General Terms of Reference

Project: Grid integration of renewable energy and demand side energy efficiency
Project no.: 14.2298.9-004.00
Tender: Energy Efficiency Label in Residential Buildings, IGEN-EERB
Tender Nr. 8326 8482

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A. Project description
List of abbreviations

BAI	Building Association of India
BEE	Bureau of Energy Efficiency
CREDAI	Confederation of Real Estate Developers' Associations of India
DISCOMs	Distribution companies
ECBC	Energy Conservation Building Code
ECBC-R	Energy Conservation Building Code- Residential Building
EC Act	Energy Conservation Act
EE	Energy Efficiency
EEB	Energy Efficiency in Building
ESCOs	Energy Services Companies
FSI	Financial Services industry
GHG	Green House Gas
IGEN	Indo German Energy Program
LCC	Life Cycle Cost
MEPS	Minimum Energy Performance Standards
MNRE	Ministry of New and Renewable Energy
MoP	Ministry of Power
MoUD	Ministry of Urban Development
M&V	Measurement and Verification
NAPCC	National Action Plan for Climate Change
NMEEE	National Mission on Enhanced Energy Efficiency
NDC	Nationally Determined Contributions
NREDCO	National Real Estate Development Council
NZEB	Net Zero Energy Building
ULBs	Urban Local Bodies
TCs	Technical Co-operation
ToR	Terms of Reference

A.1 Brief description of the project

Energy efficiency is one of the world's largest energy resources, and we are only just beginning to tap its potential. India has a tremendous opportunity to turn its building boom into an energy boom, simply by building in energy-efficient features and capturing the value of energy savings in its buildings.
The current policy environment is beginning to promote energy efficiency and the execution of national and state level programs will be the key determinants of its success. India's National Action Plan on Climate Change (2008) points to building efficiency measures as essential to carbon emission reduction.

Rapid urbanization is creating vast opportunities through an unprecedented demand for the construction of buildings, which already account for more than 30 percent of India's total electricity consumption. In line with expanding development, the country's buildings sector is expected to increase five-fold from 2015 to 2050. India is at a unique crossroads where two-thirds of the commercial and high-rise residential structures that will exist in 2030 are yet to be built. Implementing energy efficiency in buildings that are being constructed in the next ten years thus presents a singular opportunity to lock in energy and cost savings for the next several decades.

In 2012, residential buildings accounted for 20.4% of India's total electricity consumption and the electricity consumption in residential buildings is about 2.3 times more than that of commercial buildings. Projections shows that electricity consumption in residential buildings is expected to increase 7 fold during the period 2012-2032. The residential sector will become the largest consumer of electricity in the country with 36.5% share of the total electricity consumed in 2032.

The Ministry of Power and Bureau of Energy Efficiency (BEE) are entrusted with the task of implementation for the National Mission on Enhanced Energy Efficiency (NMEEE) under National Action Plan on Climate Change (NAPCC). This mission has a component which deals with the Commercial and Residential Building Energy

The Energy Conservation (EC) Act of 2001 provides the framework for energy efficiency imperatives in India followed by the National Mission for Enhanced Energy Efficiency (NMEEE) in 2008. India's Nationally Determined Contributions (NDC) aim to reduce the emissions intensity of our GDP by 33–35 per cent by 2030 from the 2005 level; mandates promotion of energy efficiency in the economy, notably in industry, transportation, buildings and appliances; as well as development of climate-resilient infrastructure. Over the past few years, BEE has introduced initiatives to promote design of energy-efficient commercial buildings based on ECBC so far related to commercial buildings; energy conservation in buildings and municipalities through performance contracting by ESCOs; adoption of energy-efficient consumer appliances through energy labeling; market transformation towards energy-efficient appliances through demand side management programs; energy efficient motors; and enhanced focus on energy-efficiency investments in industry due to energy data reporting and benchmarking practices.

The project is aligned with the commitments made by the Indian Government to meet its objectives submitted under NDCs.

The Federal Republic of Germany and the Government of the Republic of India have, under the Indo-German Technical Cooperation, agreed to jointly promote the “Indo-German Energy Programme” (IGEN) with the aim to promote energy efficiency/conservation in energy consumption so to use energy more efficiently and in turn improve the environment/climate protection.

GIZ is an international cooperation enterprise for sustainable development which operates worldwide, on a public benefit basis. GIZ is fully owned by the German Federal Government, GIZ implement development programs in partner country on behalf of the German Government in achieving its development policy objectives.

