement Notice:** ...N/A
4. **Period covered by this procurement plan:** 18 months

II. Goods and Works and non-consulting services.

1. **Prior Review Threshold:** Procurement Decisions subject to Prior Review by the Bank as stated in Appendix 1 to the Guidelines for Procurement: [Thresholds for applicable procurement methods (not limited to the list below) will be determined by the Procurement Specialist /Procurement Accredited Staff based on the assessment of the implementing agency's capacity.]

	Procurement Method	Prior Review Threshold	Comments
1.	ICB and LIB (Goods)	N/A	
2.	NCB (Goods)		
3.	ICB (Works)	Not Applicable	
4.	NCB (Works)		
5.	ICB (Non-Consultant Services)		
]		

2. **Prequalification.** Bidders for N/A shall be prequalified in accordance with the provisions of paragraphs 2.9 and 2.10 of the Guidelines. N/A
3. **Proposed Procedures for CDD Components (as per paragraph 3.17 of the Guidelines:** [Refer to the relevant CDD project implementation document approved by the Bank] - N/A

4. **Reference to (if any) Project Operational/Procurement Manual: Operation Manual and Procurement Manual**

5. **Any Other Special Procurement Arrangements:** [including advance procurement and retroactive financing, if applicable] N/A

6. ***Procurement Packages with Methods and Time Schedule***

[List the Packages which require Bank's prior review first and then the other packages]

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost	Procurement Method	Prequalification (yes/no)	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments
			Not Applicable					

III. Selection of Consultants

1. **Prior Review Threshold:** Selection decisions subject to Prior Review by Bank as stated in Appendix 1 to the Guidelines Selection and Employment of Consultants:

	Selection Method	Prior Review Threshold	Comments
1.	Quality & Cost Based Selection	USD > 50,000	All other contracts less than this threshold will be Post review
2.	QBS, Fixed Budget, CQ's, Single source selection, Sole source Selection, Individual Selection	USD > 50,000	All other contracts less than this threshold will be Post review

2. **Short list comprising entirely of national consultants:** Short list of consultants for services, estimated to cost less than \$ 500,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

3. **Any Other Special Selection Arrangements:** [including advance procurement and retroactive financing, if applicable] N/A

4. **Consultancy Assignments with Selection Methods and Time Schedule**

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Comments
		>USD 50,000 Or equivalent	Quality & Cost Based Selection	Prior review		

IV. Implementing Agency Capacity Building Activities with Time Schedule

- 1. In this section the agreed Capacity Building Activities (some items could be from CPAR recommendation) are listed with time schedule**

No.	Expected outcome / Activity Description	Estimated Cost	Estimated Duration	Start Date	Comments
	N/A				
	N/A				

Annex D Information to be provided on forms used for project

The following information may be contained on one form with four copies - one for each stakeholder.

A. Information to be provided on customer form

The customer form serves as the contract between the customer and the LEC. The following information should be provided on the form to be kept by the customer:

Name/contact details of LEC

Description of works to be carried out

Price agreed for works between customer and LEC

Explanation of payments to be made to LEC by Reliance Energy for works carried out

Information on performance agreement entered into by customer (based on Grant Agreement)

Recommendation that at least 3 independent quotes are sought prior to choosing a LEC

Contact details of Reliance Energy representative and local CBO if advice is required or complaint needs to be made

Address of Reliance Energy office where application needs to be lodged

B. Information to be provided on LEC form

The LEC form serves as the contract between the LEC and the customer and Reliance Energy. The following information should be provided on the form to be kept by the LEC:

Name/contact details of customer

Address of premises where work is to be carried out

Description of works to be carried out

Price agreed for works between LEC and customer

Information on performance agreement entered into by LEC (based on Grant Agreement)

Contact details of Reliance Energy representative and ICPCI representative if advice is required or complaint needs to be made

Address of Reliance Energy office where application needs to be lodged

Contact details for Independent Verification Contractor.

C. Information to be provided on Reliance Energy form

This information will be held by Reliance Energy.

Name/contact details of LEC

Name/contact details of customer

Address of premises where work is to be carried out

Description of works to be carried out

Price agreed for works between customer and LEC

D. Information to be provided on IVC form

This information will be held by the IVC.

