Final Report

Mid-Term Project Evaluation
Building Sector Energy Efficiency Project in Malaysia

Report submitted at the request of:
UNDP-GEF / Malaysia Country Office
by:
Asfaazam Kasbani, Programme Officer/UNDP CO Malaysia and Rakshya Thapa, RTA / UNDP Regional Office Bangkok
PIMS: 3108
Atlas Award: 00058231
Project ID: 00072266
Project Starting date: 8 July 2010
Allocated resources:
- GEF: USD 5,000,000
- Others in-cash, in-kind and parallel co-financing: 24,635,882
Total Budget: USD 29,635,882
Project Duration: 5 years
Implementing Agency: UNDP/ Implementing Partner: JKR

by:
Louis-Philippe LAVOIE
EE/RE Programme Specialist and Evaluator
gclpl@videotron.ca
and
Iskandar Mohd Majidi
National Expert
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Appendix 5: List of Documents Reviewed

LIST OF ACRONYMS

APR	Annual Project Review
BEI	Building Energy Index
BEM	Building Energy Management
BERM	Building Energy Reporting and Monitoring
BSEEP	Building Sector Energy Efficiency Project
CAST	Cawangan Alam Sekitar dan Kecekapan Tenaga/ Environment and Energy Division Branch of JKR
CBEED	Centralized Building Energy Efficiency Database System
CC	Component Coordinator = Component Manager
CM	Component Manager
CTA	Chief Technical Advisor
EE	Energy Efficiency
EPU	Economic Planning Unit
ESCOs	Energy Service Companies
GEF	Global Environmental Facility
GHG	Greenhouse Gases
GOM	Government Of of Malaysia
IP	Implementing Parner(s)
JKR	Jabatan Kerja Raya/ Public Works Department of Malaysia
KeTTHA	Ministry of Energy, Green Technology and Water
KPI	Key Performance Indicator
KPKT	Kementerian Perumahan dan Kerajaan Tempatan
MAESCO	Malaysian Association of ESCOs
MEERB	Malaysian Energy Efficiency Rating for Buildings
MFBEMP	Malaysian Federal Building Energy Management Program
MHLG	Ministry of Housing and Local Government
MNRE	Ministry of Natural Resources and Environment
NPD	National Project Director
NPM	National Project Manager
PMT	Project Management Team (PMU)
PRC	Project Review Committee
RE	Renewable Energy PWD (JKR) Public Works Department (Jabatan Kerja Raya)
REHDA	Real Estate and Housing Developer Association
RFP	Request for Proposal
RTA	UNDP Regional Technical Advisor
SEDA	Sustainable Energy Development Authority
SIRIM	Standards and Industrial Research Institute of Malaysia
TOR	Terms of Reference
TWG	Technical Working Group
UNDP	United Nations Development Programme
USD	United States Dollar

Foreword

This Draft Report provides the UNDP with findings, ratings and recommendations based on desk review documents, interviews, site visits and several meetings with the managers of the Project Management Unit and key stakeholders.

The Evaluator conducted his site visit in Malaysia (Kuala Lumpur) from October 6 to 20, 2013.

The MTR evaluation team presented his main findings and preliminary recommendations to the UNDP CO and key stakeholders during the final debriefing meeting held in Kuala Lumpur on October 17, 2013. Some of the comments of these individuals have been taken into consideration in the preparation of the draft and final reports.

The draft MTR report was submitted on November 7. The latest comments of the UNDP CO, RTA and the BSEEP were received on November 15, 2013. The first final MTR has been submitted on November 30 2014. Other comments were submitted by the RTA in December. The MTR team revised the final report in December 2013 and January 2014 with the aim of taking into consideration the latest RTA's comments.

EXECUTIVE SUMMARY

The goal of the BSEEP is the reduction in the annual growth rate of GHG emissions from the Malaysia building sector. The project objective is the improvement of the energy utilization efficiency in Malaysian buildings, particularly those in the commercial and government sectors, by promoting the energy conserving design of new buildings and by improving the energy utilization efficiency in the operation of existing buildings. Reaching this objective will be facilitated through the removal of barriers to the uptake of building energy efficiency technologies, systems and practices. As a direct result of the project implementation and post-project impact, the cumulative energy savings[1] are estimated at 2,078 GWh within the project timeframe and at 17,608 GWh for the post-project period (+10 years). These energy savings are expected to result in a cumulative emission reduction of 1 435 ktons within the project timeframe and in a total of 12,044.4 ktons over the post-project time horizon at the end of 2025.

The five primary project Components and expected Outcomes and Outputs of the project are summarized below in Tables 1 and 2:

Table 1 Components and Outcomes

Component	Expected Outcome
1. Capacity Development	Clear and effective monitoring system
2. Policy Development & Regulatory Frameworks	Implementation of, and compliance to, favorable policies that encourage the application of EE technologies and practices in the country's building sector
3. EE Financing Capacity Improvements	Availability of financial and Institutional support for initiatives on EE applications
4. Information and Awareness Enhancement	Enhanced awareness of the government, public and the building sector on EE building technology applications
5. Building EE Demonstrations	Improved confidence in the feasibility, performance, energy, environmental and economic benefits of EE building technology applications

Table 2 Components and Outputs

Component	Expected Outputs
1. Institutional Capacity Development	Output 1: GOM agencies/departments that employ and implement energy management systems.
2. Policy Development & Regulatory Frameworks	Output 2.1: Improved Malaysian EE building policies, legislation, regulations and action plan Output 2.2: Approved and enforced EE Building Code of Practice Output 2.3: Utility regulations that promote/support EE technology applications in buildings
3. EE Financing Capacity Improvements	Output 3: Enhanced availability and accessibility of financing for EE building projects
4. Information and Awareness	Output 4.1: Tools for enhancing the skills and experience of local building

1 Prodoc paragraph 112, page 128.

Enhancement	practitioners in the design of energy efficiency projects in buildings Output 4.2: Implemented market oriented EE programs in the building sector both at the national and local levels
5. Building EE Demonstrations	Output 5.1: Completed demonstration projects showcasing successful building EE technologies, techniques and practices. Output 5.2: More knowledgeable, technically capable and competent building practitioners in the GOM and the private sector

Table 3 provides the Outcome-based rating. In essence at mid-term, from January 2011 to September 2013, the project has slightly achieved partial Outputs under Component 4 (Information and Awareness Enhancement) and Component 5 (EE Demonstration). Because of the absence of Outputs from Components 1, 2 and 3, the MTR team rated these components were rated Unsatisfactory. On the other hand Components/Outcomes 4 is rated Satisfactory and 5 Unsatisfactory. Although the MTR team cannot rate the performance of specific outputs/results related to Components 1, 2 and 3, it should be noted that such a level of under performance has a direct impact on the global project performance rating.

Progress towards results is rated Highly Unsatisfactory because the project is lagging far behind the targets in terms of results and disbursements.

Adaptive management is also rated Highly Unsatisfactory because the project did not succeed in appropriately proceeding with needed adjustments to sub-activities and there was a significant management shortcoming in the mobilization of capable full-time team members.

Management Arrangement: The project's management arrangement is rated Unsatisfactory as the project was unable to fill up the posts necessarily and timely as per the project document. The evaluators take note that the NPM, Project Assistant and Financial Assistant were timely recruited (with assistance from UNDP) but the other positions (i.e component managers) were temporarily put on-hold by CAST as the NPD was in view that it was too early to recruit (also for cost-saving measure) as the project was still in the initial phase. JKR did set up the committees (NSC, PRC) and appointed the NPD at the earliest stage of the project's implementation however. Most crucial is the inability of the CAST in fulfilling the National Implementation Modality (NIM) obligations as agreed in the signed Project Document, especially in terms of leadership and progressing the project accordingly. Due to unsuccessful intervention using the usual project M&E channels, UNDP CO in consultation with EPU, has commissioned the Rapid Evaluation exercise in May 2013 to highlight the problems with the CAST's higher authority for immediate actions. The evaluator noted that CAST has now a new NPD under observation from the Ministry of Works and EPU.

The whole project performance is rated **HIGHLY UNSATISFACTORY**[2] because of the drastic lack of achievements, impacts and performance. The project did not manage to appropriately mobilize the stakeholder community and attract capable full-time Component Managers and Consultants. The project did not manage, even slightly, to comply with the planned disbursement calendar. At mid-term, less than 12% of the GEF financing has been disbursed while disbursements for Years 1-2 and 3 account for 18% of the planned disbursement target for that period (see Table 9). Co-financing (public and private) has only reached 1.2% of the whole target. See Appendix 3 for detailed disbursements at mid-

2 As per the definition, HIGHLY UNSATISFACTORY means: '' *The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits*. '' On the other hand, the MTR team is confident that the project can achieve its objectives and expected outcomes if it is extended for 1 year and recommendations are implemented on the fast track.

term and Appendix 5 for detailed co-financing status.

TABLE 3 Key Achievements at Mid-Term and Rating

Outcomes	Achievements	Rating
Outcome 1: Clear and effective monitoring system	Nothing done No result from planned 5 sub-activities No Component Manager Budget provision not used: no disbursement.	**Unsatisfactory** No disbursement No activity
Outcome 2: Implementation of, and compliance to, favorable policies that encourage the application of EE technologies and practices in the country's building sector	1 policy paper drafted in activity 2.1.1 No result from planned other 10 sub-activities No Component Manager Budget provision not used: no disbursement.	**Unsatisfactory** No disbursement Only 1 sub-activity carried out on 11
Outcome 3: Availability of financial and institutional support for initiatives on EE applications	Activity 3.3 completed by NPM Activity 3.2 in progress No result from planned other 5 sub-activities No Component Manager Budget provision not used: no disbursement.	**Unsatisfactory** No disbursement No activity
Outcome 4: Enhanced awareness of the government, public and the building sector on EE building technology applications	On **11** activities: - Activity 4.1.1 completed - 6 in progress: Activity 4.1.2, 4.1.3, 4.2.1, 4.2.4, 4.3.1, 4.3.2 in progress - **4 not yet started** - Only **26%** of the planned budget for Yrs 1-2 and 3 has been disbursed - Two consultants were involved from 1 April 2012 to 30 June 2013	**Satisfactory** Lack of achievements Disbursements under the target: Planned end of Yr3: $953 200 Achieved Yr1-Yr2 and Q3 Yr3: $250 017
Outcome 5: Improved confidence in the feasibility, performance, energy, environmental and economic benefits of EE building technology applications	On **3** activities: - 1 in progress (demo identification) - **2 not yet started** Only 12**%** of the planned budget for Yr 1-2 and 3 has been disbursed	**Unsatisfactory** No demonstration project started up Disbursements under the target: Planned end of Yr3: $1 068 000 Achieved Yr1-Yr2 and Q3 Yr3: $128 692

Co-Financing

Based on data available at the end of September 2013, the total co-financing from the government side

is USD 305 000 and no amount has been confirmed by the private side. This level of co-financing (1.2% of the whole target: USD 24 million) is very low. See Table 10.

Many Lessons must be Drawn:

- *Timely Actions*: Despite the UNDP's constant reminders and even with the lagging issues highlighted and discussed in the Project Review Committee (PRC) meetings and the National Steering Committee (NSC) meetings, JKR as the Implementing Partner, has not been able to implement the project in a timely manner and according to the agreed National Implementation Modality (NIM). This led the UNDP CO to commission the Rapid Evaluation exercise for EPU in May 2013 to seek immediate solutions to the long standing problems. The Government of Malaysia along with UNDP CO should have taken action earlier to improve the project's implementation, reporting and project management. There is no acceptable reason why the project did not replace the previous Project Manager when she left in 2012 (which meant no Project Manager for a period of 1.5 year) although JKR had confirmed that one of their senior staff members would resume the responsibility effective immediately, which did not materialize, and the same goes for Component Managers and the CTA.

- *Project Design Weaknesses:* The weaknesses were not highlighted and consequently not appropriately addressed at the Inception Stage, especially in regard to Component 3 (EE Financing) and Component 5 (EE Demonstration). On the other hand, it is important to note that at the stage of the project design, numerous consultation activities with stakeholders, aside from the LFA workshop, were conducted in 2010 to discuss the issues and concerns regarding the application of EE technologies in the building sector. The LFA workshop resulted in proposed activities to be carried out under the BSEEP, including project implementation and management arrangements. During the MTR, it became clear that there is indeed a project design problem related to Component 3 and Component 5 in spite of the valuable efforts and consultations carried out at the stage of the project preparation in 2010. See details at paragraph 3.1.3

- Mobilization of Capable Team Members: A project, especially a full-sized project, cannot be carried out and objectives appropriately achieved without the full involvement of key dedicated team members. A project cannot reach its targets if nobody is responsible for implementing activities and sub-activities. This full-sized project is adequately budget provisioned to hire capable team members.

- *The NIM (or NEX) Protocol is not a Burden*: While the project follows NEX/NIM modality (where the project activities is implemented by the Government's appointed agency including recruiting and procuring of goods and consultants),the bureaucracy faced by CAST (in following the necessary Government's procedure) should not be regarded as the reason for delays in project implementation. . If there are some outstanding situations when problems occur, the Implementing Partner should address the issues and request the UNDP's support services quickly. It was pointed out that UNDP has provided recruitment for the National Project Manager, Finance Assistant, Project Executive and The Chief Technical Advisor accordingly as stated in the Management Arrangement section. The MTR team met with most of the key stakeholders and JKR high level managers. All knew about the project's lack of performance. To a certain extent, those stakeholders kept their distance and did not intensively support the project possibly because of its questionable performance. As a result nobody took action.

Evaluation Mission Main Findings

The primary main finding is related to the weaknesses of the Project Design and the lack of adaptive management, JKR's drivenness and leadership impeded the expected progress. Over the last 2.5 yrs, the IP did not make explicit attempts to address the issues around the project. In addition, it did not recruit the necessary technical skills required to achieve the project outputs and objectives.

. The Project Design phase was carried out in the absence of any PPG, where the UNDP CO in collaboration with the Government of Malaysia carried it out on its own as its respective contributions to the project. The Project Design includes an appropriate framework and encompasses the relevant basic key components as is the case for many similar projects in the building sector. The weaknesses are more related to the design of activities rather than to the project structure as a whole.. Mid-term reviewers are in view that the activities proposed may seem to be irrelevant under the current situation. For instance, under component 3, BSEEP anticipates that the activities proposed will encourage financial institutions to be supportive in financing EE building (to the developers or the ESCOs) however it does not address clearly methods of engagement with the financial institutions. It is not clear how the ESCOs engagement's is to be laid out too. The key problem that lack of financing for EE still exists is the relatively cheap energy prices which discourage developers and owners to embark on EE. MTR reviewers are in view that for Malaysia's situation, attention shall be given more to promoting wide spread instruments for EE financing such as the Energy Performance Contracting (EPC) to be undertaken by ESCOs. Activities under BSEEP show an extremely difficult project targets to be achieved.

It is noted that the project document was completed (based on a draft design (PIF) in January 2008)three years later after the PIF stage.It is therefore not unusual for the project team to adjust the project's design (or Results Framework) in accordance with the current context at the time of the project start-up (in this case in 2011). However, the Inception Phase did not critically look into it or made any attempt to update project activities knowing that the targets were /difficult not achievable. Evidence of critical assessment was also missing and there was insufficient attempt to consult the key stakeholders relevant to the components. See details in paragraph 3.1.3

In general, the Inception Phase did not successfully address the weaknesses of the Project Design which resulting with the project team implementing the activities as per the Prodoc. Finally, the project Implementing Partner did not succeed in mobilizing capable Component Managers. In other words, all the ingredients were assembled to result in the current disappointing situation.

Table 7 provides details on the actual achievements at mid-term.

Recommendations

In this situation of underperformance, the mandatory MTR exercise can be very helpful if it focuses on a set of appropriate and realistic recommendations, rather than only dealing with ratings and putting the blame on an individual or a specific organization for what has occurred in the past. When a project does not perform, as a rule the project's Implementing Partner and even the UNDP sometimes feel uncomfortable at the stage of the MTR. The MTR team must point out that it was not the case with this particular situation and the implementation partners (UNDP and JKR) were willing, committed and ready for change and look forwardimplement the key recommendations. This is a very good indicator in regard to proceeding further and hopefully securing the successful

achievement of the project through results and impacts as per expectations and toward objectives.

Recommendations are broken down in three categories:

- 1 recommendation on Budget and Planning Matrix/Logical Framework
- 4 recommendations dealing with component-based improvements
- 5 recommendations dealing with management issues and organizational arrangements

Table 11 (page 33) provides an overview of the way the recommendations address the particular issues and lacks pointed out in the MTR and the expected impacts of their implementation. Again, the MTR team would like to mention that the recommendations must be supported by a detailed Project Design and the needed timeline in the AWP 2014. This task must be carried out by the CTA, NPM and related Component Managers as a priority.