Under IGEN–EE, considerable amount of work has been done in different programs such as Standard and Labeling, Energy Manager Training and Examination, Energy efficiency in Industries under PAT Program. BEE and GIZ mutually agreed that there is a need for development of Energy Efficiency Building program in India through the International experience gained by GIZ.

In order to encourage energy conservation and awareness, a number of government policy tools and programmes have been implemented in the past 15 years as shown below.

Standard and labelling program	Energy Conservation Building Code	Green Building Rating Systems
•Labelling program focussing on energy consumption for various appliances like •Air conditioners •Lamps •Ceiling fans •others	•ECBC 2017 for commercial buildings	•LEED for homes •EDGE rating tool •IGBC homes •GRIHA rating system for new homes

The objective of the assignment is to enable and extend support to Bureau of Energy Efficiency for the development of Energy Efficiency label for Residential Buildings and its implementation/ notification framework.

At present, the energy efficiency programmes in India focuses on commercial buildings. Although the appliance labeling program could influence indirectly the consumer behaviour and help to achieve energy conservation in residential buildings, there is still a lack of effective measures to overcome the market barriers for energy efficiency in the residential sector. It is believed that an energy labeling system for assessing the energy performance of residential buildings will be a useful strategy.

The building energy efficiency labeling will enhance energy efficiency and minimize energy consumption in building sector through market forces. The labeling scheme provides a reliable and applicable way to implement energy certificate based on suitable ratings. The certificate makes building performance visible and provides incentives for energy

improvement. Energy labels would effectively differentiate buildings in the marketplace. They provide information on the potential and actual energy use of buildings, as well as feedback to building owners and managers on how their building is performing. The idea of energy labels on buildings follows the logic of other types of labels and consumer advices. It is a method based on the assumption that well-informed actors will behave rationally. This certification would highlight the unique characteristic of a building in reference to its energy efficiency and further facilitate the incentive mechanisms. The goal of this labeling mechanism is to act as a mandatory information required in any real estate transaction/ leasing.

A.2 Description of the measure of Technical Cooperation (TC)

A.2.1 Objectives and indicators

The broader objective of the IGEN-EEB Component is to ensure that the ECBC for Residential Buildings shall be in place for further implementation at State and Municipality level, and shall be scalable for any size of building, which ultimately lead to the certification of building through labeling methodology. In this particular assignment, the objective is to provide specific sets of recommendations for enabling and extending support to BEE for the development of energy effieciency label for mult-storer building. The objective is measured by the following indicators:

- A national EE label for residential buildings is submitted to Bureau of Energy Efficiency

  Baseline value: 0 (no labeling has been developed yet for residential building)

  Target value: 1 Labeling standards

- Adoption of EE labels in 2 green building certification programmes of the country based on the proposed benefits and harmony of the new EE label mechanism.

  Baseline value: 0
  Target value: 2 Adoption of EE Labels

A.2.2 Target group and other stakeholders

The target group of the consulting work consists of the relevant staff members of MoP, MoUD, BEE, State Designated Agencies, State Urban Development Ministry, ULBs, City Planners, Municiplaities, Green Building certification bodies in India.

A.2.3 Lead executing agency and implementing organization

Lead executing agency and implementation organization will be BEE on behalf of the Ministry of Power, Government of India. The Government of India set up Bureau of Energy Efficiency (BEE) on 1st March 2002 under the provisions of the Energy Conservation Act, 2001. The mission of the Bureau of Energy Efficiency is to assist in developing policies and strategies with a thrust on self-regulation and market principles, within the overall framework of the Energy Conservation Act, 2001 with the primary objective of reducing energy intensity of the Indian economy. This will be achieved with active participation of all stakeholders, resulting in accelerated and sustained adoption of energy efficiency in all sectors.

B. Terms of Reference

I. Contractor's profile

The agency shall be consisting of team of experts in the field of efficient building design, energy efficiency policy development, building labeling, energy efficiency financing, energy simulation, and green building certification. The contractor, must have worked in energy efficiency policy advisory and planning, and developing standards and labelling for buildings, products and appliances. The experience of the agency shall also be counted through International and national level policy and building label formulation.

The agency should have worked on development of the Energy Efficiency projects in building and should have supported in several International and national programs on Energy Efficiency in building, training and awareness, impact assessment, and implementation. The experience of data collection & analysis, benchmarking, energy savings analysis, GHG impact assessment, and developing large scale implementation programs shall be an added advantage.