Name/contact details of LEC

Name/contact details of customer

Address of premises where work is to be carried out

Description of works to be carried out

Price agreed for works between customer and LEC

Annex E Monitoring, evaluation and reporting

Monitoring Indicators

The monitoring and verification of actual outputs for certification and subsidy disbursement will be undertaken by the IVC and will be supplied to Reliance Energy. Information may also be obtained by Reliance Energy from USAID. Reliance Energy will make these available to GPOBA upon request. For monitoring and tracking purposes, Reliance Energy will be responsible for compiling the information in the table below and making it available to GPOBA when requested.

Verifiable Project Indicators	
<i>Project Characteristics</i>	
Project output(s)	
Targeting of subsidy (community decisions, geographic)	
OBA design period	months
Planned implementation period for outputs	months
No. of people per household in project area	No.
	USD/
Comparator, average subsidy required in similar projects	connect
<i>Financing (pls. provide semi-annually)</i>	
	<u>GPOBA</u> <u>Donors</u> <u>Govt.</u> <u>Local</u>
Investment grants	USD ths
Private sector investment finance, if any (own funds/loans)	
Private sector finance mobilized for investments	USD ths
Guarantors (if any)	
Guarantee amount	USD ths
Up-front user contribution	USD ths
<i>Use of contractors</i>	
Number of participating contractors	No.
<i>Project Outcome</i>	
Cost of alternative service provision	USD
Percentage of GPOBA subsidy reaching poor households	pct.
GPOBA payments proceeding according to plan (Y/N)?	
Payments delay, if any	months
Other benefits such as time saving and improved health	1)
User assessment of project (no/poor/fair/good/very good)	
Number of jobs created	No.

Means of dissemination of lessons learned, if any		<u>2007</u>	<u>2008</u>	<u>2009</u>	-
No. of people with increased access due to the project	no.				
Percentage of population in target area with electricity connection	pct.				
No. of new connections established	no.				
Kwh sales per year	Kwh				
Service availability for the project area	h/day				
Unscheduled electricity supply failures lasting more than 30 min for the project area at 11 kV feeder level.	no./yr.				
Electricity tariff	Rs/kwh				
Collection rate	Pct.				
Affordability ratio ²⁾	pct.				
<i>Unit cost</i>					
		<u>2007</u>	<u>2008</u>	<u>2009</u>	-
Estimated unit cost in T0	USD				
Actual unit costs	USD				
<i>Replicability</i>					
Pilot scheme or replication?					
Scheme introduced to other potential financiers (Y/N)?					
Scheme considered for replication/replicated (Y/N)?					
Funding of replications if any (government, donors)					
1) Describe and give relevant indicators					
2) Average bill per household per month divided by average monthly household expenditure					
3) General information other that related to supply of electricity, will be based on the survey carried out by USAID					

Annex F: Sample format for quarterly (IFR) disbursement report to be submitted by Reliance Energy to GPOBA

The quarterly (IFR) report is used to document the status of the Project and request disbursements from GPOBA. It forms part of the Quarterly Report. It will be compiled by Reliance Energy using IVC reporting (Output Verification Reports). The Quarterly Report will be verified by the IVC prior to being submitted to the Bank for reimbursement.

A. Introduction

This section will describe:

- Details of the reporting period
- Summary highlights

B. Overall status of Project Activities

This section will describe the implementation status of key activities across the sites using milestones such as the following, but not limited to:

- i. Works carried out by Reliance Energy & progress by stages of construction
- ii. Applications by slum dwellers/LECs
- iii. Extent of take up of instalment payment program
- iv. Number of completed connections
- v. Number of verified working connections (no. of from POS to house (with average length to date), no. of internal wirings; and no. of payments for regulated connection charge.
- vi. Payments carried out by Reliance Energy to LECs
- vii. Release of OBA subsidy to date
- viii. Likely disbursement schedule/changes to planned disbursement schedule

C. Specific breakdown of information required for disbursement

Reliance Energy will compile and furnish a report on a quarterly basis that will include the following information together with accompanying Output Verification Reports (upon request) from the Independent Verification Contractor.

Calculation of disbursements that will be made are set out in square brackets.