In the opinion of the MTR team, these 10 recommendations are all very important and none should be considered as a secondary recommendation. The MTR report provides guidelines but recommendations 2-3-4 and 5 require a detailed design by the IP to be implemented. The MTR team feels that it is important to point out that the next step is to draft the AWP 2014 accordingly to recommendations. These tasks should be taken up collectively by the NPD and NPM as immediate priorities.

Recommendation 1: Revision of the Planning Matrix[3] and Budgeting

In Appendix 1, the MTR team proposes an improved Logical Framework/Planning Matrix and an adjustment to some key performance indexes (KPIs) (or project targets) with the aim of making the targets realistic and hopefully achievable. Major adjustments are related to Components 1, 2 and 5.

The proposed new budget breakdown structure is presented in Appendix 2 in line with the revised Planning Matrix. The whole project framework and project objectives remain unchanged. Major adjustments to the Planning Matrix are related to Component 1 (Institutional Capacity Development), Component 3 (EE Financing) and Component 5 (Building EE Demonstration). Table 4 is a summary of the revised budget as opposed to the current approved budget (Prodoc). Table 4 encompasses the budget components related to M&E (Component 6) and Management (Component 7). Budget cuts in all components are related to international and local consultants as the project needs to allocate more for component 5 for purchasing of monitoring equipment. The budget increase in Component 5 is allocated to procurement and co-financing in the public sector.

Table 4 – Budget Revision

	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Total
Total budget	462 000,00	592 000,00	502 000,00	1 242 000,00	1 735 000,00	59 000,00	408 000,00	5 000 000,00
Revised budget	438 183,91	574 137,93	462 022,99	1 085 405,50	1 973 249,67	59 000,00	408 000,00	5 000 000,00
Available budget on Atlas	462 000,00	592 000,00	502 000,00	994 933,81	1 609 788,95	58 188,36	232 054,64	4 450 965,76
Adjustment	***-5%***	***-3%***	***-8%***	***-13%***	***14%***	***0%***	***0%***	***0%***

Recommendation 2: Refocus the key Component 1 outputs

The emphasis must be shifted as a priority to the development and roll-out of the National Energy Consumption Monitoring System and Data Analysis, that is to say an integrated Monitoring System (IMS) in the building sector. As per the Project Design, the BSEEP supported different information systems. The ongoing work under the Building Consumption Information System (BCIS) of the Malaysia Green Technology Corporation (MGTC) will be linked with support from BSEEP. BSEEP will then take this further up by establishing real-time data from demonstration projects. The BCIS (with IMS) will be the heart of the Central Building EE database (CBEED) which the project is pursuing. This recommendation relies on existing databases and information systems developed by different ministries with the aim of creating a national web-based IMS. The Integrated IMS should be designed by technical experts.

Recommendation 3: Put the emphasis of Component 3 EE Financial Mechanism Capacity Improvements on the ESCO business model.

MTR evaluators recommend that the project establishes provision of intensive support to the ESCO business model and the development of the Energy Performance Contract modality. Such a recommendation is in line with the current needs. The MTR team is confident that such a refocusing activity is more appropriate in 2014 in terms of outputs. By decision (a directive letter by MEGTW on utilizing EPC concept for government buildings on September 2013), the KeTTHA (Ministry of Energy, Green Technology & Water) stipulates that EE

3 In the Project Document the Planning Matrix is entitled Logical Framework-Planning Matrix

investments in the public sector should proceed according to the Energy Performance Contract (EPC) modality through the existing ESCO network in Malaysia. As explained, in meeting the objectives of this component, the project can not depend primarily on the financial institutions as they are mainly receiving part. Experience from the Green Technology Financing Scheme (GTFS) shows that the banks and financial institutions are generally supportive on financing RE and EE projects. However, constraints come from the quality of submission (in meeting the banks' requirement) and the methodology of applying which mainly are the issues of the submitters. Hence, by emphasizing on the performance modality, the risks undertaken of the projects will be linked the project's guaranteed return (and the capability of the applicants (the ESCOs)) and rather than fully relying on the EE projects to be financed which are not curtained in some way. Hence, The MTR team recommends to focus on Activity 3.5 (ESCO) with the aim of improving the capacity of ESCOs in the financial analysis of EE measures, the preparation of bankable documents and providing awareness activities to commercial banks on EE project financing in the public and private sector through the ESCO business model and EPC modality.

Recommendation 4: Revised Component 5 budget to include purchase of monitoring systems and inclusion of best practices in energy management.

The aim of Project Component 5 should be to provide decision makers with an evidence-based demonstration of the impact and cost effectiveness of EE measures in the building sector. It is therefore recommended that BSEEP looks into provision of providing efficient monitoring systems to be included in the demonstration projects. As such, budget for Component 5 shall be revised and focuses into 3 parts mainly 1) continuing the originally intended objectives, 2) purchase of IMT equipment and 3) inclusion of best practices in energy management in buildings as one demonstration projects. 3 major demonstration activities:

- EE Investment Cost Effectiveness: These activities basically suggest BSEEP to continue completing the originally intended objectives which is to demonstratethe cost effectiveness of the selected EE measures in 10-12 public and privateuildings, including one or two hospitals whereone or two of those projects should be implemented through the ESCO business model under the EPC modality. Case studies publication and other information materials should be prepared and disseminated.

- Integrated Monitoring Technology (IMT): IMT refers here means providing real time data monitoring system (via web-based internet protocol) as part of demonstration project. It is anticipated that demonstration of energy consumption monitoring technology and data logging systems to be about 20 to 30 in quantity(to be validated) as representative of various types of buildings (public and private).This includes, among other things, smart meters and data gathering/logging equipment (distance reading). The cost of EE investment shall remain with the hosts / building owners but the IMT equipment (hardware and software) shall come from BSEEP as part of the monitoring activities. BSEEP team will then be able to monitor and provide substantial analysis for data monitoring and effective policy formulation. The BSEEP should also support the development and implementation of analytical tools as well as a web-based information sharing system.

- Impact of Best Practices in Energy Management: Demonstration of the impact of the implementation of best practices and systematic energy management guidelines in

target buildings where emphasis is given to include energy management in buildings.

The BSEEP must consider a significant investment in equipment, rather than 10 k$ as planned in the Project Document and a budget provision should be dedicated to TA (local consultant) to achieve those 3 activities as planned. Let's recall that the budget provision for Component 5 is 1,735,000$ and at mid-term only 7% (128k$) of that budget provision has been spent. The recommended budget provision is now USD 1,973,249 to be split more or less equally between TA and procurement.

Recommendation 5: Extend the network of implementation partners

The MTR evaluators were in view that at the current situation, many key stakeholders were not consulted and invited during key project decisions. As such, MTR evaluators recommend that the project extend the implementation partners' network (institutional arrangements) in a more practical way than previously. Such an involvement must be intensive and practical (not limited to ''dialogue'' or meetings only at the end of the outputs) especially in regard to Component 1 and Component 5.

Among others, key staleholders to be included are

Other JKR departments (Mechanical/Electrical/Maintenance department) Mechanical, Electrical and the Maintenance departments have many ongoing, planned and completed experience on EE hence, any synergy is expected. A joint pro-active demonstration project committee (DPC) or part of the Project Review Committee meeting must be set up with the aim of proceeding with project screening, project selection and implementation.

Company-based Experts (outsourcing) should manage to design and implement about 10 demo projects.

Sustainable Energy Development Authority (SEDA) – SEDA has conducted many relevant building initiatives on EE (i.e. Low Carbon building guidelines and the monitoring of the SAVE's project), It is expected BSEEP to continue discussion on the relevant framework for joint cooperation. MGTC for the National Monitoring and Data Analysis System development and implementation especially related to BCIS development.

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Recommendation 6: Filling up the vacant positions

This is an urgent requirement to be quickly resolved by the end of the year with the selection and hiring of 4 Component Managers and suggested as follows:

- Component 1: to be undertaken by the full-time Component Manager cum Consultant;
- Component 2: to be undertaken by part-time Component Manager cum Consultant
- Component 3: to be undertaken jointly by part-time CTAand the full time Project Executive
- Component 4: to be undertaken by the Part-time Component Manager cum Consultant ,
- Component 5: to be undertaken by a Full-time Component Manager cum Consultant.

Out of the positions above, the highest priority will be the Component 3 and Component 5 and followed by the Component 4. MTR evaluators recommend several positions to be in full time basis due to the urgency and comprehensive nature of the activities. The non-full time positions can be generally appointed on case by case basis.

Recommendation 7: Recruitment of the Chief Technical Advisor (CTA)
MTR evaluators recommend BSEEP to proceed with the selection and contracting procedure of a part-time international CTA to support the PM and Component Managers during 2014 and 2015 period. In addition, the CTA should be partly responsible for Component 3. The CTA position should be contracted by early December with the aim, among others, of providing input for the preparation of the AWP 2014.

With the positions filled up, it is expected that the IP (JKR CAST (Energy and Environment Branch)) will strengthen its capacity in implementing BSEEP effectively and timely. Besides having a dedicated team on the project's activities, the team will also assist CAST by leading effective project monitoring system especially related to physical project implementation in Component5. UNDP CO will continue providing support to BSEEP and JKR team in adherence to the UNDP/GEF templates.

Recommendation 8: Project Duration Extension
The project should end on December 2016 rather than 2015 if the BSEEP is willing to proceed with the needed improvements. The duration extension is mainly required to deliver outputs related to Component 1 and Component 5.

Recommendation 9: Improvement to Progress and Planning Reports
MTR team recommends to proceed with a drastic improvement of Quarterly and Annual Progress Reports and the AWPs as well as activity budgeting follow-ups and reporting. It is noted that PIR is in compliance of the UNDP GEF requirement. Writing of the report shall be enhanced for quality reporting. This includes strict compliance in reporting with the UNDP Annual Project Report and the Annual Work Plan format. The full team on board (recommendation no6 and no7) will allow BSEEP to drill clearly on specific issues and provide quality reporting contents as required.

Recommendation 10: Timely scheduling of the NSC and PRC Meetings
BSEEP was not in compliance with the agreed schedule for the NSC and the PRC despite the various reminders by UNDP CO. It is now suggested that the project to schedule and hold both meeting timely (NSC to be organized twice yearly and the PRC four times yearly). The National Steering Committee (NSC) must mainly provide guidance and direction to the project team at the strategic level and approve the AWPs. It is also expected that NSC to seriously review the project implementation arrangement and advice BSEEP team in adhering to the agreed project progress including budget utilization. The BSEEP should also invite the JKR relevant sections, MGTC, SEDA and Energy Commission to become involved as NSC members because they are key players in the field of EE and, more importantly, because in the future the MGTC and EC will play a very active role in regards to the National Monitoring System (Component 1) and a few demonstration projects (Component 5) respectively.

Timely scheduling of the PRC and NSC meetings will allow BSEEP to receive proper guidance and act swiftly in case of any delays and problems faced by the team. As a result, JKR CAST will increase its project management capacity as required in the project document. Based on this recommendation, the JKR CAST will be appropriately supported by capable key technical partners. To this end, Recommendation 5 highlights key activities where these technical partners should be actively involved.

Conclusion

In addition to the deficiencies pointed out in regard to the initial Project Design, in the MTR team's view, the root of the implementation problem lies with the absence of key project staff and consultants, which is a direct result of the project's lack of leadership, questionable management skills and inefficient engagement process and modality. For all these reasons and others mentioned, the project is rated HIGHLY UNSATISFACTORY. However the JKR should know that, as per the GEF's definition, HIGHLY UNSATISFACTORY means: '' The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits. '' The MTR team strongly believes that the project will not achieve its objectives within the remaining timeframe if the project is implemented as currently designed. Therefore, it is recommended that a strategic review of the project design, work plan, outputs and activities be conducted, their relevance explored and if required adjustments made in project targets and performance indicators. With the fast track implementation of the recommendations, the MTR team is confident that the project outcomes are still relevant. It is also recommended that the project is extended for 1 year.

Although the project has failed to appropriately progress up until now, the MTR team is confident that the new project team will take action to implement recommendations with the aim of significantly improving the project performance towards objectives. The total budget provision still available is more than 4 million dollars, which is quite sufficient to achieve objectives over the upcoming 3 years (if the duration extension is approved). It is also important to note the Government of Malaysia and the JKR top management has indeed nominated a new senior person as the new NPD whom is expected to bring drastic changes to the team beginning 2014 until the end of the project period in December 2016.

In other words, the BSEEP will have a second chance to successfully perform towards the same objectives. In a certain sense, one can say that it is almost like the beginning of a new project, but not starting from scratch since Components 4 and 5 have achieved a few results.

Section 1 Introduction

The Building Sector Energy Efficiency Project (BSEEP) is designed in line with the GEF's climate change strategic program on Promoting Energy Efficiency in Residential and Commercial Buildings (SP-1) with the aim to contribute to reducing the annual growth rate of GHG emissions in the Malaysia building sector.

The project started in January 2011 and is expected to end in December 2015.

The BSEEP objective is the improvement of the energy utilization efficiency in Malaysian buildings, particularly those in the commercial and government sectors, by creating an environment of building energy efficiency awareness including the adoption of cost-effective design and technology options available for the construction of new buildings as well as through energy management and retro-fitting of the relevant technologies in existing buildings. The realization of this objective will be facilitated through the removal of barriers to the uptake of building energy efficiency technologies, systems and energy management best practices.

As a direct result of the project implementation and post-project impact, the cumulative energy savings[4] are estimated at 2,078 GWh within the project timeframe and at 17,608 GWh for the post-project period (+10 years). Such an energy saving is expected to result in a cumulative emission reduction of 1 435 ktons within the project timeframe, and of 12,044.4 ktons over the post-project time horizon at the end of 2025.

1.1 Purpose of the Review

The overall purpose of the MTR is to measure the effectiveness and efficiency of project activities in relation to the stated objectives endorsed by the GEF, including any agreed upon changes in the expected outputs during project implementation. In other words, this Mid-Term Review provides an overall and detailed assessment of the project and an opportunity to critically assess management and implementation strategies and issues. In addition, the MTR provides recommendations to secure the project's sustainability, to improve its potential to achieve expected outcomes towards the approved objectives.

1.2 Scope – Methodology and Tracking Tools

The GEF Monitoring and Evaluation Policy specifies that the MTR shall assess, at a minimum:

(i) The achievement of outputs and outcomes and provide ratings for the targeted objectives and outcomes;
(ii) The likelihood of sustainability of the outcomes at project mid-term and expectation at the end of the project timeframe, and provide ratings for this.

The MTR team rolled out the standard methodology to carry out the Mid-Term Review:

- Comprehensive desk review prior to the site presence;
- Preparation of the MTR Inception Report (Questions-Issues-Agenda) prior to the site

4 Prodoc paragraph 112, page 128.

presence;
- Two-week MTR mission in Kuala Lumpur (Oct. 6 to 20): meetings with all key project partners and outsiders (see Mission Agenda Appendix 4);
- Draft Report (November 7) and comments by November 18;
- Final MTR Report November 25.

Evaluations in the GEF explore four major criteria:

(i) Relevance: the extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time.
(ii) Effectiveness: the extent to which an objective has been achieved at mid-term.
(iii) Efficiency: the extent to which results have been delivered from the project's start-up with the least costly resources possible.
(iv) Current Results: the positive and negative, and foreseen and unforeseen, changes to and effects produced by the project. For the current project, results are more related to GHG emissions reduction, the sustainability of the intervention and its replication effects.

The MTR serves as an agent of change and plays a critical role in supporting the UNDP CO and the Implementing Partner (JKR). The emphasis of the evaluation mainly focuses on major issues encountered and challenges the project has to deal with to achieve its approved objectives.

MTR Tracking Tools

In accordance with the GEF guidelines (GEF M&E Policies and Guidelines-me_policy-english.pdf) the MTR tracking tools are the following:

Project indicators The evaluation assessed the achievement toward indicators related to expected outcomes, planned duration and budget and co-financing of the project.
Implementation The evaluation assessed the implementation of the project in terms of quality and timeliness of inputs and efficiency, the effectiveness of activities carried out.
Project outputs, outcomes and impact The evaluation assessed the outputs, outcomes and impacts achieved by the project as well as the likely sustainability of project results.

As at the MTR period, direct reduction of the GHG emission due to the BSEEP is reported to 0 ktons CO2equivalnet. At the stage of the MTR, the evaluation team mainly dealt with issues related to the project progress (technical and financial), project management and recommendations.

1.3 Structure of the Review Report

In accordance with the GEF MTR methodology and the TORs, the evaluation process was structured to focus on the implementation of activities described in the Project Document and the logical framework. The Evaluation Report is structured in accordance with the GEF's requirements as mentioned in the TORs.

For those who would like to have a quick view, the Executive Summary has been drawn up comprehensively enough to provide the most important findings, ratings and rationales, conclusions and recommendations, as well as lessons learned.