II. General Terms of Reference for the Contractor

The Terms of Reference (ToR) covers the scope and deliverables by the Contractor to include the energy efficiency labels for residential buildings. ToR broadly covers developing EE labels for residential buildings and supporting Bureau of Energy Efficiency for inclusion of the proposed labeling scheme in the existing green building certification programmes of India.

1. Develop national energy efficiency labels for residential buildings
2. Facilitate the adoption of EE labels in at least 2 green building certification programmes.

The main activities outlined in this tender document provide a guideline for the activities envisaged by the Contractor is expected to adjust flexibly to changing demands for support. This tender solicits to develop the code following the strict timelines; the mobilization of activities will be based on demand and needs of the project tasks, and coordinated by the GIZ project coordinator in India in close coordination with the Indian partners and experts of the contractors.

The Contractor is providing a pool of international and local experts to carry out the necessary activities. The pool has to consist of a mix of senior and mid level experts. A consortium or joint venture can be formed to submit one single bid. A consortium/joint venture needs to appoint one consortium/joint venture leader who will take over all communication and represents the contracted parties in front of GIZ and third parties. No cross-communication to GIZ (via other consortium/joint venture members) will be accepted by GIZ.

The staff members seconded by the Contractor must co-operate closely with the GIZ project co-coordinator. The Contractor will have to submit quarterly (and on request) project status report to GIZ in the prescribed format (in the format provided in annexure A). It is important here to indicate whether the project is within the objectives defined in sections A.2.1.

The activities include seminars, workshops and round table talks with stakeholders at state-level and national level.

The Contractor shall provide internationally acquired experience. The objective of the contract is to make available state of the art information about international best practices including German and Indian residential building sectors for developing the energy efficiency label for residential building. The Contractor mandatorily needs to demonstrate adequate technical knowledge and experience in the Building Energy Efficiency domain. The Contractor is also expected to be familiar or to familiarize him/herself with,

- The objectives of the national energy policy, National Building Code, ECBC 2017, ECBC-R development stages, and the energy policy on state levels of India as well as other relevant documents and regulations
- The interests of all stakeholders.

III. Short description of the work packages

The project aims to develop **national energy efficiency labels for residential buildings** to enhance energy efficiency in the residential sector through market forces. The proposed labeling scheme should be easy to understand and communicate the unique energy efficiency potential of a building to the end-users and affect the commercial decisions of end-users, government incentives programs etc. The project also aims to inclusion of the proposed energy efficiency labels in the existing green building certification programs of the country. The contract duration shall be 12 months

The entire activity is divided into two different work packages.

Work Package 1: Develop national energy efficiency label for residential buildings

It involves defining the scope of label for residential buildings and developing the framework of the labeling mechanism. The proposed label should map all residential building constructions in a framework and communicate the comparative understanding of the energy efficiency of one building over the another. Technical assistance towards development of National Energy Efficiency label for Residential Buildings shall be provided. Suitable recommendations should be made regarding up gradation/ establishment of infrastructure.

Key Indicators:

i. A national energy efficiency label for residential buildings is submitted to Bureau of Energy Efficiency

Work Package 2: Facilitate the inclusion of energy efficiency label in green building certification programs.

It is proposed to understand the existing structure of all green building rating agencies in the country and to design an integration process of the proposed EE labeling mechanism for residential buildings within the framework of all rating agencies.

Key Indicators:

i. Adoption of EE labels in 2 green building certification programmes of the country based on the proposed benefits and harmony of the new EE label mechanism..

IV. Detailed Specifications

Work Package 1: Develop national energy efficiency label for residential buildings