1. Number of customers connected during the quarter. Of these,
 - a. Number that are new connections and **[70% of Rs. 375 per connection]**
 - b. number that are regularizations **[\$0]**
2. Number of eligible connections between the Point of supply and the dwelling unit. Provide a calculation of the total length of connections (to the nearest meter) for all the connections (each connection not to exceed 20 meters in length). **[70% of Rs. 71/meter of connection]**

3. Number of eligible internal wirings carried out. **[70% of Rs. 1,032 per connection]**.
4. Number of eligible connections between the point of supply and the dwelling unit checked with at least 6 months of billing and satisfactory electricity delivery to the Point of supply. Provide a calculation of the total length of connections (to the nearest meter) for all the connections (each connection not to exceed 20 meters in length). **[20% of Rs. 71/meter of connection]**
5. Number of eligible internal wirings carried out checked with at least 6 months of billing and satisfactory delivery to the Point of supply. **[20% of Rs. 1,032 per connection]**

D. Summary of Financial Status

For the Special Account, the following details will be provided:

- Account reconciliation, with justification if necessary, all transactions on the Special account, itemised by payments to date.

E. Constraints and Recommendations

- Summary of constraints faced by Reliance Energy
- Actions recommended for the next reporting period to handle any constraints raised.

F. Tabular summary to be used

GPOBA Quarterly Progress report for the Quarter Ended -----, 20XX (To be used a Basis of Disbursement)							
Regularized Connections by Location	IVR Cross Reference❶	Unit Cost Decided as Per GPOBA	Total Payable	New Connections by Locations	IVR Cross Reference❶	Unit Cost Decided as per GPOBA	Total Payable

❶ IVR Cross Reference : Should include the locations of regularized connections and new connections.

Annex G: Reliance Detailed Project Reports

Extract from Detailed Project Report: Shivaji Nagar, April 2007.

Proposal to be implemented in Shivaji Nagar

Proposals required to improve reliability of Shivaji Nagar area are discussed on three stages of distribution

❖ Consumer side improvement

Following improvements are required to be done at service position level

- Rewiring of meter cabins
- Changing of old wooden meter boxes
- Changing of Cut outs
- Changing of old Induction type energy meters to Electronic meters

❖ LT improvement

Following Types are work identified for LT network improvement .The details are given under each Annexure

- Relieving of LT Network (Ref Annexure -2-A)
- Up gradation Of Lt network (Ref Annexure- 2-A)
- Relieving Pole mounted substation from LT side (Ref Annexure -2-A)
- Removing T-Joints on the cable (Ref Annexure-2-A)
- Abandoning faulty LT cable gone under concrete(Ref Annexure -2-A)
- Installing New 10 Way LT pillar at Substation (Ref Annexure-2-C)

❖ HT side improvement

Some of the projects are already been in process for implementation by Reliance Energy Ltd.

- Installing New substation at Sant Nirankari Nagar (REL Ltd)
- Up gradation of Power X'mer at Shivaji Nagar (REL Ltd)
- Up gradation OF Distribution X'mer (Ref Annexure -3-A)
- Reinforcing of HT network (REL Ltd)

Cost of implementation

Description	Labour Charges (Rs)	Material Charges (Rs)	BMC RI Charges (Rs)	Total (Rs)	For detail Cost structure Ref Annexure
Service Improvement cost for authorized consumers	4616853	17101211	56292125	78010189	Annexure-1
To give supply to un-authorized consumers	3010359	40470602		43480960	Annexure-1
LT Network improvement cost	6421759	14790316	34196336	55408411	Annexure-2B
Installing Additional 10 WLTP	2124470	1465700		2857320	Annexure-2F
Distribution X'mer up Upgradation				10800000	Annexure-3-A
Total Amount in Rs				190556880	

Table-5 Cost of implementation

Investment Schedule

Month	Expected Work	Expenditure (Rs)	Subtotal (Rs)
Month 0	X'mer Upgradation	3600000	
	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	16157303
Month 1	X'mer Upgradation	3600000	
	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	16157303
Month 2	X'mer Upgradation	3600000	
	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	16157303
Month 3	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	12557303
Month 4	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	

Month	Expected Work	Expenditure (Rs)	Subtotal (Rs)
	New connection	4348096	12557303
Month 5	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	
	LT Network improvement	11081682	23638986
Month 6	Insatllation 10 W LTP	408189	
	Service Improvement for authorised	7801019	
	New connection	4348096	
	LT Network improvement	11081682	23638986
Month 7	Service Improvement for authorised	7801019	
	New connection	4348096	
	LT Network improvement	11081682	23230797
Month 8	Service Improvement for authorised	7801019	
	New connection	4348096	
	LT Network improvement	11081682	23230797
Month 9	Service Improvement for authorised	7801019	
	New connection	4348096	
	LT Network improvement	11081682	23230797
	Total (Rs)		190556880