Section 2: Project Description and Development Context

2.1 Project Start and Duration

The project (BSEEP) began in January 2011 and is expected to be completed at the end of December 2015.

2.2 Problems that the Project Sought to Address

The Building Sector Energy Efficiency Project (BSEEP) is jointly funded by the Government of Malaysia (GOM) and the Global Environmental Facility (GEF). The BSEEP is aimed to contribute to the reduction in the annual growth rate of greenhouse gas (GHG) emissions from the Malaysia building sector. Five project components are designed to remove barriers for the widespread implementation of Energy Efficiency (EE) in the building sector within Malaysia. It is also a capacity building project intended for the government as well as the private sectors involved. Through its five components, the project addresses the following priorities (as defined):

- Institutional Capacity Development: Effective System of Monitoring resulting in a better energy performance in the building sector;
- Policy Development & Regulatory Frameworks: Compliance/implementation of EE policies to advance the roll-out of EE technologies;
- EE Financing Capacity Improvements: Make financial and institutional supports available for initiatives on EE building technology applications;
- Information and Awareness Enhancement: Enhanced awareness of the government and building sector on EE technologies;
- Building EE Demonstrations: Improved confidence in the feasibility, performance, energy and environmental benefits of EE technology applications leading to replication.

2.3 Immediate and Development Objectives of the Project

The project is in keeping with the objectives of the GEF's Operational Programme #5 (Removal of Barriers to Energy Efficiency and Energy Conservation) and will contribute to the reduction of GHG emissions through the transformation of the Malaysian buildings market towards more energy-efficient building materials, technologies and practices. The project is in line with the GEF's climate change strategic program on Promoting Energy Efficiency in Residential and Commercial Buildings (SP-1). It is comprised of activities aimed at improving energy efficiency and promoting the widespread adoption of energy efficient building technologies and practices in the Malaysian building sector.

The project is expected to make great contribution to the national objectives of reducing the energy consumption in government buildings by 10%. In that regard, the project is contributing to the national priority on the promotion of energy efficiency and facilitation of measurable reductions in GHG emissions. It is also in line with the national environmental strategy as stipulated. The proposed project itself is expected to lead to investments in energy efficiency best practices and EE technologies in Malaysian building sectors.

2.4 Context Baseline Indicators Established

Table 5 shows the context baseline indicators at the time of the Project Design (carried out in 2010 based on the PIF submitted in 2007) and the update carried out by the MTR team in 2013. The MTR team proceeded with the update of the context baseline based on interviews, desk reviews and, more importantly, on the experience of the MTR National Team Member.

Table 5 Context Baseline

	Context Baseline in 2010	Update of the Context Baseline in 2013
1.	A small number of EE initiatives have been planned by some government agencies (e.g., JKR) and private sector entities.	EE initiatives are being planned by various agencies and the ESCO business model is identified by MEGTW as the main option for implementation on public buildings. The Energy Commission is undertaking registration of ESCOs interested in participating in government buildings.
2.	There was no coordination among the project owners and proponents to at least explore and take advantage of potential synergies in order to deliver more impacts to the building sector.	Coordination and implementation is still lacking. Though the MS1525 has been reviewed and mandated by the government, only one state has enforced energy efficiency provisions into their UBBL so far
3.	In the long run, it was expected that building energy efficiency will improve slowly as technology developments and design strategies abroad filter through to the Malaysian market.	EE technologies and EE design strategies have been incorporated in the development of green buildings under the Green Building Index rating, Green Pass and Penarafan Hijau (Green Certification)
4.	No strong coordinated national Energy Management effort	Efficient Electrical Energy Management Regulations 2008 were enforced in 2010. Currently 150 public buildings are affected by this regulation. The national energy efficiency action plan is already drafted but its approval has been delayed
5.	Each agency implemented energy management according to its own definition	ISO50001 Energy Management Standard came into effect in 2011 and can be the basis for energy management guidelines (Green Recognition)
6.	Lack of coordinated policies and implementation	The situation is still the same. The national energy efficiency action plan has been delayed
7.	Development in EE in buildings was characterized by lowest common denominator	No change
8.	R&D not stimulated by challenging demands and allocation of resources	No change
9.	Stimulus for EE weak (inefficient incentives)	Status quo remains, except a few programs, for example the EE Chillers subsidy is enforced
10.	Difficult to find and get financing for EE projects in buildings	Has improved a bit but banks are only willing to finance established players. Local banks still require large collaterals and have yet to fully appreciate the cash flow generated by savings.

2.5 Main Stakeholders

The MTR team met with all key stakeholders with the aim of getting their feedback and comments in regard to project achievements and project usefulness. The list of institutions and other organizations met is provided at Table 6.

In regard to the BSEEP, all stakeholders highlighted the relevance of the project but nearly all pointed out the following:

- Lack of project leadership, management and engagement skills
- Poor planning of resources staffing
- Lengthy recruitment modality/process and too high expectations on the qualification and experience of candidates
- Lack of coordination among government authorities in regard to EE implementation

In our view, the project needs to engage stakeholders in a more active manner, including other key government agencies as well as industrial associations and the private sectors. The BSEEP will benefit from the active involvement of key partners, not only as ''observers'', as has been the case until now.

Table 6 List of Stakeholders

Stakeholders	Description	Involvement
CAST JKR (*)	Cawangan Alam Sekitar dan Kecekapan Tenaga/ Environment and Energy Division Branch of JKR	Key player Responsible for managing and implementing the BSEEP
JKR CKM and CKE	Electrical and Mechanical JKR Branch	Key player in the field of EE but not actively involved until now. The MTR team recommends to establish a close collaboration with that department for the purpose of demonstration projects
EPU (*)	Economic Planning Unit/UNDP Focal Point	Relationship with the UNDP CO
MAESCO	Malaysian Association of ESCOs	Key Player in the field of ESCO development. Not yet involved.
MGTC	Malaysian Green Technology Corporation	Key Player in regard to EE technologies. Until now, the MGTC has not been actively involved. The MTR recommends a strong collaboration with the MGTC especially in regard to the development and management of the national energy monitoring system in the building sector. *Must be NSC* member in the future.*
KPKT (*)	Kementerian Perumahan dan Kerajaan Tempatan / Ministry of Housing and Local Government	The KPKT is responsible for developing and updating some EE standards (e.g.: MS 1525). KPKT would like to establish a strong collaboration with the BSEEP especially in regard to MS-1525 training for inspectors.
KeTTHA (*)	Ministry of Energy, Green Technology and Water	The key player in the energy sector but not intensively involved up to now. In the KeTTHA's view, the BSEEP should be an important partner for rolling out the new EE National Action Plan.

EC	Energy Commission	EC was not intensively involved until now. The EC intends to significantly strengthen its collaboration with the BSEEP mainly for developing the ESCO-EPC business model in the public and private sector. *Must be NSC* member in the future.*
SEDA	Sustainable Energy Development Authority	SEDA should be a priority partner to implement a demonstration project in the hospital sector.

(*) National Steering Committee

Other stakeholders the MTR team did not meet with because of time constraints:

NRE	Ministry of Natural Resource and Environment/GEF Focal Point (the GEF focal point officer attended the final MTR presentation meeting on Oct. 17)
CIDB	Construction Industry Development Board
MGBC	Malaysia Green Building Confederation
PAM	Pertubuhan Akitek Malaysia/ Malaysian Institute of Architects
PEMANDU	Performance Management and Delivery Unit
REHDA	Real Estate and Housing Developer Association
SIRIM	Standards and Industrial Research Institute of Malaysia
MOF	Ministry of Finance
MITI	Ministry of International Trade and Industry
MIDA	Malaysia Investment Development Authority

2.6 Expected Results

As a direct result of the project implementation and post-project impact, the cumulative energy savings[5] are estimated at 2,078 GWh within the project timeframe and at 17,608 GWh for the post-project period (+10 years). These energy savings are expected to result in a cumulative emission reduction of 1 435 ktons within the project timeframe and in 12,044.4 ktons over the post-project time horizon at the end of 2025. If the recommendations are implemented, the BSEEP can be on target in regard to energy savings and GHG emissions reduction.

This quantitative expected result is perhaps achievable if demonstration projects are all implemented. In accordance with the new demonstration strategy and modality, the BSEEP will be in a better position to be on target in that regard. By being involved as co-investor and by intensively supporting the ESCO business model and EPC modality, the BSEEP can significantly catalyze the EE market through EE applications and EE management mainly in the public and private sector.

On the other hand, overall results are related to the outcomes as described in the LFA (as per the Prodoc): The new proposed targets and assumptions used are in the annex.

- Clear and effective monitoring system: such a result is achievable if the BSEEP intensively focuses its actions under Component 1 to advance and implement the National Monitoring System in the building sector. As a result, the BSEEP will significantly impact on the BERM, MEERB and feed data to improve and update the BEI.
- Implementation of, and compliance to, favorable policies that encourage the application of

5 Prodoc paragraph 112, page 128.

EE technologies and practices in the country's building sector: most importantly, supporting the MHLG (KPKT) as an extension to the implementation of the updated MS-1525 standard through a capacity building activity mainly at the local level.

- Availability of financial and institutional support for EE applications initiatives: The title of that outcome is questionable. This is understandable however MTR evaluators are in view that besides providing assistance to the financial institutions as in the current BSEEP activities, it is also expected the BSEEP supports the operational part that can lead towards the increasing support for EE financing in the context of Malaysia's building. It is hereby suggested that BSEEP supports the EPC modality which works based on the performance guaranteed modality and has been identified by MEGTW in maintaining government buildings. Financial institutions are at the receiving side and are governed by the standard financing/loan practice. Any capacity building for financial institutions will continue under this component. In conclusion, it basically means that the component shall now focus primarily on the EPC development. The MTR team strongly recommends focusing Component 3 on an intensive support to the Energy Commission, which has been assigned by the Ministry of Energy, Green Technology and Water (Decree 2013) as the authority for developing EE projects in line with the EPC modality (ESCO) in the public sector.
- Enhanced awareness of the government, public/private and the building sector on EE building technology applications: The preparation of at least one additional EE Technical Guideline related to Active EE Design Features. The first Technical Guideline issued in July 2013 was related to Passive EE Design Features. In addition, Component 4 should be more intensively focused on coordinating and arranging numerous training deliveries and workshops related to (i) MS-1525 EE Standard; (ii) ESCO/EPC Modality and EE project Financial Analysis; (iii) awareness and capacity building for financial institutions; (iv) Technical Guidelines for Passive and Active EE Building Design; (v) preparation and dissemination of case studies, etc.

- Improved confidence in the feasibility, performance, energy, environmental and economic benefits of EE building technology applications: the aim of Project Component 5 should be to provide decision makers with an evidence-based demonstration of the attractiveness of EE investments in the building sector through: (i) setting up an operational and reliable Integrated Monitoring Technology (IMT). IMT refers here means providing real time data monitoring system (via web-based internet protocol) as part of demonstration project. It is anticipated that demonstration of energy consumption monitoring technology and data logging systems for 20 to 30 number of buildings in quantity (to be validated) as representative of various types of buildings (public and private). This includes, among other things, smart meters and data gathering/logging equipment (distance reading). The cost of EE investment shall remain with the hosts / building owners but the IMT equipment (hardware and software) shall come from BSEEP as part of the monitoring activities. BSEEP team will then be able to monitor and provide substantial analysis for data monitoring and effective policy formulation. The IMT is for the purpose of the implementation of the National Monitoring System; (ii) demonstrating the cost effectiveness of a few EE measures (equipment-based) in 10 public and private buildings, including one or two hospitals; and (iii) demonstrating the impact of the implementation of best practices in energy management.

Many KPIs under Components 1 to 5 must be revised with the aim of making expected results more realistic taking into consideration the project timeframe and the responsiveness of the EE market. See Appendix 1. The KPIs related to GHG emissions reduction remains unchanged as well as the project objectives.

Section 3 Findings and Rating

3.1 Progress towards Results - Rating

The project started in January 2011 and is expected to be completed by December 2015. From the project monitoring reports and interviews with key stakeholders and project beneficiaries, one can conclude that the project performance is not impressive.

The **HIGHLY UNSATISFACORY** rating testifies of the weakness of the Project Design and the slow progress of the project as a whole. In practice, Components 4 and 5 only were active in some sub-activities. On the 37 sub-activities encompassed in the Planning Matrix, only 2 are completed and 6 are in progress. Others (29) are not yet started up or have just been initiated. See Table 8 below.

3.1.1 Progress toward Targets

Table 7 Progress towards Targets

Description	Key Indicators	Status and Achievements
OUTCOME 1: Clear and effective monitoring system		
No Activity completed or in progress No disbursement		**Unsatisfactory**
OUTCOME 2: Implementation of, and compliance to, favorable policies that encourage the application of EE technologies and practices in the country's building sector		
1 policy paper drafted in under sub-activity 2.1.1 No disbursement		**Unsatisfactory**
OUTCOME 3: Availability of financial and institutional support for initiatives on EE applications		
Activity 3.3 completed by NPM Activity 3.2 in progress No disbursement		**Unsatisfactory**
OUTCOME 4: Information and Awareness Enhancement		
Output 4.1: Tools for enhancing the skills and experience of local building practitioners for the design of energy efficiency projects in buildings		
Activity 4.1.1: Detailed Study on the Current Building Designs and EE Building Applications	Completed study on best practices in the application of EE technologies and techniques in the design, construction and operation of buildings by Year 2011: **TARGET: 1**	**On target** **Satisfactory**
On Going		
Activity 4.1.2: Establishment of a Centralized Building Energy Efficiency Database System (CBEED)	• A fully established and operational Centralized Building Energy Efficiency Database System (CBEED) by Year 2011: **TARGET 1: WORK IN PROGRESS** • No. of database-keepers (national and international) linked and/or contributing to the CBEED by EOP: **TARGET: 10** • No. of EE information offices (EIOs) operating each year starting Year 2011: **TARGET 10** • % of overall EIO customers each year that are satisfied with the EIO services starting Year 2011: **TARGET 70 % at least**	**Ongoing** **Satisfactory**
Activity 4.1.3: Establishment of a Comprehensive Guidebook on EE Building Design	• Government (JKR) - endorsed Guidebook on EE Building Design officially launched by Year 2012: **TARGET: 1** • % of building practitioners each year that are satisfied with using the guidebook starting Year 2012: **TARGET: 70 % at least** • No. of building projects that were designed (of at least 70%) based on the guidebook by EOP: - New Buildings: **TARGET 39** - Retrofitted Buildings: **TARGET 326**	**Ongoing** Passive Guidelines Completed. **Satisfactory**
OUTCOME 5: Building EE Demonstrations		

Output 5.1: Completed demonstration projects showcasing successful applications of building EE technologies, techniques and practices.

Description	Key Indicators	Status and Achievements
Activity 5.1.1: Demonstration of EE Building and EE Building Technology Applications	• A set of criteria ready to be used for selecting demonstration projects by Year 2010: • No. of detailed technical and financial feasibility studies conducted for demonstration site selection by Year 2011: **TARGET 30** • No. of finalized and approved demonstration project designs (engineering & construction) by	**Ongoing** 8 Projects identified and reviewed but NSC has yet to approve and the BSEEP team is currently finalizing the list. **Unsatisfactory**

	Year 2011 : **8 identified but NSC's approval has yet to be granted as the projects can keep up with BSEEP timeline.** • No. of financed demonstration projects confirmed and approved for implementation each year starting Year 2011: **TARGET 10**	

3.1.2 Implementation Progress

The significant output to date is mainly contributed by Component 4 and to a lesser extent Component 5 although there is a lack in terms of the design of that component. The overall project implementation is found to be significantly behind schedule.

Table 8 Project Component-based Progress

Outcomes	Achievements
Component 1 Institutional Capacity Development	Nothing done No result towards planned 5 sub-activities No Component Manager Budget provision not used: no disbursement.
Component 2 Policy Development & Regulatory Frameworks	1 sub-activity partly completed (2.1.1: Policy paper) No result towards other planned 10 sub-activities No Component Manager Budget provision not used: no disbursement.
Component 3 EE Financing Capacity Improvements	Activity 3.3 completed by NPM Activity 3.2 in progress No result towards planned 5 sub-activities No Component Manager Budget provision not used: no disbursement.
Component 4 Information and Awareness Enhancement	On **11** activities: - 1 is completed (Study on Current Building Design and EE Building Applications) 3 in progress - **4 not yet started** - Only **26%** of the planned target budget for Yr 1-2 and 3has been disbursed
Component 5 Building EE Demonstrations	On **3** activities: - 1in progress (demo identification) **- 2 not yet started** - Only 12**%** of the planned target budget for Yr 1-2 and 3has been disbursed
Component 6 **M&E**	MTR carried out on October 2013 Budget (Atlas) not updated at the moment of the MTR. The account has yet to be reconciled.
Component 7 **Project Management**	NPD, NPD and Project Executive were involved at the time of the MTR. Budget disbursement 80% of the planned target budget for Yr 1-2 and 3

Table 9 below provides the overall component-based disbursements breakdown structure at the end of August 2013.
Appendix 3 provides details of component-based disbursements as per the Atlas system.