1. *Framework for labeling scheme*

    a. Undertake a market recognition survey to understand the market preparedness and relevance of a labeling system in the country.
    b. Undertake an international best practices study to understand the international developments for the EE labels for residential buildings, under consideration of the existing labeling systems in different countries such as Germany, UK, Switzerland, Mexico, US and other countries.
    c. Define the vision and strategies of the labeling system and what potential roles the labeling system could play in the Indian building industry. The vision to be set based on the key discussions with all major stakeholders who could potentially be leveraging on the proposed labeling systems, like – BEE, NHB, KfW, financial institutions, Indian green building rating agencies, MoUD, MoEF, State SDAs, Builder organizations etc. The vision and strategies should expand this program for wider impact.
    d. Define the scope in terms of type of buildings, size of buildings, new and existing buildings, a floor in a building or the entire building etc. Prevailing government policies like smart cities, affordable housing etc. should also be considered while defining the scope of labeling scheme. The input for this task can be sought from the available data collated for ECBC-R.
    e. Define the important parameters as building components affecting the energy performance.
    f. Categorize the key building components into different groups (like envelope, fixed load equipments, variable load equipments, renewable energy etc) and develop the assessment mechanism for each group.
    g. Assessing and comparing the option of introducing an operational rating alone or asset rating alone or a hybrid option (asset + operational) (to add more paragraph on better understanding)
    h. Develop appropriate weightage factors, for each group and respective automation controls, based on the impact and relevance and suggestion for inclusion in the labeling protocol.
    i. Benchmark the energy performance for each building component category
    j. Develop the appropriate energy performance levels for each group in line with the residential energy efficiency code of the country and/or ECBC 2017, with a vision towards NZEB and Passive house.
    k. Determine the threshold requirements and EE levels for different building types, five climatic zones, etc.
    l. Undertake the techno-economic analysis for each building component and conclude a robust labeling scheme.
    m. Understand the existing BEE's star rating for commercial building programs and develop a concept plan to integrate the proposed labeling programs with the star rating for commercial buildings, if relevant. The methodology and techno-economic analysis for developing the labeling programs shall feed into the non-residential buildings as well.

n. Finalize an evaluation matrix for the EE labeling to propose the final labels
o. Design a label for five climatic zones. The label should be concise and intuitive, showing minimal, necessary information and can be easily understood by the end user;
p. Develop an appropriate tool to capture relevant data for each building parameter and automate the label disclosure.
q. Develop workshop materials to present the proposed labeling scheme to the stakeholders. Total proposed number of workshops is 5.
r. Collect, collate, and address the comments from the stakeholders
s. Support the approval of labeling scheme with the technical committees constituted by BEE.
t. Finalize the labeling scheme for five climatic zone
u. Develop a measurement, reporting and verification (MRV) plan to estimate through **measuring instruments** and verify the disclosed specification for each building component and suggest measures on digitalization of MRV process.
v. Undertake a market acceptance survey for the proposed labeling scheme and propose a relevance of the labeling scheme with the **business model**.
w. Finalize the regulatory framework to develop and facilitate the market driven strategies for the proposed labeling program.

2. *Administration plan for labeling scheme*

a. Develop a comprehensive administrative system with integrated data collection capabilities.
b. Assess institutional capacity in terms of technical and financial resources of existing institution like BEE, State SDAs,ULBs, PWDs etc and suggest possible potential Institutions.
c. Defining the responsibilities and processes for commissioning and generating a label

3. *Training and awareness*

a. Assess capabilities of existing professionals, and of existing training accreditation systems and programmes.
b. Develop a training strategy including the type of trainings to be conducted, training modules and materials, and of examination and registration processes.
c. Assess the ongoing information compaigns and develop new information campaigns that target the general public.
d. Development of Training materials, Manuals and PPTs for Workshop for ToTs -3 Nos and One International Seminar on Building labeling

4. *Assess quality and compliance*

a. Develop an overall quality assurance approach to include training, validation of certificates and auditing processes.
b. Develop the auditing and validation process for future changes in the building parameters.

c. Establish a comprehensive quality assurance system including complaint and appeal procedures.
d. Train specialists (ToTs) to undertake compliance, desk reviews and practice audits (Training Workshops: 3 Nos) and develop the process of capacity building down the line
e. Provide support for assessors.

Deliverables

1. Report on market recognition survey
2. Study report on international best practices
3. Report on Labeling scope, methodology, and framework
4. Prepare a report documenting the techno-economic analysis for labeling scheme
5. Draft report on EE label scheme for residential buildings
6. Compiled feedback/ comments from the stakeholders along with the address
7. Final report on EE label scheme for residential buildings
8. An appropriate prescriptive tool on easy to use basis to automatically calculate the label based on the input parameters, along with documented development process and user reference manual, on the EE label generation for residential buildings. The tool shall be based on the approved Open source software through offline and/or online portal.
9. Measurement and verification plan report to check compliance
10. Report on market acceptance survey and business model study for the EE label scheme
11. Administration plan report for labeling scheme
12. Training and awareness action plan guidelines & Report on process for capacity building of down the line stakeholders
13. Prepare workshop material, Power Point presentations for initial five training workshops for different stakeholders.
14. Report on quality assessment and compliance plan
15. Prepare workshop material, Training Manuals, Power Point presentations for three training workshops for ToTs on Building Labeling
16. Support and Prepare seminar material,Power Point presentations for one International Seminar on Building labeling

That the deliverables (final version) shall be handed in after one prior round of feedback and comments from GIZ and stakeholders. - Stakeholders shall be solicited - Final remarks shall be incorporated in the final version of deliverables.