Notes:

1. Excavation permissions on Public Roads are closed by MCGM Authorities from 15th April to 15th October every Years. Hence cable laying is not possible during this period.
2. As per MCGM procedure, excavation permissions are to be applied only 8 days prior to works. However, the works can only be started after receipt of permission.
3. Month 0 means month in which agreement is signed, MERC approvals are received and project is launched. (For this investment schedule it is assumed to be May-07)

Annex H: Specifications for wiring

Working connections from Reliance Energy point of supply to the home using technical specifications that meet Indian government standards and internal wiring within the home using technical specifications that meet Indian government standards and which meet the basic needs of the customer – i.e. 4.5 points (i.e. two lights, one fan, one TV and one spare plug). The additional costs of moving to 5.5 or more points are to be fully met by the end-users.

General specifications for carrying out the wiring work shall comply to the following:

- Work shall be carried out by Licensed Electrical Contractor strictly in adherence to the I.E.Rule, Electricity Act 2003.
 - Material used for electrical installation shall be as per I.S. Specifications.
 - Material used for electrical installation should not be defective or of second sale.
 - Earthing shall be carried out as per Electricity Act 2003.
 - Sample I. S. specifications for reference
 - I.S.694 ;1990,1994 - PVC insulated cables for voltage up to 1100 V
 - I.S..... :1992 - Bare Copper wire for earthing
 - I.S. 1554:1988 - Multicore PVC insulated heavy-duty electric cable up to 1100 V
 - I.S. 3854:1993 - Switches, DP
 - I.S.2448: 1995- Insulated adhesive tape
 - I.S.2675:1983,1991- Enclosed distribution fuse board cutout up to 1000 V
- I.S.1293: 1999 - Kit kat 5A, 15A switches (also called as 'piano'type switches).

Annex I: Summary of unit cost calculations

All cost information was received from Reliance and was then independently audited in detail by an independently hired (by USAID) experienced assessor of costs. The costs were also assessed and verified by the International Copper Promotion Council (India).

Wiring Costs - Case 1: 4&1/2 Points							
Sr.No	Description Of Material	Unit	Rate (Rs/unit)	Case No 1: 4&1/2 pt			
				Internal Wiring	Amount (Rs)	External Wiring	Amount (Rs)
1	PVC board 200mm*150mm	No	80	1	80	0	0
2	PVC board 150mm*100mm	No	57	1	57	0	0
3	PVC board 100mm*100mm	No	37	0	0	0	0
4	Double pole main switch 32 A	No	60	1	60	1	60
5	Kit-Kat switch 5 A	No	16	3	48	0	0
6	Kit kat switch with Sockets 5 A	No	22	1	22	0	0
7	Kit-Kat switch with plug socket 15 A	No	70	1	70	0	0
8	Ceilings rose for fan	Kg	18	1	18	0	0
9	Holder 5 A	Mtr	20	2	40	0	0
10	PVC pipe 15mm	No	17	16	272	0	0
11	PVC pipe 20mm	No	19	0	0	0	0
12	Saddles for PVC pipe 15mm	No	0.5	32	16	30	15
13	saddles for PVC pipe 20mm	Mtr	0.6	0	0	0	0
14	Screw 20mm	Mtr	0.5	84	42	70	35
15	Copper wire 2.5sq.mm	Mtr	300	0.3	90	0	0
16	1.5mm square (3/22 gauge) PVC copper	No	14	40	560	0	0
17	2.5mm square (3/20 gauge) PVC copper	No	22	0	0	0	0
18	4mm square (7/20 gauge) PVC copper	No	34	0	0	0	0
19	2/c 2.5mm square Armoured PVC cable	Mtr	70	0	0	10	700
20	2/c 4 mm square Armoured PVC cable	Mtr	90	0	0	0	0
	Subtotal: Material				1375		810
	Labour	o Of Point	50	4.5	225	0	0
	Cable pulling Charge	Mtr	5	0	0	15	75
	Indirect , Testing & incidental charges	%	7.50%	0	120		66
	Total internal/external wiring				1720		951
	Grand Total: Case 1						2671

Sources: Reliance Energy, Independent assessor of costs hired by USAID, MERC documentation, Nexant & IIEC India.

Note: the cost numbers for external wiring relate to 10 meter length of wiring between the point of supply and house.