Table 9 Overall Component-based Disbursements

Disb. YEAR	COMP 1	COMP 2	COMP 3	COMP 4	COMP 5	COMP 6 (M&E)	COMP 7 (PMC)	TOTAL
2010	-	-	-	-	-	-	5 793,31	5 793,31
2011	0 $	0 $	0 $	455 $	1 116 $	0 $	121 711 $	123 282 $
2012	0 $	0 $	0 $	85 437 $	122 928 $	812 $	31 934 $	241 111 $
2013	0 $	0 $	0 $	164 125 $	4 648 $	0 $	44 204 $	212 977 $
TOTAL	**0 $**	**0 $**	**0 $**	**250 017 $**	**128 692 $**	**812 $**	**203 642 $**	**583 163 $**
% on planning	**0%**	**0%**	**0%**	**26%**	**12%**	**3%**	**80%**	**18%**

Planned Disbursements

Disb. YEAR	COMP 1	COMP 2	COMP 3	COMP 4	COMP 5	COMP 6 (M&E)	COMP 7 (PMC)	TOTAL
	-	-	-	-	-	-	5 793,31	5 793,31
2011	55 400	127 400 $	54 400 $	409 400 $	396 000 $	3 000 $	88 800 $	1 134 400 $
2012	131 400 $	83 900 $	166 900 $	371 900 $	336 000 $	3 000 $	76 800 $	1 169 900 $
2013	161 400 $	132 900 $	78 400 $	171 900 $	336 000 $	25 000 $	83 800 $	989 400 $
Total Yrs 1-2-3	348 200	344 200	299 700	953 200	1 068 000	31 000	255 193	3 299 493,31

Table 9 shows the drastic budget disbursement underperformance except in regards to Project Management (Component 7) which is nearly on target (80% of the planned budget for Yr 1-2 and 3). For details in regards to disbursements, see Appendix 3 (data from Atlas).This had a significant impact on PMC costs.

3.1.3 Project Design – Impact on Progress

The lacks of the Project Design were not appropriately addressed at the inception Stage, especially in regard to Component 3 (EE Financing) and Component 5 (EE Demonstration). See details below. On the other hand, it is important to mention that at the stage of the project design numerous stakeholder consultation activities, aside from the LFA workshop, were conducted in 2010 to discuss the issues and concerns regarding the application of EE technologies in the building sector. The LFA workshop resulted in proposed activities to be carried out under the BSEEP, including the project implementation and management arrangements. In spite of valuable efforts and consultations during the formulation stage, the shortcomings were not realized appropriately until the MTR period.

Based on the desk reviews, the Project Design phase was carried out in the absence of any PPG; based on the PIF of January 2008, the UNDP CO proceeded with the Project Design on its own. The Project Design includes an appropriate framework and encompasses the relevant basic (or standard) key components as is the case for many similar projects in the building sector. The weaknesses are more related to the design of activities rather than the project structure as a whole. See details below

This is especially true for Component 1 (Institutional Capacity Development), Component 3 (EE Financing) and Component 5 (EE Demonstration). These components account for nearly 50% of the GEF contribution.

Component 1 encompasses 4 activities related to energy management to a national EE monitoring, but the project did not support the country in implementing a comprehensive country wide monitoring of the energy consumption monitoring system. MTR evaluators are in view that, while the 4 activities are important, the components do not address a consolidated approach of all the outputs. The approach undertaken by the activity is undertaken separately (as nearly each player in the building sector has its own system) rather than advancing the

development of an integrated and reliable monitoring system. MTR evaluators found that this linkage to the greater national data collection (with the ability of comparing/benchmarking) to be missing. To be efficient, an Energy Management System must rely on a reliable integrated data gathering/logging system with the aim of helping each energy manager to compare his or her building's energy consumption patterns with the energy of other buildings or other similar energy used in the building sector. That is the weakness of Component 1.

Component 3 is a very important component. The total budget provision for Component 3 is USD 502,000 and only USD 28,000 is granted for the development of an EE investment business model. Most of the budget provision (52%) of Component 3 is allocated to Activity 3.1 entitled ''Streamlining Process for Financing Applications''. A provision of USD 260 000 is granted for dealing with procedures related to financial incentives made available by the Government of Malaysia. Mid-term reviewers are in view that the activities proposed may seem to be irrelevant under the current situation. For instance, under component 3, BSEEP anticipates that the activities proposed will encourage financial institutions to be supportive in financing EE building (to the developers or the ESCOs) however it does not address clearly methods of engagement with the financial institutions. It is not clear how the ESCOs engagement's is to be laid out too. The key problem that lack of financing for EE still exists is the relatively cheap energy prices which discourage developers and owners to embark on EE. MTR reviewers are in view that for Malaysia's situation, attention shall be given more to promoting wide spread instruments for EE financing such as the Energy Performance Contracting (EPC) to be undertaken by ESCOs. Activities under BSEEP show an extremely difficult project targets to be achieved. The design of this component must be revised to focus on current needs, especially to advance the Energy Performance Contract modality and ESCOs' capacity in particular in regard to bankable documents and project financial analysis and cash flow from energy savings.

The last weakness, but not the least, is related to Component 5 (Demonstration). Perhaps at the time of the PIF (2008). EE technologies were not well-known in Malaysia. That is the only reason that the Project Design focuses on the demonstration of EE technologies. In 2013, all EE practitioners (architects, engineers and building specialists) that the MTR team met are aware of the EE technologies available in the building sector and most of them are technically very capable. The current need for demonstration is nowadays more related to the cost effectiveness (financial impact), reliable monitoring, data analysis (data loggers, distance reading, smart metering systems) and reliability (long-lasting) of EE measures rather than to the introduction of new EE technologies. It is best that EE technologies implemented in the building sector are proven technologies, innovative and rarely cutting-edge technologies. Proven technology such as the efficiency of latest chiller is well known and can be seen as a waste of effort and time. The most relevant purpose of this activity should be to demonstrate the cost effectiveness of the EE measures implemented as per the MS-1525 Standard for instance.

As a result of the project design lack related to Components 1 and 3, these activities did not take off. Indeed, by reinforcing the separate approach of data gathering and energy consumption monitoring, the project could not have the expected national impact on other databases and information management systems and vice-versa. In regards to Component 3, the development of the EE investment business model was very lightly considered. As recommended, activities must be refocused on the ESCO business model, which is now a priority in Malaysia. Finally, the lack in the design of Component 5 which focused only on TA did not provide the BSEEP with the chance to become an active partner in demo projects. That is mainly why this component did not

take off. Recommendation 4 refocuses Component 5 equally on demo co-financing and TA and the whole budget must be increased accordingly.

3.2 Adaptive Management

As per the agreed (Prodoc) management arrangement, the NSC was set up by and includes UNDP-Malaysia, JKR, MEGTW, MHLG, MNRE, as required by the Prodoc. Again the BSEEP has not been very adaptive because the project did not invite the (Sustainable Energy Development Authority (SEDA)established in 2012 to become a NSC member and even the MGTC that has been a key player in the field of EE for many years. SEDA has implemented programme related to EE such as Low Carbon Buildings guidelines and monitoring of the SAVE recipient projects related to the purchase of energy efficient chillers, with almost 100 buildings have been periodically monitored. The input of these new members would have perhaps been helpful to the project. Also, the minimum target of one meeting a year has not been respected.

The Project Review Committee (PRC) has been set up but the evaluation team cannot conclude about the relevance or helpfulness of such a committee taking into consideration the poor performance of the BSEEP until now. The MTR team would like to recall the role of that committee: '' …*oversee the technical and physical project implementation consistent with the project implementation program''*. The way the PRC played its role is rather questionable. The MTR noted however that the lagging issue has been brought up by UNDP with the aim of keeping the pressure on the JKR to undertake necessary actions. In addition, only three meetings were arranged over the last three years.

In regard to project implementation, the BSEEP/JKR did not demonstrate a strong adaptive management approach in terms of timely recruitment, re-orienting the project and management strategies to adapt to the changing conditions and realities so as to achieve the targets in a timely and systematic way.

3.2.1 Work Planning

The Prodoc (Project Implementation Agreement) clearly mentions ''… *All M&E functions will be carried out in line with standard UNDP and UNDP-GEF procedures. UNDP Malaysia will also provide country office support for all the activities of the project as agreed with the implementation partner of Malaysia. Among the activities will include organizing project reviews, approving annual implementation work plans and budget revisions, monitoring progress, identifying problems, suggesting actions to improve project performance, facilitating timely delivery of project inputs, and provide linkages to the other sub-regional, Asia-Pacific regional and global initiatives*.''

The Annual Work Plan drafted by the BSEEP is a key management and monitoring tool. The MTR team looked at three AWPs (2011,2012 and 2013).

The quality of the AWPs is quite questionable and almost unacceptable. The AWP, which was poorly prepared by the BSEEP project team, was perhaps not properly scrutinized by UNDP. To a certain extent, one can say that the poor quality of the AWPs can explain the low performance of project.

In accordance with AWP 2011, the BSEEP intended to launch only one sub-activity per component (1.1/2.1/3.1/4.1 and 5.1). No narrative section was included in that year's AWP.
In accordance with the narrative section of AWP 2012, the BSEEP planned to deal with 20 sub-activities in Components 1 to 5. In the Implementation Table attached to the narrative section, the BSEEP planned to deal with only 2 sub-activities.
AWP 2013 intended to deal with 20 sub-activities but in the Implementation Table attached to the narrative section, only 5 sub-activities were planned.

Although a few sub-activities were identified in the Implementation Tables, the AWPs did not specify the quarter when the sub-activities would produce results (a generic reference to Q4), what actions would be undertaken and any reference to KPIs (a basic result-based management requirement).

In other words, the AWPs were not appropriate for the implementation of activities and sub-activities. The MTR team must however mention that two vacant key positions did not facilitate the preparation of quality AWPs 2012 and 2013.

To this end, the MTR clearly stresses Recommendation # 9 but this is not in the scope of the MTR to provide AWP templates in regard to standard reports. The UNDP CO is perfectly in a position to provide these guidelines.

3.2.2 Project Financing and Co-financing

Co-financing (in-kind and in-cash) from the Government was estimated at: USD 19,405,326; mainly related to Component 5 (Demo) for UDS 16,530,026
Co-financing (in-kind and in-cash) from the private sector was estimated at: USD 5,230,556 all related to Component 5 (Demo).

Based on data available at the end of September 2013, the total co-financing from the government side is USD 305 000 and nothing has been confirmed by the private side. This level of co-financing (1.2% of the whole target) is very low.

The low level of co-financing is a direct result of the underperformance of Project Component 5 (Demo). Since there was no demo projects implemented until recently, that co-financing component is zero. The MTR team is confident that, to an extent, the co-financing will be achieved by the end of 2016 because of the recommended improvements to Component 5. At this point in time, the evaluators recommend keeping the same targets and re-evaluating the situation at the end of 2014 in the Annual Progress Report.

NOTE: See Table 7 Progress towards Targets for more details

Table 10 Co-financing at mid-term

Contributor	Classification	Type	Amount-Commitment (US$)	Achieved at mid-term (USD)	Purpose
Public Works Department (JKR) Other Gov't Agency: KeTTHA, SEDA MGTC, ST EPU, MITI, MIDA, NRE, MHLG, MOF		Cash	15,947,222		
		In-kind	3,458,104	305,000 (9%)	Salaries and Office Space
Putra Perdana	Private Sector	Cash	1,666,667		
Putra Perdana	Private Sector	In-kind	100,000		
Sime Darby	Private Sector	Cash	3,263,889		
Sime Darby	Private Sector	In-kind	200,000		
		Sub-Total Private	**24,635,882**		**1,2%**

NOTE: Based on the currency rate of 3,.08 Ringgits for 1 USD on December 31, 2010

3.2.3 Project Monitoring and Reporting

As a rule, the QPRs and APRs must make reference to annual targets (targets are related to KPIs to be achieved by the EOP) and expected results. Since the AWPs did not provide annual targets the relevance of the QPRs or APRs was compromised. AWP 2012 and mid-year AWP 2013 did not make reference to any sub-activities, targets or KPIs. The situation is similar to the preparation of the AWP, which was poorly drafted by the project team. Seemingly the UNDP did not properly scrutinize it, which led to inaccurate reporting. For instance for AWP2013 (which was prepared in Dec 2012), BSEEP planned to literally address all activities and belived that they will be able to achieve its yearly targets. However, BSEEP did not prepare it realistically and did not address the more urgent project concerns (i.e. filling up the posts) in the AWP, which made the annual plan too ideal to be followed. A check with UNDP CO showed UNDP CO did scrutinize but in many occasion being optimist of the given plan and agreed with the suggestions.

In other words, as they were prepared, the APRs and QPRs could only be very marginally useful to the UNDP CO and the NSC to proceed with quality and reliable project progress monitoring.

To this end, the MTR team stresses Recommendation # 9 but this is not in the scope of the MTR to provide M&E templates in regard to standard reports. The UNDP CO is perfectly in a position to provide these guidelines.

3.2.4 Risk Management

Table 13 of the Prodoc is a standard outline of risks and mitigation measures. The Prodoc dealt with six institutional risks:

- Political support for EE

- Unstable economic growth in Malaysia
- Inaccuracy of data submitted in CBEED and MEERB programme
- Commitment from state and local authorities
- Lack of support from building sector professionals
- Poor performance of demonstrated technologies, non-achievement of projected energy savings and increased investment or maintenance costs for energy efficient technologies.

Risks were rated LOW. In the opinion of the MTR team, these risks did not impact on the project's poor performance. The MTR team does not need to update the risk matrix because that matrix is quite general and is still relevant because of its generality and it is not our task to draw up a brand new risk matrix.

At this point in time, the major risk is related to team members. If the BSEEP is not in a position to attract capable full-time team members and a part-time CTA, to speed up the selection procedure and to get the approval of the key recommendations, the risk of facing the same evaluation rating at the end of the project timeframe is VERY HIGH.

Again, such a risk could not be taken into consideration at the time of the project design because of the outstanding reputation of the JKR.

If the partners agree with most (hopefully all) of our recommendations, the remaining risk will be related to the capacity of the BSEEP to attract the best candidates as Manager and CTA.

To mitigate this risk, the MTR team recommends to select two full-time component managers andtwo part-time component managers and urgently involve a part-time CTA. These team members should be contracted by the UNDP CO in line with the UNDP CO salary cost norms because the UNDP's cost norms are seemingly more attractive than the JKR's. The highest priority must be given FIRST OF ALL to the CTA position and to the Component 5 position. The CTA will support the NPM in preparing the AWP 2014 and in the selection of Component Managers . The individuals should be contacted by the end of the year.

3.3 Management Arrangements and Deviations

3.3.1 Management Arrangements

The Mid-Term Evaluation indicates that the Public Works Department (Jabatan Kerja Raya,JKR) as the implementing partner has not adequately fulfilled the National Implementation Modality (NIM) as agreed in the signed Project Document. This is especially critical in regard to personnel recruitment and counterpart staff involvement. The implementing partner was expected to manage and internalize the programme with full commitment. Based on meetings and desk reviews, the MTR team must conclude that the JKR Environment and Energy Branch did not manage to commit the needed technical counterparts. The MTR team also noticed that, although the JKR Electrical and Mechanical Branch is the most capable branch to deal with EE measures in the building sector, in practice they were not involved, except as ''observers'' and dialogue partners. The MTR Report encompasses a recommendation to this end (#4).

Although the previous comments related to management shortfalls, the BSEEP set up the NSC

and the PRC as required by the Project Document but the NSC met only three times despite the very questionable project performance. Let's recall the role of the NSC is ''… *The NSC will play the role of an advisory committee and providing an overall direction to the project team… and reviewing of annual progress reports for necessary guidance on the effectiveness of BSEEP implementation*''. The MTR team met with the NSC Chairman and he said that he had already taken action. As a result, the NSC assigned a new NPD on October 21, 2013.

The BSEEP Organization Chart is appropriate but the JKR did not fulfil the agreed management arrangement accordingly. At the stage of the MTR, only 3 positions on 9 were filled (NPD, NPM and National Project Executive). The crucial positions of NPM and CTA were vacant for 1.5 year. The CTA position is still vacant and the new NPM was only recently hired in May 2013. As Component Manager cum Consultant for C4 has just completed his assignment, at the time of the MTR, no Component Managers were involved.

Another serious weakness of the Project Design Document is related to the involvement of Component Managers . Although these positions were figuring in the project organization chart, the Prodoc only required filling one Component Manager position. MTR Evaluators did understand that the set up was agreeable by the team, UNDP and GEF, it was never mention explicitly that the Component Manager must exist clearly in the organigram. The MTR team drafted a very clear recommendation (#5) in this regard that such positions are crucial for the component's progress.