Work Package 2: Facilitate the inclusion of energy efficiency label in green building certification programs.

1. *Impact assessment*

    a. Understand the current situation and EE requirements of existing green building rating systems in the country and propose the approach of a single platform to compare all the available rating systems in the country.
    b. Assess the impact of proposed labeling scheme on the other energy efficiency policies for residential buildings in India and green building certification programs.
    c. Utilize the proposed labeling scheme for residential building to feed into larger policy goals.

d. Support the stakeholder round table meetings (4 in numbers) and incorporation of feedbacks

2. *Implementation plan for labeling scheme*

a. Designing an implementation scheme in the country
b. Develop an integration plan in the green building certification programmes highighting the approach, benefits, process, and impact.
c. Develop a comprehensive action plan and support the implementation group.

Deliverables

1. Ex-ante analysis report on existing green building rating system
2. Report on Impact assessment of the proposed green labeling program
3. Report on implementation plan for EE label scheme
4. Document the feedback received during the workshops

That the deliverables (final version) shall be handed in after one prior round of feedback and comments from GIZ and stakeholders. - Stakeholders shall be solicited - Final remarks shall be incorporated in the final version of deliverables.

V. Specification of Inputs

1. Assignment of personnel

In total, the contract is projected to have a volume of up to 14 expert months; however, bidders are expected to draw a detail expert-days distribution as per the table of Expert-day schedule & activities, to optimize the project timeline with a streamlined and efficient approach. Out of 14 expert months at least 6 expert months have to be from senior consultant level. One person month is equivalent to 30 expert days. Therefore, the total expert days shall be 420 expert days.

Sr.No.	Expert Category	Tentative expert-days
1	Team Lead (senior level)	up to 60 expert days
2	International Experts (senior level)	up to 30 expert days
3	Pool of Experts on market assessment, techno-economic analysis, and labeling design	up to 120 expert days
4	Pool of Experts on implementation, and administrative plans	up to 120 expert days
5	Pool of Experts on impact assessment, business models, and integration support in green building rating programs	up to 90 expert days

Brief Profile of Experts

1. **Team Lead**: The team lead should be an Engineering Graduate or Architect having minimum 25 years of professional experience. S/he should be a senior consultant having proven understanding of concept for building energy efficiency standards, labeling programs, and related policy design. S/he should also have experience of managing and implementing large and complex projects wherein co-ordination with multiple stakeholders is required.

2. **Pool of International Experts**: It is desirable that at least two experts having International working experience in two different countries to be included in the team to share the international best practices and guide the program throughout. The proposed international experts should have at least 15 years of experience in the international building energy efficiency and business economics, inclusive of 5 years experience in Building labeling scheme, and its impact of different countries having diverse labeling scheme adopted. The experts should be an Engineering gradute or Architect.

3. **Pool of Experts on market assessment, techno-economic analysis, and labeling design:** The contractor should propose a pool of experts in the area of building energy efficiency, market assessment strategies, Gap Assessment, Best Practices and lead the techno-economic analysis to develop the EE label for the residential buildings in India. At least One (1) person month should be proposed in the category of senior consultant in this pool.

4. **Pool of Experts on implementation and administrative plan:** The contractor should propose a pool of experts for implementation support to BEE. The experts to have knowledge, along with required strategy development skills, on implementation aspects of building labeling at central level. At least one (1) person month should be proposed in the category of senior consultant in this pool.

5. **Pool of Experts on impact assessment, business models, and integration support in green building rating programs:** The contractor should propose a pool of experts having knowledge on impact assessment, business models, and integration support in green building rating programs and related skills to support the program on all related concern to ensure successful implementation and completion of program activity. At least one (1) person month should be proposed in the category of senior consultant in this pool.

Definition of senior consultant level: At least 10 years of experience in the area of expertise the expert is supposed to cover in the project context and should be an Engineering gradute or Architect.

Definition of consultant level: At least 5 years of experience in the area of expertise the expert is supposed to cover in the project context and should be an Engineering gradute or Architect.

Efforts from Interns cannot be taken into consideration here.

All the Senior Consultants / Consultants should have good command over English language (reading, writing and speaking)

The contractor has to assign nos of personnel, national and International Experts of different level for different activities during the course of project completion. It is expected from contractor to provide the list of assigned personnel for the activities along with expected man days as per format provided. In the case of a tender being submitted by a consortium or joint venture, for each of the consortium/joint venture partner a separate listing shall be provided.

Expert-day schedule & activities						
Sr. No.	Expert Category	Expert International /National	Activities Involved	Job Description	Tentative experts-days	Brief Profile Attached (Yes/No)
1	Team Lead					
2	Expert 1					
3	Expert 2…					
4	Expert ….					
5	etc……					

2. **Timeframe of the contract**

Timeframe: The duration of contract shall be less than 12 months. All the tasks have to completed latest by October 2018.

3. **Workshops, training and upgrading**

Not applicable

4. **Flexible remuneration item**

This position is supposed to allow for flexible reaction to changing situations and new requirements, if necessary for reaching the objective of the project. INR 1.0 million is to be included for this. Use of this remuneration item has to be initiated and approved by the responsible person on GIZ side.

VI. Further Requirements

a) BEE is in the process of developing first draft of ECBC-R by Dec 2017. It is assumed that the activities of this ToR shall be planned and executed considering draft ECBC-R 2017 as a reference document.

b) Any data to be purchased from external sources if necessary for the purpose of execution of the contract shall be purchased by the Contractor on its own expense.

c) Cost of venue, food etc. for organizing round-tables, workshops shall be borne by GIZ separately. All travel, accommodation, food etc. for the staff of the Contractor has to be borne by the bidder and have to be budgeted in their proposal.

d) The bidder should consider all the relevant and related activities, including but not limited to the activities proposed above in the work packages, to ensure the successful completion of the Work Packages 1-2.

e) All deliverables under Work Packages 1-2 shall be considered final after incorporating all the comments and Feedbacks from the stakeholders and final approval from GIZ.

f) Tendering shall be executed in two stages, where the agencies have to be assessed through the Assessment grid for eligibility for qualification in next stage for opening of Technical bid. The technical assessment of the proposals will be undertaken for the bidders, who qualify in eligibility.

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Annexure A: Sample Template for Progress Report

Activity	Responsible Consultant	Timeline as per work plan	Actual % Work Progress	Status	Remarks
WP 1					
Sub task 1.1					
…					
…					
WP 2					
…					

Brief summery in bullets to justify the status

	Completed (100%)
	in progress (26%-99%)
	Progress less than 25%

Project Milestones

Sr. No.	Deliverables/Activities	Reporting Months	Milestone
WB1	**Develop national energy efficiency label for residential building**		
1.1	*Report on market recognition survey*	Jan-18	
1.2	*Study report on international best practices*	Feb-18	
1.3	*Report on Labeling scope, methodology, and framework includes vision and strategies of the labeling system after discussions with all major stakeholders for wider impact*	Mar-18	❶
1.4	*Prepare a Report documenting assessment mechanism different groups (like envelope, fixed load equipments, variable load equipments, renewable energy etc) & the techno-economic analysis for labeling scheme along with energy performance levels for each group in line with the residential energy efficiency code of the country supported by benchmarking study on the energy performance for each building component category*	June-18	❷
1.5	*Draft report on EE label scheme for residential building*	July-18	❸
1.6	*Compiled feedback/ comments from the stakeholders along with the address after the workshops and seminars*	Sep-18	
1.7	*Final report on EE label scheme for residential building*	Oct-18	❹
1.8	*An appropriate tool to automatically calculate the label based on the input parameters, along with documented development process and user reference manual, on the EE label generation for residential building. The tool shall be based on the approved software through offline and/or online portal.*	Oct-18	❺
1.9	*Measurement and verification plan report to check compliance*	Oct-18	❻
1.10	*Report on market acceptance survey and business model study for the EE label scheme*	Nov-18	
1.11	*Administration plan report for labeling scheme and prepare regulatory framework to develop and facilitate the market driven strategies for the proposed labeling program*	Nov-18	❼
1.12	*Training and awareness action plan guidelines*	Nov-18	❽
1.13	*Report on quality assessment and compliance plan*	Dec-18	❾

WB2	**Facilitate the inclusion of energy efficiency label in green building certification programs**		
2.1	*Ex-ante analysis report on existing green building rating system propose the approach of a single platform to compare all the available rating systems in the country*	Mar-18	❿
2.2	*Report on Impact assessment of the proposed green labeling programme*	May-18	
2.3	*Report on implementation plan for EE label scheme along with integration plan in the green building certification programmes highlighting the approach, benefits, process, and impact*	Oct-18	⓫
2.4	*Document the feedback received during the workshops and integrate into the final report*	Nov-18	⓬