3.3.2 Deviations

In regard to salaries or fees paid by the project, the MTR team noticed a deviation from NEX/NIM requirements. In fact, the project agreed to pay a small fee to two JKR staff members to deal with some administrative/financial tasks related to the project, in interim measures, while waiting for the permanent positions to arrive. Although the MTR team recognizes the difficult situation resulting from a drastic lack of project team members and the UNDP CO explained the rationale behind this approach. The MTR team is nevertheless of the opinion that the UNDP should not have tolerated such a situation as it is against normal practices. This problem was solved during the course of the MTR MTR as the project executive and the financial assistant have been successfully recruited by UNDP. At a glance, the MTR team did not notice any other deviation to administrative procedures.

In the opinion of the MTR team, an important deviation is in the area of project management. The deviation of the role of the NPD regarding the tasks of the NPM is a key reason for the project's underperformance. The NPD served as NPM for too long and was in view that the NPM was not an important position so long there was a CTA (but the CTA himself also resigned halfway) .

What should have been a convenient short-term replacement lasted too long. From January 2012 up to May 2013, that is to say 15 months, the project had no Project Manager, no CTA (still a vacant position) and no Component Managers. The MTR team is serious about this: despite the willingness of the NPD, he should not have been assigned for such a long period of time as Project Manager, it was not his role and surely not his task!

3.3.3 Overall Project Management

In the absence of key team members (CTA, NPM and Component Managers) the National Project Director (NPD) tried to manage the whole project but it was quite impossible for him to take up the challenge. From November 2011 to May 2013, the BSEEP involved only one full-time team member. The expectation of the NPD that the Chief Technical Advisor (CTA) and himself would assume all the roles has proven to be unrealistic and explains why the BSEEP did not take off.

The overall project management has failed to timely address the identified issues and roll out the needed adaptive management. A t the time of the MTR, there were only two full-time team members involved (NPM and Project Executive) and any counterpart staff from JKR available in the project office. In the absence of capable in-house technical experts, the project did not engage (or outsource) external technical assistance: at the time of the MTR, the BSEEP involved the NPM and the Project Executive on a full-time basis. Both are qualified for the job. The MTR team is not in a position to provide evidence-based reasons to explain the incapacity of the BSEEP to recruit team members. The MTR cannot rely on ''hearsay'' to explain the situation.

Finally it is important to mention that issues surrounding the project management have been raised by UNDP but follow-up/corrective actions have been often delayed and perhaps ignored.

3.3.4 Quality of Implementing Partners

For the time being, the project failed in terms of performance because of the JKR's poor capacity to address issues in a timely way, its lack of drivenness and leadership as well as the general loose adaptive management approach taking into consideration the weaknesses in terms of project design. The JKR's questionable way of implementing the project or its interest in doing so was perhaps not conceivable at the time of the project design. Although the JKR is a very powerful and reputable ministry in Malaysia, its performance is very questionable. However, in the view of evaluators, the poor performance of the BSEEP is probably more related to an individual management issue rather than to the actual proven and extended capacity of the JKR.

Ministry managers and decision makers (KeTTHA, MHLG, JRK), the technical staff of a few agencies or Units (MGTC, EPU, EC) and the private sector as well have all demonstrated (at first glance) their capacity and eagerness to embark on the BSEEP's ''new style'' and support the upcoming challenge in accordance with the MTR recommendations. If the BSEEP is in a position to mobilize key partners, involve capable team members and a CTA to keep the momentum over the upcoming 3 years, the project could have a successful ending rather than an untimely closing.

3.3.5 Quality of Support Provided by the UNDP

In line with the Prodoc and in accordance with the NIM/NEX agreement, '*…UNDP-Malaysia will be responsible for monitoring and evaluation (M&E), including organizing project reviews, and endorsing approvals of annual implementation work plans and budget revisions, monitoring progress after approval by the NSC. All M&E functions will be carried out in line with standard*

UNDP and UNDP-GEF procedures. UNDP-Malaysia will provide linkages to the other sub-regional, Asia-Pacific regional and global initiatives and will also provide country office support for all the activities of the project as agreed with the implementation partner of Malaysia.

The UNDP CO did a good job at the time of the Project Design and project start-up, that is to say in 2010 and 2011. On the other hand, in early 2012, based on the poor quality of the AWPs and Progress Reports, the project's underperformance was easily predictable.

In the opinion of the MTR team, although it is noted that the UNDP CO has been continuously reminding and complaining to the JKR, the UNDP CO should have kept more intensive pressure on the JKR to proceed in the right way and at the right time. Again, the MTR recognizes the efforts rolled out by the UNDP CO to this end. Although the JKR is a very powerful and capable ministry and the UNDP Project Officer is very capable, the situation became worse and worse from January 2012 until now (Sept. 2013). Because of the MTR team's short-term assignment and very brief site presence, the evaluators are not in a position to compressively shed light on this unfortunate situation. Section 4 of the MTR Report draws a few key lessons learnt that can be useful in the future.

Section 4 Lessons Learnt - Recommendations and Conclusion

Many Lessons Must be Drawn:

Timely Actions: Despite the UNDP's constant reminders and even with the lagging issues highlighted and discussed in the Project Review Committee (PRC) meetings and the National Steering Committee (NSC) meetings, the JKR, as the Implementing Partner, has not been able to implement the project in a timely way and according to the agreed National Implementation Modality (NIM). This led UNDP CO to commission the Rapid Evaluation exercise for EPU in May 2013 to seek immediate solutions to the long standing problems. The Government of Malaysia along with UNDP CO should have taken action earlier to improve the project's implementation, reporting and project management. There is no acceptable reason why the project did not replace the previous Project Manager when she left in 2012 (which meant no Project Manager for a period of 1.5 year) although JKR has confirmed that one of their senior staff members would resume the responsibility effective immediately, which did not materialize, and the same goes for Component Coordinators and the CTA.

It is important to mention that the UNDP GEF has repeatedly emphasized and advised the IP on recruiting the NPM as soon as the previous one resigned, not to mention the full team of Component Coordinators including during the PRC 2012 and PIRs 2012 and 2013.

Weaknesses of the Project Design The weaknesses were not appropriately addressed at the Inception Stage, especially in regard to Component 3 (EE Financing) and Component 5 (EE Demonstration). On the other hand, it is important to mention that at the stage of the Project Design, numerous stakeholder consultation activities, aside from the LFA workshop, were conducted in 2010 to discuss the issues and concerns regarding the application of EE technologies in the building sector. The LFA workshop resulted in proposed activities to be carried out under the BSEEP, including the project implementation and management arrangements. In spite of valuable efforts and consultations, the shortcomings highlighted at the stage of the MTR were not pointed out. See details at Paragraph 3.1.1

Mobilization of Capable Team Members: A project, especially a full-sized project, cannot be carried out and objectives appropriately achieved without the full involvement of key dedicated team members. A project cannot reach its targets if nobody is responsible for implementing activities and sub-activities. This full-sized project is adequately budget provisioned to hire capable team members

The NIM (or NEX) protocol is not a burden: The implementation protocol should not disable the efficiency of the decision-making process and efficient project management. If there are some outstanding situations when problems occur, the Implementing Partner should address the issues and request the UNDP's support. It was noted that UNDP has provided recruitment for the National Project Manager, Finance Assistant, Project Executive and the Chief Technical Advisor accordingly. On the other hand, the NIM procedure is not a burden to justify the situation. The MTR team met with most of the key stakeholders and JKR high level managers. All were aware of the project's lack of performance. To a certain extent, those stakeholders kept their distance and did not intensively support the project perhaps because of its questionable performance. As a result, nobody took action.

Evaluation Mission Main Findings

The primary main finding is related to the weaknesses of the Project Design, the lack of adaptive management, the IP's lack of leadership and drivenness, and the incapability to hire and involve key Component Managers.

It is easy to criticize the Project Design nearly 4 years later. The project design has an appropriate framework and encompasses the relevant basic key components as is the case for many similar projects in the building sector. The weaknesses are more related to the design of activities rather than to the project structure as a whole. Based on a draft design (PIF) in January 2008, the project started up three years after (January 2011) and did not fully comply with the context and needs at the time. See details in paragraph 3.1.1

The Inception Phase did not successfully address the weaknesses of the Project Design and because of the lack in terms of adaptive management, the project has been implemented basically as per the Prodoc. Finally, the project management team did not succeed in mobilizing capable team members. In other words, all ingredients were assembled to result in the current disappointing situation.

Table 7 provides details on the actual achievements at mid-term.

Recommendations

In this situation of underperformance, the mandatory MTR exercise can be very helpful if it focuses on a set of appropriate and realistic recommendations rather than only dealing with ratings and putting the blame on an individual or a specific organization for what has occurred in the past. When a project does not perform, as a rule the Implementing partner and even the UNDP CO often feel uncomfortable at the stage of MTR. The MTR team must point out that it was not the case in this particular situation and the implementation partners (UNDP CO and JKR)

were willing and very keen to restart the project in another way and implement key recommendations. This is a very good indicator in regard to proceeding further and hopefully securing the successful achievement of the project through results and impacts as per expectations and toward objectives.

Recommendations are broken down in three categories:

The MTR team proposes 10 recommendations:

- 1 recommendation on Budget and Planning Matrix/Logical Framework
- 4 recommendations dealing with component-based improvements
- 5 recommendations dealing with management issues, organizational arrangements and budget adjustments.

Table 11 – Recommendations vs Shortcomings and Impacts

Recommendation	Target shortcomings	Impacts
Recommendation 1	Project design and insufficient budget provision for Component 5 (Demo)	- KPI Adjustment and update - refocus of activities under Components 1,3 and 5
Recommendations 2-3-4-5	Component-based improvements	- Refocus the key Component 1 outputs to implement the national energy consumption information system in support to existing databases and IMS - Refocus Component 3 on Improvements towards the ESCO business model development. - Refocus Component 5 on co-financing mechanism (equipment procurement and TA) of demo projects and monitoring systems. - Practical Involvement of additional technical partners
Recommendations 6-7-8-9-10	Management issues and organizational arrangements	- Vacant position are filled in Project duration extended by 1 year - Better M&E, planning and progress reporting

In the opinion of the MTR team, these recommendations are all very important and none should be considered as a secondary recommendation. All the recommendations below will be proposed to the NSC meetings for endorsement.

Recommendation 1:
Planning Matrix[6] and Budgeting

In Appendix 1, the MTR team proposes an improved Logical Framework/Planning Matrix and an adjustment to some key performance indexes (KPIs) (or project targets) with the aim of making the targets realistic and hopefully achievable. Major adjustments are related to Components 1, 2 and 5.

The proposed new budget breakdown structure is presented in Appendix 2 in line with the revised Planning Matrix. The whole project framework and project objectives remain unchanged. Major adjustments to the Planning Matrix are related to Component 1 (Institutional Capacity Development), Component 3 (EE Financing) and Component 5 (Building EE Demonstration). Table 4 is a summary of the revised budget as opposed to the current approved budget (Prodoc). Table 4 encompasses the budget components related to M&E (Component 6) and Management (Component 7). Budget revisions in all components are related to international and local consultants as the project needs to allocate more for component 5 for purchasing of the monitoring equipment. he budget increase in Component 5 is allocated to procurement and co-financing in the public sector.
In the MTR, the increased budget provision of USD1 973 000 should be preferably roughly split as follows: 50% under TA and 50% under co-financing/procurement to advance demo projects mainly in the public sector. The rationale behind this recommendation is the following: the BSEEP cannot succeed with the demonstration component if it is not in a position to partly support some investment components pointed out in Recommendation 4. As a result, the MTR team and the NPM agreed to reduce the TA in Components 1 to 5 with the aim of making available a budget provision for EE investments.

Table 12 – Budget Revision

	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Total
Total budget	462 000,00	592 000,00	502 000,00	1 242 000,00	1 735 000,00	59 000,00	408 000,00	5 000 000,00
Revised budget	438 183,91	574 137,93	462 022,99	1 085 405,50	1 973 249,67	59 000,00	408 000,00	5 000 000,00
Available budget on Atlas	462 000,00	592 000,00	502 000,00	994 933,81	1 609 788,95	58 188,36	232 054,64	4 450 965,76
Adjustment	***-5%***	***-3%***	***-8%***	***-13%***	***14%***	***0%***	***0%***	***0%***

Recommendation 2:
Refocus the key of Component 1 outputs
The emphasis must be shifted as a priority to the development and roll-out of the National Energy Consumption Monitoring System and Data Analysis, that is to say an integrated Monitoring System (IMS) in the building sector. As per the Project Design, the BSEEP supported different information systems. The ongoing work under the Building Consumption Information System (BCIS) of the Malaysia Green Technology Corporation (MGTC) will be linked with support from BSEEP. BSEEP will then take this further up by establishing real-time data from demonstration projects. The BCIS (with IMS) will be the heart of the Central Building EE database (CBEED) which the project is pursuing. This recommendation relies on existing databases and information systems developed by different ministries with the aim of creating a national web-based IMS. The Integrated IMS should be

6 In the Project Document the Planning Matrix is entitled Logical Framework-Planning Matrix

designed by technical experts

Over the last 5 years, several key ministries and agencies developed their own energy consumption management systems and databases. MGTC with its BCIS system and SEDA is also coming up with net-based building data reporting system. This piecemeal approach should be replaced by the new National IMS (NIMS) and BSEEP intends to develop and implement. Discussions with SEDA and MGTC showed that this idea (where BSEEP as the facilitator) is possible. Other databases will feed data to the NIMS and distant reading equipment will be installed (Smart Metering) within demo projects The MTR team recommends to involve the MGTC to develop, implement and manage the NIMS.

Recommendation 3:
Put the emphasis of Component 3 EE Financial Mechanism Capacity Improvements on the ESCO business model

MTR evaluators recommend that the project establishes provision of intensive support to the ESCO business model and the development of the Energy Performance Contract modality. Such a recommendation is in line with the current needs. The MTR team is confident that such a refocusing activity is more appropriate in 2014 in terms of outputs. By decision (a directive letter by MEGTW on utilizing EPCs for government building on September 2013), the KeTTHA (Ministry of Energy, Green Technology & Water) stipulates that EE investments in the public sector should proceed according to the Energy Performance Contract (EPC) modality through the existing ESCO network in Malaysia. As explained, in meeting the objectives of this component, the project can not depend primarily on the financial institutions as they are mainly receiving part. Experience from the Green Technology Financing Scheme (GTFS) shows that the banks and financial institutions are generally supportive on financing RE and EE projects. However, constraints come from the quality of submission (in meeting the banks' requirement) and the methodology of applying which mainly are the issues of the submitters. Hence, by emphasizing on the performance modality, the risks undertaken of the projects will be linked the project's guaranteed return (and the capability of the applicants (the ESCOs)) and rather than fully relying on the EE projects to be financed which are not curtained in some way. Hence, The MTR team recommends to focus on Activity 3.5 (ESCO) with the aim of improving the capacity of ESCOs in the financial analysis of EE measures, the preparation of bankable documents and providing awareness activities to commercial banks on EE project financing in the public and private sector through the ESCO business model and EPC modality.

To this end, the BSEEP should select a CTA with outstanding experience in ESCO/EPC development.

Recommendation4:
Revise Component 5 budget to include purchase of monitoring systems and inclusion of best practice in energy management.
The aim of Project Component 5 should be to provide decision makers with an evidence-based demonstration of the impact and cost effectiveness of EE measures in the building sector. It is therefore recommended that BSEEP looks into provision of providing efficient monitoring systems to be included in the demonstration projects. As such, budget for Component 5 shall be revised and focuses into 3 parts mainly 1)continuing the originally intended objectives, 2) purchase of IMT equipment and 3) inclusion of best practices in energy management in buildings as one demonstration projects. 3 major demonstration activities:

- EE Investment Cost Effectiveness: These activities basically suggest BSEEP to continue completing the originally intended objectives which is to demonstratethe cost effectiveness of the selected EE measures in 10-12 public and privateuildings, including one or two hospitals where one or two of those projects should be implemented through the ESCO business model under the EPC modality. Case studies publication and other information materials should be prepared and disseminated.

- Integrated Monitoring Technology (IMT): IMT refers here means providing real time data monitoring system (via web-based internet protocol) as part of demonstration project. It is anticipated that demonstration of energy consumption monitoring technology and data logging systems to be about 20 to 30 in quantity (to be validated) as representative of various types of buildings (public and private). This includes, among other things, smart meters and data gathering/logging equipment (distance reading). The cost of EE investment shall remain with the hosts / building owners but the IMT equipment (hardware and software) shall come from BSEEP as part of the monitoring activities. BSEEP team will then be able to monitor and provide substantial analysis for data monitoring and effective policy formulation. The BSEEP should also support the development and implementation of analytical tools as well as a web-based information sharing system.
- Impact of Best Practices in Energy Management: Demonstration of the impact of the implementation of best practices and systematic energy management guidelines in target buildings where emphasis is given to include energy management in buildings.

  The BSEEP must consider a significant investment in equipment, rather than 10 k$ as planned in the Project Document and a budget provision should be dedicated to TA (local consultant) to achieve those 3 activities as planned. Let's recall that the budget provision for Component 5 is 1,735,000$ and at mid-term only 7% (128k$) of that budget provision has been spent. The recommended budget provision is now USD 1,973,249 to be split more or less equally between TA and procurement.

Recommendation 5:
Extend the network of technical partners

MTR evaluators were in view that at the current situation, many key stakeholders were not consulted and invited during key project decisions. As such, MTR evaluators recommend that the project extend the implementation partners' network (institutional arrangements) in a more practical way than previously. Such an involvement must be intensive and practical (not limited to dialogue or meetings only at the end of the outputs) especially in regard to Component 1 and Component 5.

Among key stakeholders to be included are:

- Other JKR departments (Mechanical/Electrical/Maintenance department) - Mechanical, Electrical and the Maintenance departments have many ongoing, planned and completed experience on EE hence, any synergy is expected. A joint pro-active demonstration project committee (DPC) or part of the Project Review Committee meeting must be set up with the aim of proceeding with project screening, project selection and

implementation.

- Company-based Experts (outsourcing) should manage to design and implement about 10 demo projects.
- Sustainable Energy Development Authority (SEDA) – SEDA has conducted many relevant building initiatives on EE (i.e. Low Carbon building guidelines and the monitoring of the SAVE's project), It is expected BSEEP to continue discussion on the relevant framework for joint cooperation. MGTC for the National Monitoring and Data Analysis System development and implementation especially related to BCIS development.

Other Recommendations

With the aim of enhancing the BSEEP leadership and strengthen project management capacity, the implementation performance and to make the project achievable, the MTR team recommends No 6 to 10 :

Recommendation 6:
Filling up the vacant positions

This is an urgent requirement to be quickly resolved by the end of the year with the selection and hiring of 4 Component Managers and suggested as follows:

- Component 1: to be undertaken by the full-time Component Manager cum Consultant;
- Component 2: to be undertaken by part-time Component Manager cum Consultant;
- Component 3: to be undertaken by jointly by part-time CTAand the full time Project Executive;
- Component 4: to be undertaken by the Part-time Component Manager cum consultant,
- Component 5: to be undertaken by a Full-time Component Manager cum Consultant.

Out of the positions above, the highest priority will be the Component 3 and Component 5 and followed by the Component 4. MTR evaluators recommend several positions to be in full time basis due to the urgency and comprehensive nature of the activities. The non-full time positions can be generally appointed on case by case basis.

NOTE: The team members for Components 1 and 5 must be full-time. They must be preferably contracted by the UNDP CO and paid (salary and advantages) based on UNDP CO regulations. The aim of such an approach is to attract the best candidates and shorten the selection procedure.

Recommendation 7:
Recruitment of the Chief Technical Advisor (CTA)

MTR evaluators recommend BSEEP to proceed with the selection and contracting procedure of a part-time international CTA to support the PM and Component Managers during 2014 and 2015 period. In addition, the CTA should be partly responsible for Component 3. The CTA position should be contracted by early December with the aim, among others, of providing input for the preparation of the AWP 2014.

Recommendation 8:
Project Duration Extension

The project should end in December 2016 rather than 2015 if the UNDP and the BSEEP are willing to proceed with the needed improvements. The duration extension is mainly required to deliver outputs related to Component 1 and Component 5.

The decision must be taken by the decision-makers (JKR/UNDP CO/GEF Focal Point/UNDP Focal Point) **by the end of November 2013** with the aim of establishing the right project time horizon for the NPM to prepare the AWP 2014.

Recommendation 9: Improvement to Progress and Planning Reports
MTR team recommend to proceed with a drastic improvement of the Quarterly and AnnualProgress Reports and the AWPs as well as activity budgeting follow-ups and reporting. It is noted that PIR is in compliance of the UNDP GEF requirement. Writing of the report shall be enhanced for quality reporting. This includes strict compliance in reporting with the UNDP Annual Project Report and the Annual Work Plan format. Refer to paragraphs 3.2.1 and 3.2.3 for further explanation on for the needed improvements.

Recommendation 10:
Timely scheduling of the NSC and PRC Meetings

BSEEP was not in compliance with the agreed schedule for the NSC and the PRC despite the various reminders by the UNDP CO. It is now suggested that the project to schedule and hold both meeting timely (NSC to be organized twice yearly and the PRC four times yearly). The National Steering Committee (NSC) must mainly provide guidance and direction to the project team at the strategic level and approve the AWPs. It is also expected that NSC to seriously review the project implementation arrangement and advice BSEEP team in adhering to the agreed project progress including budget utilization. The BSEEP should also invite the JKR relevant sections, MGTC, SEDA and Energy Commission to become involved as NSC members because they are key players in the field of EE and, more importantly, because in the future, the MGTC and EC will play a very active role in regards to the National Monitoring System (Component 1) and a few demonstration projects (Component 5) respectively. Based on this recommendation, the JKR CAST will be appropriately supported by capable key technical partners. To this end, Recommendation 5 highlights key activities where these technical partners should be actively involved.

Conclusion

In addition to the deficiencies pointed out in regard to the Project Design, in the MTR team's view, the root of the implementation problem lies with the absence of key project staff, which is a direct result of the lack of leadership, questionable management skills and inefficient engagement process and modality. For all these reasons and others mentioned, the project is rated HIGHLY UNSATISFACTORY. However the JKR should know that, as per the GEF's definition, HIGHLY UNSATISFACTORY means: '' The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits. '' The MTR team strongly believes that the project will not achieve its objectives within the remaining timeframe if the project is implemented as currently designed. Therefore, it is recommended that a strategic review of the project design, work plan, outputs and activities be conducted, their relevance explored and if required adjustments made in project targets and performance indicators. With the fast track implementation of the recommendations, the MTR team is confident that the project outcomes are still relevant. It is also recommended that the project is extended for 1 year.

Although the project failed to appropriately progress until now, the MTR team is confident that the new project team will take action to implement recommendations and proceed with the needed adjustments to the Logical Framework/Planning Matrix and KPIs with the aim of significantly improving the project performance towards objectives. The total budget provision still available is more than 4 million dollars, which is quite sufficient to achieve objectives over the upcoming 3 years (if the duration extension is approved).

In other words, the BSEEP will have a second chance to successfully perform towards the same objectives. In a certain sense, one can say that it is almost like the beginning of a new project, but not starting from scratch since Components 4 and 5 have achieved a few key results.

Annex 1. Revised Logical Framework/Planning Matrix

This is taken from the Project Planning Matrix BSEEP. The MTR team assumes that assumptions remain the same as in the Project Planning Matrix BSEEP.

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
GOAL: Reduced intensity of GHG emissions from the buildings sector	• Cumulative CO_2 emission reduction from the buildings sector by end-of-project (EOP, Year 2014), kton CO_2eq	0	1,421.3	• CBEED • BERM Program data • MEERB • PTM building-sector energy database	• GOM commitment to EE remains firm • Current economic growth at least remains constant • To include GBI/GreenRE/GreenPass/Penarafan Hijau building stock database
	• % reduction in GHG emissions from the buildings sector by EOP	0	7.2		
	• Average emission reduction in the buildings sector by EOP, kg/m2	0	5.3		
OBJECTIVE: Improved energy utilization efficiency in the buildings sector	• Cumulative energy savings from the buildings sector by EOP, GWh	0	2,078	• CBEED • BERM Program data • MEERB • PTM building-sector energy database • Annual reports from client departments, JKR, and other building project developers.	• PTM has been renamed MGTC and they are identified as key partner for implementation of CBEED • To include GBI/GreenRE/GreenPass/Penarafan Hijau building stock database
	• Average BEI in the Malaysian buildings sector by EOP, kWh/m^2-yr	205	187.3		
	• % Energy savings reduction by EOP	0	7.2		
	No. buildings with EMS and/or EMP in place by EOP	160	576		
	% improvement of BEI in the buildings sector by EOP	0	8.6		
	No. of new EE buildings by EOP (Basis: End 2009)	0	39		
	% of new buildings that are considered EE buildings at EOP (Basis: End 2009)	0	30		
COMPONENT 1: Institutional Capacity Development					
Outcome 1: Clear and effective system of monitoring and improving the energy performance of the buildings sector.					
Output 1: GOM agencies/departments that employ and implements energy management systems					
Activity 1.1: Capacity Needs Assessment in the GOM Institutions on Building Energy	• No. of training programs on building energy management in Government	0	4	• Documentation on the training	150 Government facilities are affected

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
Management	Agencies/Institutions conducted each year starting Year 2010			programs • Evaluation reports on training programs • BERM Reports • Project Reports	by the new Efficient Management of Electrical Energy Regulation 2008. It is recommend targeting these facilities and incorporating ISO50001 Energy Management Standard as part of the training. A survey nearer EOP is recommended as means of verification.
	• No. of government agencies/institutions that are aware of, and the benefits of, building energy management (BEM) in their day-to-day operations by EOP	10	150		
	• No. of government agencies/institutions that have employed BEM programs by EOP	10	150		
Activity 1.2: Development of a Malaysian Federal Building Energy Management Program (MFBEMP)	• An established and fully operational Malaysian Federal Buildings Energy Management Programme (MFBEMP) by Year 2012	0	1	Documentation of the approved MFBEMP	It is recommended to merge this activity with 1.4. To focus on designing and implementing the framework for benchmarking of public building website. Installing remote metering system at public buildings is recommended to gather real-time data. MGTC who is already operating BCIS is recommended as key partner in implementing MFBEMP
	• Average annual total budget for the MFBEMP by EOP, RM Million	0	40	MBEMP annual reports and plans	
Activity 1.3: Preparation of Specific Energy Management (EM)) Guidelines for Government Institutions	• Completed and approved guidebook on Energy Management Guidelines for Government Institutions by Year 2012	0	1	• Published guidebook • MFBEMP reports • BERM Reports	Recommended to base the guidelines based on the existing ISO50001 requirement.
	• No. of government building managers each year that are satisfied in using the EM guidelines starting Year 2013	0	10		

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
	• No. of government buildings with BEM programs designed based on the EM guidelines by EOP	0	160	• Project Reports	
Activity 1.4: Monitoring and Evaluation of the MFBEMP Impacts	• Average level of investment/budget each year on energy efficiency per building starting Year 2011, RM	0	20,000	• MFBEMP reports • BERM Reports • CBEED	Recommend to merge with Activity 1.2. To conduct survey at EOP as mean of verification.
	• Average energy savings per building generated from EE projects and BEM activities starting Year 2011, RM	0	100,000		
Activity 1.5: Building Energy Reporting and Monitoring (BERM) Program	• No. of buildings actively participating in the BERM Program each year starting Year 2012	0	350	• Documentation on the approved BERM program • BERM Reports • Project Reports	Recommend to conduct survey at EOP as mean of verification of all activities output. Information can also be obtained from the BCIS system as part of the MFBEMP
	• % of reporting buildings each year that are satisfied with the BERM program starting Year 2012	0	70 (at least)		
	• No. of reporting buildings that have met and/or exceeded the set BEI (for specific building types) by EOP	0	20		
	• % Improvement in the BEI (i.e., reduction) per building category by EOP				
	▪ Office buildings	0	10		
	▪ Hotel buildings	0	10		
	▪ Hospital buildings	0	10		
	▪ Retail buildings	0	10		
COMPONENT 2: Policy Development & Regulatory Frameworks					
Outcome 2: Implementation of, and compliance to, favorable policies that encourage the application of EE technologies and practices in the country's buildings sector					
Output 2.1: Improved Malaysian EE Building policies, legislation, regulations and action plan					
Activity 2.1.1: Conduct of Building EE Policy Studies	• No. of policy studies conducted by EOP	0	10	Documentation of completed policy studies	To reduce the target to 3
	• No. of recommended policies from completed policy studies that are implemented and enforced by local governments, JKR and MHLG by EOP	0	5	• Documentation of approved policies • Implementing rules & regulations on policies	To reduce the target to 2

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
Activity 2.1.2: Formal & informal discussions with policymakers	• No. of policy making agencies endorsing the proposed policies by EOP	0	10 (at least)	• Documentation of approved policies • Implementing rules & regulations on policies	Recommend to focus instead on 2 workshops to disseminate proposal. Survey at EOP to assess impact of policy paper.
	• No. of approved policies on building EE technology applications by EOP	0	2		
Output 2.2: Approved and Enforced EE Buildings Code of Practice					
Activity 2.2.1: Review of Existing Buildings Code of Practice	• No. of existing articles and provisions in the MS 1525 that were reviewed, adjusted/modified or upgraded to facilitate incorporation in the UBBL by EOP	0	10	MS 1525 Review Reports	To focus on training of capacity building of local authority staff
Activity 2.2.2: Formulation, Approval and Enforcement of a Policy on EE Building Design	• No. of upgraded provisions in the MS 1525 completed and approved/endorsed for incorporation in the UBBL by the MHLG by EOP	0	10	Documentation of the approved version of MS 1525 in SIRIM and MHLG	
	• No. of MHLG personnel trained on the enforcement of MS 1525 as part of the UBBL by EOP	0	150	Training course report and training evaluation report	
Activity 2.2.3: Capacity Building on the Application of Building Energy Codes	• No. of training courses conducted on building energy codes for building practitioners by EOP	0	20	Documentation on the training courses; training reports	Reduce the target **to 4** covering the four main regions North, Central, South & East Malaysia Reduce target to 4 as not much changes to MS1525
	• No. of training courses conducted on the design, construction, economic feasibility evaluation, operation and maintenance of EE buildings[7] by EOP	0	20	Documentation on the training courses; training reports	
	• No. of technically capable building practitioners and building service providers by EOP	0	700	List of certified building practitioners and service providers	Due to not much changes in MS1525 to reduce the target to 120

7 For local engineering firms and equipment manufacturers, repair and maintenance service providers

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
				in CBEED	At EOP to conduct survey & list established industry players
	• No. of local engineering and engineering consulting firms that are providing EE building system services by EOP	0	20	List of certified firms providing building EE system services in CBEED	At EOP to conduct survey & list established industry players
Activity 2.2.4: Development of an EE Code of Practice in Residential Buildings	• A completed government-endorsed EE Code of Practice in Residential Buildings officially launched by Year 2012	0	1	Published EE Code of Practice in Residential Buildings at MHLG	Postpone in 2014. To collaborate with SIRIM as they are planning to start work on this soon
	• No. of residential building projects that are compliant to the provisions of the EE Code of Practice by EOP			Approved building permits in MHLG	
	▪ New residential buildings	0	5		
	▪ Retrofitted residential buildings	0	10		To conduct a survey at EOP to assess activity impact
Output 2.3: Utility regulations that promote/support EE technology applications in buildings					
Activity 2.3.1: Assessment of Utility Regulations Promoting/Supporting EE Building Technology Applications	• Completed assessment report on applicable policies and regulations that are supportive of the implementation of EE initiatives in the design, construction, retrofit and operation of buildings by Year 2011	0	1	• Assessment Report in MEGTW, ST and TNB • Project Reports	BSEEP consultant to conduct a study in 2015
Activity 2.3.2: Design of EE System Incentives in Buildings	• No of approved incentives for EE buildings by EOP	0	5	Documentation on the approved incentives	Proposed BSEEP to work closely with KeTTHA on their EE Action Plan (nearly completed) To reduce the number of buildings who benefited from the
	• No. of buildings that benefited from the incentive given by EOP	0	100	• List of buildings that availed of the incentives • Project	

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
				Reports	incentive to 100 since there aren't many incentives in the EE action plan draft
Activity 2.3.3: Review of Utility Tariffs Focusing on EE in the Buildings Sector	• Satisfactorily completed and acceptable report on the Electricity Pricing Study that is intended for policy decision making regarding pricing issues on decentralized power generation by Year 2012	0	1	Documentation of completed electricity pricing study	To be carried out by the same consultant in activity 2.3.1 In 2015
	• Satisfactorily completed and acceptable report on the survey and recommendations on Fuel Price Perception by Year 2012	0	1	Documentation of fuel price perception study	To be carried out by the same consultant in activity 2.3.1 In 2015
	• Satisfactorily completed and acceptable report on the Study on Gas Fuels Pricing for Buildings by Year 2012	0	1	Documentation of the gas price study	
Activity 2.3.4: Discussions on Energy Pricing for Buildings	• No. of tariff adjustments made by public utilities that are supportive of EE buildings incentive schemes by EOP	0	2	Documentation on the approved tariff adjustments from ST/TNB and PETRONAS	To be carried out by the same consultant in activity 2.3.1
Activity 2.3.5: Monitoring of Incentives Scheme Implementation	• An operational fiscal/financial incentive mechanism monitoring service by Year 2011	0	1	• Operational website • Survey of and documented feedback from website users • Project Reports	To conduct survey at EOP to document clients satisfaction
	• % of clients each year that are satisfied with the monitoring service starting Year 2011	0	70% (at least)		
COMPONENT 3: EE Financing Capacity Improvements					
Outcome 3: Availability of financial and Institutional support for initiatives on EE Building technology applications					
Output 3: Enhanced availability and accessibility of financing for EE building projects					
Activity 3.1: Streamlining Processes for Financing Applications	• Approved streamlined procedures for applying for and getting financial incentives for building EE activities by Year 2012	0	1	• Documented streamlined procedures for each participating banks/FIs	Achieved in 2014
	• % of clients each year that were satisfied with the streamlined procedures starting Year 2012	0	70% (at least)		Achieved in 2015.

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
				• Project Reports	To change the key indicator from % of clients to "No. of information requested by clients". The new target is 20 request for information
Activity 3.2: Capacity Building on EE Building Technologies for the Banking/Financial Sector	• No. of training courses on EE building technologies for the banking/financial institutions designed and conducted by EOP	0	10	• Documentation of training courses • Training course evaluation reports • Project Reports • BERM Reports • CBEED • Building construction reports • Bank financing reports	
	• Percentage of targeted banking/financial institutions that are committed to support EE building projects by EOP	0	50% (at least)		To conduct survey after 10 workshop to assess willingness of bank to support EE
	• Total No. of EE building projects that are financed by local banks/financial institutions by EOP	0	20		
	• Total volume of financing provided by local banks/financial institutions for EE building projects by EOP	0	RM100 million		
Activity 3.3: Development of an Action Plan for EE Building Project Financing	• Completed and approved action plan for the facilitation of the provision of financing of energy efficiency initiatives by Year 2012	0	1	• Documentation of action plan • Signed agreements between financing institutions and Malaysian building sector entities	A final report as mean of verification would be sufficient. Agreements are related to EPCs and financial arrangements between ESCOs and FI.
	• No. of agreements signed on mobilizing local and international financial institutions and resources from the local building sector for implementing EE building and EE building technology projects by EOP	0	10		
Activity 3.4: Design of Financing Schemes for EE Building Project Financing	• No. of applicable project financing schemes on building EE identified and designed by Year 2012	0	3	Documentation of the designed financing	A final report as mean of verification would be sufficient.

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
				scheme, including implementation mechanisms, and rules & regulations	Mainly through the ESCO business model and EPC modality in accordance with the decision of minister of Kettha, Sept 2013. Achieved in 2014.
Activity 3.5: Promotion of EE Building Projects to Local 'ESCOs'	• No. of seminar-workshops on EE building project ventures for local ESCOs conducted by Year 2011	0	20	Documentation of workshop proceedings	Recommend to include building owners as well in the workshop. Target to be reduced to 5
	• Percentage (%) of targeted ESCOs that committed to support EE building projects by EOP	0	70% (at least)	• MAESCO Reports • Individual ESCO Reports	To change to "Percentage (%) of targeted ESCOs that committed to use building technology by EOP". The BSEEP should target a number of ESCOs: 5 is an appropriate target.
	• Total No. of EE building projects which utilize ESCOs by EOP	0	100		To change to "Total No. of EE building projects which utilize EE technology by EOP": a realistic target should be 50 EE projects.
	• Total volume of financing provided to the local ESCOs for EE building projects by EOP	0	RM500 million	• Bank/FI financing reports • MAESCO Reports • Individual ESCO Reports	To remove this activity all together as a key indicator, as the project has no own financial instrument to affect the outcome. The BSEEP can only advance the establishment of an enabling environment for ESCO

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
					development and investment.
Activity 3.6: Capacity Building on EE Building Project Financing	• No. of seminar-workshops conducted for the buildings sector on potential financing options for supporting their EE building and EE building technology projects by Year 2011	0	10	Documentation of workshop proceedings	To focus on building owner/the end users. The realistic target should be 5 workshops by the EOP. workshops will be related to successful ESCOs projects.
Activity 3.7: Business Development Matching and Strategic Partnership Establishment	• An operational EE Building Market Services Group (MSG) with a clear mandate of identifying business opportunities through providing technical support to EE building project financing by Year 2012	0	1	• Documentation of the establishment of the MSG • Charter of the MSG	To collaborate with MIDA green technology unit.
	• No. of EE building project developers/owners, banks and financial institutions assisted by the MSG building their capacity to deliver EE building and EE building technology application project financing, and market their projects and financing products by EOP.	0	10	Documentation of each EE building project assisted by the MSG	
	• % of MSG clients that were satisfied with the services provided by the MSG by EOP	0	70% (at least)	MSG Performance Survey Results	Market survey at EOP to verify performance
COMPONENT 4: Information and Awareness Enhancement					
Outcome: Enhanced awareness of the government, public and the building sector on EE building technology applications					
Output 4.1: Tools for enhancing the skills and experience of local building practitioners in the design of energy efficiency projects in buildings					
Activity 4.1.1: Detailed Study on the Current Building Designs and EE Building	• Completed study on best practices in the	0	1	Report on the best practices	done

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
Applications	application of EE technologies and techniques in the design, construction and operation of buildings by Year 2011			study	
Activity 4.1.2: Establishment of a Centralized Building Energy Efficiency Database System (CBEED)	• A fully established and operational Centralized Building Energy Efficiency Database System (CBEED) by Year 2011	0	1	• CBEED installed in JKR • CBEED Reports	Work in progress. 70% achieved.
	• No. of database-keepers (national and international) linked and/or contributing to the CBEED by EOP	0	10	• CBEED installed in JKR • Communications with partner database-keepers	Information officers to be from within JKR framework
	• No. of EE information offices (EIOs) operating each year starting Year 2011	0	10	EIO Reports	Initial EIOs are JKR State Offices
	• % of overall EIO customers each year that are satisfied with the EIO services starting Year 2011	0	70% (at least)	EIO Reports	Verification base on survey to be conducted by EIOs
Activity 4.1.3: Establishment of a Comprehensive Guidebook on EE Building Design	• Government (JKR) - endorsed Guidebook on EE Building Design officially launched by Year 2012	0	1	Published Guidebook on EE Building Design	Done: Passive EE Guidelines printed out (500 copies). The document must be made available on the website. The Active EE Guideline Book is under preparation (2014).
	• % of building practitioners each year that are satisfied in using the guidebook starting Year 2012	0	70% (at least)	• Project Reports • BERM & MFBEMP Reports • Building Sector Survey Reports	To conduct survey to quantify achievement
	• No. of building projects that were designed (of at least 70%) based on the guidebook by EOP				It is proposed to readjust the indicator to "No. of educational institutions adopting the book as syllabus"
	• New Buildings	0	39		
	• Retrofitted Buildings	0	326		

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
					Target is 20 institutions
Activity 4.1.4: Development of a Peer-Reviewed, User-Friendly Building Performance Prediction Software Tool	• Government-endorsed Building Performance Prediction Software Tool officially launched by Year 2011	0	1	Building Performance Prediction Software Tool in JKR	To collaborate with ACEM
	• % of building practitioners each year that are satisfied in using the building performance prediction software tool starting Year 2012	0	70% (at least)	• Project Reports • BERM & MFBEMP Reports • Building Sector Survey Reports	To conduct survey to quantify the number of downloads of the software tool instead of user satisfaction.
	• No. of building projects that were designed using the building performance prediction software tool by EOP				
	• New Buildings	0	20		
	• Retrofitted Buildings	0	50		
Output 4.2: Implemented market oriented EE programs in the buildings sector both at the national and local levels					
Activity 4.2.1: Design of the Malaysian Energy Efficiency Rating for Buildings (MEERB)	• Government-endorsed MEERB officially launched by Year 2011	0	1	Documentation of the official launch of MEERB	To proceed with ongoing activity that is going to be implemented within JKR (ICSAS rating) To consider the need to establish a sustainable buildings council as the formation of a council is government led?
	• An established and operational a government-endorsed Sustainable Buildings Council (MSBC) with clear mandate to work on the administration and implementation of the MEERB scheme by Year 2012	0	1	• Documentation of the establishment of the MSBC • Charter of MSBC • Business Plan of MSBC	
Activity 4.2.2: Development of the Institutional Mechanism for the MEERB Scheme	• Approved implementing rules and regulations on the MEERB implementation by Year 2012	0	1	• Documentation of the MEERB implementing rules and regulations	Recommend to change the word "mechanism" in the activity description to "arrangement". The key indicator to be revised as "Implementing framework on MEERB

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
					implementation"
Activity 4.2.3: Implementation, Monitoring and Evaluation of the MEERB Scheme	• No. of buildings actively participating in the MEERB each year starting Year 2012	0	50	• MEERB Reports • Project Reports	
	• No. of qualified awardees each year for the National Building EE Awards starting Year 2012	0	10	• Documentation of the National Building EE Awards	
Activity 4.2.4: EE Buildings Advocacy and Promotion	• No. of promotional campaigns conducted each year to promote EE in buildings and EE building design starting Year 2010	0	12	• Documentation of completed promotional campaigns	
Output 4.3: Government agencies and private sector entities capable of designing and implementing EE building projects					
Activity 4.3.1: EE Buildings Training Needs Assessment and Planning	• No. of subjects/concepts on energy efficient design, construction, operation and maintenance of buildings identified for inclusion in training courses by Year 2010	0	20	Training needs assessment report	
Activity 4.3.2: Design and Implementation of EE Building Training Courses	• No. of sets of training materials developed and disseminated by EOP	0	20	• Published and web-based training materials	
	• No. of training courses conducted each year starting Year 2010	0	4	• Documentation of the training courses • Training course evaluation reports	
	• Overall no. of trained personnel each year starting Year 2010	0	120		
	• % of overall no. of trainees that are gainfully employing learned skills on EE building design / construction/operation & maintenance of new and/or retrofitted building by EOP	0	70	Post training course evaluation reports	
	• No. of certified EE building practitioners by EOP	0	240	List of certified EE building practitioners with JKR	The inception report has revised the target to 480 but 240 would be much more achievable
Activity 4.3.3: Sustainable Training Program Design	• A completed, ready-for-implementation and funded sustainable follow-up EE building	0	1	NSC-approved Follow-up EE	

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
	training program approved by the National Steering Committee by Year 2013			Building Training Program	
COMPONENT 5: Building EE Demonstrations					
Outcome 5: Improved confidence in the feasibility, performance, energy, environmental and economic benefits of EE building technology applications					
Output 5.1: Completed demonstration projects showcasing successful applications of building EE technologies, techniques and practices.					
Activity 5.1.1: Demonstration of EE Building and EE Building Technology Applications	• A set of criteria ready to be used for selecting demonstration projects by Year 2010	0	1	Documentation of the set of criteria	The activity description to be revised as "Demonstration of EE Building Technology and Performance" The main thrust would be to showcase the cost effectiveness of EE project implementation supported by verifiable data
	• No. of detailed technical and financial feasibility studies done for demonstration site selection by Year 2011	0	30	Documentation of the techno-economic feasibility studies	To reduce target to 20
	• No. of finalized and approved demonstration project designs (engineering & construction) by Year 2011	0	10	Documentation of approved demonstration project designs	To be achieved by mid 2014.
	• No. of financed demonstration projects confirmed and approved for implementation each year starting Year 2011	0	10	Financing report for each demonstration project	To be achieved by the end of 2014.
Activity 5.1.2: Demonstration Project Implementation	• No. of demo projects implemented by EOP	0	10	Documentation and Case Study of each demonstration project	At least 10 EE projects.
	• No of dissemination exercises conducted each year starting Year 2011	0	4	Report on each annual demo project results	At least 10 Case Studies

Strategy	Success Indicator	Baseline	Target	Means of Verification	MTR Recommendation
				dissemination activity	
Output 5.2: More knowledgeable, technically capable and competent building practitioners in the GOM and the private sector					
Activity 5.2.1: Follow-up Capacity Building for the Local Building Industry	• Completed assessment report on the viability of a local industry for the manufacture of EE building materials and EE building equipment/components by Year 2013	0	1	Assessment Report submitted to FMM	To survey and list local building materials producers/supplier instead
	• No. of training courses designed and conducted for local building materials producers/suppliers on EE building materials applications by EOP	0	8	• Documentation of training courses • Training evaluation reports • Project Reports	
	• No. of training courses designed and conducted for local engineering firms on EE building materials production and applications by EOP	0	8		
	• No. of new EE building projects designed based on, or influenced by, the results of the demonstration projects by EOP	0	40	• Documentation of proposed replication projects • Documentation of completed replication projects	To conduct survey to quantify achievement

Appendix 2 Proposal for a New Budget Breakdown Structure (Aggregate)

Key Changes	Comp 1	Comp 2	Comp 3	Comp 4	Comp 5	Comp 6	Comp 7	Total
International Consultant								
Project Document	56 000,00	42 000,00	94 000,00	154 000,00	350 000,00	28 000,00	-	724 000,00
MTR recommendation	32 183,91	24 137,93	54 022,99	88 505,75	201 149,43	28 000,00	-	428 000,00
Local Consultant								
Project Document	272 000,00	382 000,00	272 000,00	542 000,00	832 000,00	-	-	2 300 000,00
Project Executive	(5 933,17)	(5 933,17)	(8 899,75)	(8 899,75)	(29 665,84)	-	-	(59 331,67)
MTR recommendation	266 066,83	376 066,83	263 100,25	442 000,00	300 000,00	-		1 647 233,92
Amount available to reallocate to C5 Procurement	23 816,09	17 862,07	39 977,01	156 594,50	651 184,74	-	-	**889 434,41**
Total budget	462 000,00	592 000,00	502 000,00	1 242 000,00	1 735 000,00	59 000,00	408 000,00	5 000 000,00
Revised budget	**438 183,91**	**574 137,93**	**462 022,99**	**1 085 405,50**	**1 973 249,67**	**59 000,00**	**408 000,00**	**5 000 000,00**
Available budget on Atlas	462 000,00	592 000,00	502 000,00	994 933,81	1 609 788,95	58 188,36	232 054,64	4 450 965,76

APPENDIX 3 MISSION AGENDA AND LIST OF INSTITUTIONS/PERSONS MET

List of Persons Met during the MTR of BSEEP (7 – 19 Oct 2013)

UNDP

1. James George Chacko - Head of Programme
2. Asfaazam Kasbani – Assistant Resident Representative

EPU

1. Iliani Sha'ari – Principal Assistant Director, International Division
2. Renuka Devi Logarajan – Principal Assistant Director, International Division
3. Mohd Sukri Mat Jusoh – Deputy Director
4. Safwan Rosidy B. Mohamad – Principal Assistant Director, Energy Section
5. Dr. Gerrad – Chief Advisor, Sustainable Consumption and Production, EPU

JKR

1. Dato' Seri Ir. Hj. Mohd Noor Bin Yaacob – Director General, JKR, Chair of the NSC meetings
2. Cheong Pui Keong – Director, Environment and Energy Section, NPD of BSEEP
3. Dato' Roslan Md Taha – Director, JKR Negeri Sembilan, and the new Director of the Energy and Environment Section
4. Kevin Hor – National Project Manager, BSEEP Team
5. Deep Kumar – Project Executive, BSEEP Team
6. Hj Nasir Abd Hamid – Mechanical Engineering Branch

MEGTW

1. Jaya Singam Rajoo – Undersecretary Energy Division
2. Ellisa Ahmad – Assistant Secretary

MNRE

1. Norhaslin Abd Halim – Principal Assistant Secretary, o/b of the GEF focal point

SEDA

1. Datin Bariyah Abd Wahab – Chief Executive Officer
2. Steve Lotjutin – Deputy Director, EE Division

Energy Commision

1. Zulkiflee Umar - Head Demand Side Management
2. Norazlin Rupadi – Executive, DSM Division

MGTC

1. Mohd Azrin Mohd Ali – Senior Vice President
2. Mohd Fendi Mustaffa – Senior Officer

MAESCO

3. Zulkifli Zahari – President MAESCO

MHLG

1. Aminah Abd Rahman – Director, Department of Local Government

Consultants

1. Lal chan – Inception Report Consultant
2. CK Tang – C4 Lead Consultant
3. Nic Chin – C4 Consultant
4. Morten Christensen – C5 short-term consultant

Demonstration Sites

1. The New JKR Office Block – JKR HQ Building

Mid-Term Review Schedule (Tentative)
Building Sector Energy Efficiency Project (BSEEP)
7 - 19 Oct 2013 **Revised 8 Oct 2013**

Date		Location	Person to meet
7 Oct 2013 - Mon			
9:30 -11:00	Briefing on MTR & mission	UNDP	Asfa
11:30 - 13:00	Entry Meeting		NPD & all team members
14:00-16:30	Introduction to BSEEP and meeting with NPM	BSEEP Office, JKR	NPM
8 Oct - Tue			
9:30 -14:00	Project briefing		NPM
14:00 - 16:30	Meeting with NPD	BSEEP Office, JKR	NPD
9 Oct - Wed			
9:30am - 10.30am	MGTC ?	Bangi	Hadri or Hisham ?
11:30am - 12:30pm	meeting with Sustainable Energy Development Authority (SEDA)	SEDA, Putrajaya	Datin Badriyah or Steve
14:30 - 15:30	meeting with MEGTW	MEGTW, Putrajaya	Jaya Singam Rajoo or rep
16:30	Meeting MAESCO	Kelana Jaya	En Zulkifli Zahari
10 Oct - Thurs			
10am	meeting with EPU International Coop	EPU Putrajaya	Hidah
11:30 AM	Meeting EPU - Energy	EPU Putrajaya	Datin Haliza, Kevin
12:30am	Meeting EPU - ENRES SCP	EPU Putrajaya	Azhar
14:00- 16:30	meeting consultants	BSEEP Office, JKR	CK Tang, Nic, Lal Chand,
11 Oct - Fri			
9:30 -10:30			
11:00-12pm	meeting MGBC ?		
15:00-16:00	meeting with other JKR sections	JKR sections' office	contact person ?
16:30	meeting with MHLG	PICC	Aminah Abd Rahman
12 Oct - Sat			
	Weekend - Report writing / SPARE		
13 Oct - Sun			
	Weekend - Report writing		
14 Oct - Mon			
9:30 - 16:30	Site Visits (2-3 C5 demo sites)	TBC	Kevin
15 Oct - Tue			
	HOLIDAY - Raya Haji		
16 Oct - Wed			
9:30 -12:30	Meeting with PRC & NSC Chairperson	JKR's HQ	Kevin
14:00 - 14:30	Skype meeting with APRC	'@ BSEEP Office	Kevin
14:30-16:30	Discussions / Q&A	JKR's HQ	NPD & NPM
17 Oct - Thurs			
9:30 AM	Meeting ST	ST, Putrajaya	En Elmi, En Zulkifli, Kevin & Asfa
11am	meeting GEF focal point	NRE, Putrajaya	Pn Haslin, Kevin & Asfa
3:00 PM	draft presentation	BSEEP Office, JKR	NPD, NPM, project team
18 Oct - Fri			
9:30 - 12:30	Exit meeting, Wrap-up & Closing	BSEEP Office, JKR	ALL
2 - 4:30pm	Discussions / Q&A	UNDP	Asfa
19 Oct - Sat			
9:30 - 16:30	Report Writing / Discussion	Hotel	Asfa

International Consultant: Mr. Louis Philippe LAVOIE
Local Consultant: Mr. Mohd Iskandar MAJIDI

Appendix 4 TOR

Building Sector Energy Efficiency Project (BSEEP)
Terms of Reference (TOR) for the
Mid-Term Review 2013

For One (1) International Consultant & One (1) National Consultant

PROJECT INTRODUCTION

BSEEP has for its goal the reduction in the annual growth rate of GHG emissions from the Malaysia buildings sector. The project objective is the improvement of the energy utilization efficiency in Malaysian buildings, particularly those in the commercial and government sectors, by promoting the energy conserving design of new buildings and by improving the energy utilization efficiency in the operation of existing buildings. The realization of this objective will be facilitated through the removal of barriers to the uptake of building energy efficiency technologies, systems, and practices. The project is in line with the GEF's climate change strategic program on Promoting Energy Efficiency in Residential and Commercial Buildings (SP-1). It is comprised of activities aimed at improving energy efficiency and promoting the widespread adoption of energy efficient building technologies and practices in the Malaysian buildings sector.

Specifically, the proposed project will reduce carbon emissions by an estimated 581.1 ktons
CO2 per year (or cumulative total of about 1,421.3 ktons CO2) by end of the project. This represents about 4% reduction in CO2 emissions compared to the magnitude of CO2 emissions under a business-as-usual scenario13. Five years after the project end, CO2 emissions are forecast to be about 7.2% lower in annual emissions if there will be no BSEEP.

The expected outcomes of the project are the following:
Outcome 1: Clear and effective system of monitoring and improving the energy
performance of the building sector
Outcome 2: Implementation of, and compliance to, favorable policies that encourage the application of EE technologies in the country's buildings sector
Outcome 3: Availability of financial and institutional support for initiatives on EE
building technology applications
Outcome 4: Enhanced awareness of the government, public and the buildings sector on EE building technology applications
Outcome5: Improved confidence in the feasibility, performance, energy, environmental and economic benefits of EE building technology applications leading to the replication of the EE technology application demonstrations.

Outcomes and Outputs of the BSEEP are as in Annex 4.

BSEEP is Nationally-Executed (NEX) by the Malaysian Government and JKR is the appointed executing agency.

The Project Document and other relevant GEF documents can be downloaded from the following weblink:
http://www.thegef.org/gef/sites/thegef.org/files/repository/11-30-09%20ID3598%20-%20Council%20letter.pdf

Information on the UNDP evaluation process and experience from other countries can be refered to the Evaluation Resource Center at the following weblink http://erc.undp.org

Information on project can be viewed at www.jkr.gov.my/bseep

2. OBJECTIVE OF THE MID TERM REVIEW

The objective of this MTR is to gain an independent analysis of the progress of the project so far. The MTR will identify potential project design problems, assess progress towards the achievement of the project objective, identify and document lessons learned (including lessons that might improve design and implementation of other UNDP-GEF projects), and make recommendations regarding specific actions that should be taken to improve the project. The MTR will assess early signs of project success or failure and identify the necessary changes to be made. The project performance will be measured based on the indicators of the project's logical framework (see Annex 4) and various Tracking Tools.

Specifically, the purpose of the BSEEP Mid-Term Review is to review, rate the performance of the project from the start of the project implementation up to the present and recommend possible corrective actions (in short and long-term actions). The review will include evaluating the
Progress in project implementation, measured against planned outputs set forth in the Project Document/Inception Report with latest revision in accordance with rational budget allocation,
An assessment of the overall impact of the project to the country and
and identify corrective measures, lessons learned and best practices for immediate actions

The MTR must provide evidence based information that is credible, reliable and useful. The review team is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key

stakeholders. The team will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based review. A list of documents that the project team and UNDP Country Office will provide to the team for review is included under section 5 of this Terms of Reference.

3. SCOPE OF THE MTR

The scope of work for the consultancy will include, but not limited to, the following activities:

Assessment of progress in project implementation
The MTR will focus on such aspects as appropriateness and relevance of work plan, compliance with the work plan alongside with budget allocation; timeliness of disbursements; procurement, quantity and quality of goods and services created; coordination among different project stakeholders. Any issue that has impeded the implementation of the project or any of its components, including actions taken and resolutions made should be highlighted. Activities that should be taken up by the NPT and the executing agency shall also be recommended. The template below shall assist the consultant in reviewing the progress.

Review of Activities			
Component / Activities	Planned	Actual	Action

Assessment of Budget Utilization			
Component /Activities	As per ProDoc	Actual Expenditures	% of Project Budget

The following assessments shall be carried out:
Project design (as per the LFA), i.e., whether the project design allowed for flexibility in responding to internal and external changes in the project environment.
Implementation difficulties, i.e., whether difficulties and barriers, which were not expected at the start of the project, are identified and the approaches for the solutions are considered and implemented effectively.
Project resources, i.e., whether the project components and activities were logically designed as to content and time frame commensurate with the human and financial resources that were made available.

The review team will assess the following project progress. For each category, the review team is required to rate overall progress using a six-point rating scale outlined in Annex 1:

Assessment of project outputs
b.1) General questions will include the below
Whether the project is implemented in the right direction to achieve the outcomes (i.e., based on the agreed work plan / annual target).
Review how the project addresses country priorities and the significance of the outcomes so far achieved for the country/region.
Whether the project outputs are produced effectively, efficiently, and in a timely manner according to the time schedule.
The quality and credibility of the outputs, as stipulated in the Project Document.
How effective and efficient the project funds are utilized, and how the expenditures are monitored.
The credibility of the data used in the project and reliance of the numerical outputs.
The monitoring and evaluation of the project consultants' work.
The quality of the internal monitoring system results.
Review the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners.

b.2) On the overall project level, it will assess the project performance in terms of:
(a.) Progress towards achievement of results, (b.) Factors affecting successful implementation and achievement of results, (c.) Project Management framework, and (d.) Strategic partnerships.

Progress towards achievement of results (internal and within project's control)

Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions made by the project. Identify new assumptions.
Review the relevance of the project strategy and assess whether it provides the most effective route towards results.
Assess the outputs and progress toward outcomes achieved so far and the contribution to attaining the overall objective of the project.
Is the Project making satisfactory progress in achieving project outputs vis-à-vis the targets and related delivery of inputs and activities?
Are the direct partners and project consultants able to provide necessary inputs or achieve results?
Given the level of achievement of outputs and related inputs and activities to date, is the Project likely to achieve its Immediate

Purpose and Development Objectives?
Are there critical issues relating to achievement of project results that have been pending and need immediate attention in the next period of implementation?
Examine if progress so far has led to, or could in the future lead to, beneficial development effects (i.e. income generation, gender equality and women's empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
Examine whether progress so far has led to, or could in the future lead to, potentially adverse environmental and/or social impacts/risks that could threaten the sustainability of the project outcomes. Are these risks being managed, mitigated, minimized or offset? Suggest mitigation measures as needed.

Factors affecting successful implementation and achievement of results (beyond the Project's immediate control or project-design factors that influence outcomes and results)

Is the project implementation and achievement of results proceeding well and according to plan, or are there any outstanding issues, obstacles, bottlenecks, etc. on the consumer, government or private sector or the energy efficient buildings industry as a whole that are affecting the successful implementation and achievement of project results?
Review the baseline data included in the project results framework and GEF Tracking tool and suggest revisions as necessary.
Is the project logical framework and design still relevant in the light of the project experience to date?
Is the project well-placed and integrated within the national government development strategies, such as community development, poverty reduction, etc., and related global development programs to which the project implementation should align?
Do the Project's purpose and objectives remain valid and relevant, or are there items or components in the project design that need to be reviewed and updated?
Are the Project's institutional and implementation arrangements still relevant and helpful in the achievement of the Project's objectives, or are there any institutional concerns that hinder the Project's implementation and progress.

Project management (adaptive management framework)

Are work planning processes result-based? If not, suggest ways to re-orientate work planning to focus on results.
Are the project management arrangements adequate and appropriate?
How effectively is the project managed at all levels? Is it results-based and innovative?
Do the project management systems, including progress reporting, administrative and financial systems and monitoring and evaluation system, operate as effective management tools, aid in effective implementation and provide sufficient basis for evaluating performance and decision making?
Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required?
Ensure that the monitoring system, including performance indicators, meet GEF minimum requirements. Apply SMART indicators as necessary.
Ensure broader development and gender aspects of the project are being monitored effectively. Develop SMART indicators, including disaggregated gender indicators as necessary;
Review the mid-term GEF Tracking Tool (s) as appropriate and comment on progress made, quality of the submission, and overall value of the GEF Tracking Tool.
Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to M&E? Are these resources being allocated effectively?
Is technical assistance and support from project partners and stakeholders appropriate, adequate and timely?
Validate whether the risks originally identified in the project document APR/PIRs and the ATLAS Risk Management Module still hold and are the most critical. Assess whether risk ratings applied are appropriate. If not, explain why?
Describe additional risks identified and suggest risk ratings and possible risk management strategies to be adopted.
Assess the use of the project logical framework and work plans as management tools and and review any changes made to it since project start. Ensure any revisions meet with UNDP-GEF requirements in planning and reporting and assess the impact of the revised approach on project management?

Consider the financial management of the project, assess the cost effectiveness of the interventions and note any irregularities.
Complete the co-financing monitoring table (see Annex 3).
Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
How have the APR/PIR process helped in monitoring and evaluating the project implementation and achievement of results?
Assess how adaptive management changes have been reported by the project management, and shared with the Project Board.
Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.
Review overall effectiveness of project management as outlined in the project document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
Review the quality of execution of the project Implementing Partners and recommend areas for improvement.
Review the quality of support provided by UNDP and recommend areas for improvement.

Strategic partnerships (project positioning and leveraging)

Are the project partners and their other similar engagements in the project strategically and optimally positioned and effectively leveraged to achieve maximum effect of the EE program objectives for the country?
Asses how project partners, stakeholders and co-financing institutions are involved in the Project's adaptive management framework.
Identify opportunities for stronger collaboration and substantive partnerships to enhance the project's achievement of results and outcomes.
Are the project information and progress of activities disseminated to project partners and stakeholders? Are there areas to improve in the collaboration and partnership mechanisms?

4. DELIVERABLES AND TIMELINE

The MTR Team will consist of one International Consultant and one National Consultant. The International Consultant will be the Team Leader. The Team Leader, in close collaboration with the National Consultant, will have the overall responsibility for the quality and timely submission of the deliverables. Specifically, the team of consultants is responsible for submitting the following deliverables to the UNDP Country Office and Project Support Unit:

No	Deliverable	Content	Timing	Responsibilities
1	Inception Report or Submission of Work plan	Review team clarifies timing and method of review	Within 5 days of signing of the contract	Review team submits to UNDP Country Office
2	Presentation	Initial Findings	End of review mission	To project management, UNDP Country Office, reviewed by RTA
3	Draft Final Report	Full report (as template in annex 2) with annexes A detailed record of consultations with stakeholders will need to be kept and provided (as part of the information gathered by the reviewers), as an annex to the main report. If there are any significant discrepancies between the impressions and findings of the review team and stakeholders, these should be explained in an annex attached to the final report.	Within 2 weeks of the review mission	Sent to UNDP CO, reviewed by RTA, PCU, GEF OFP…
4	Final Report	Revised report with audit trail detailing how all received comment have (and have not) been addressed in the final review report).	Within 2 weeks of receiving UNDP comments on draft	Sent to UNDP CO.

5. METHODOLOGY

The reviewers will review relevant project documents and reports related and conduct focused individual/group discussions on topics and issues that relate to the implementation and impact of the project. The reviewers are expected to become well versed as to the objectives, historical developments, institutional and management mechanisms and project activities. More specifically, the review will be based on the following sources of information:
Review of documents related to the project such as project document, quarterly and annual progress reports, other activity/component specific reports and evaluation as described.
Structured interview with knowledgeable parties, i.e., NPD, Project Staff members, Sub-Contractors, International/National Consultants, UNDP, members of the National Steering/Advisory Committee/s, Project Beneficiaries or grantees, etc.
Site visits to specific projects, if feasible. The site visits should be discussed with the NPM and the UNDP Country Office.

Key documents to be reviewed are as below:
Project Initial Form (PIF);
UNDP/GEF BSEEP Project Document;
Inception Report
Output reports and documents produced under BSEEP
Minutes of Project Steering Committee Meetings and National Steering Committee meetings.

Amendments to the inception report (if any)
- Review/evaluation report
- Latest Project Implementation Report PIR
- Latest NEX audit reports or any other audit reports
- Past consultancies' assignments and summary of the results
- Quarterly reports
- Pictures of equipment, installations and sites if any
- Newspaper/publication articles

The evaluation team shall meet and interview the following:
National Project Director
National Project Manager
Finance Assistant
Project Executive
Component Managers (all) if any
Key government stakeholders in building energy efficiency (i.e. EPU International Cooperation, EPU Energy, MEGTW, Energy Commission, Sustainable Energy Development Authority (SEDA))
Other sections/departments in the Implementing Partner relevant to BSEEP
Representative from the Industry association
Representative from the academia relevant to BSEEP
Selected members of the NSC meeting
Consultants
Participating industries / demonstration sites
Other project partners relevant to the outcome of the project

The evaluator will conduct an opening meeting with the NPD and relevant executing agency staff to be followed by an "exit" interview with UNDP CO to discuss the findings of the assessment prior to the submission of the final report.

6. DURATION

The total duration of the MTR will be 4 weeks in August or September 2013. The expected number of working days per consultant is 20 days including 10 working days mission to Malaysia for the international consultant. Detail dates will be confirmed later.

7. IMPLEMENTATION ARRANGEMENTS
The principal responsibility for managing this review resides with the UNDP Country Office (UNDP CO) in Kuala Lumpur, Malaysia. The UNDP CO will contract the consultants and ensure the timely provision of per diems and travel arrangements within the country for the review team. The BSEEP project team will be responsible for liaising with the review team to set up stakeholder interviews, arrange field visits with missions to relevant project sites.

In preparation for the review mission, the project manager, with assistance from UNDP country office, will arrange for the completion of the tracking tools. The tracking tools will be completed/endorsed by the relevant implementing agency or qualified national research /scientific institution, and not by the international consultant or UNDP staff. The tracking tools will be submitted to the mid-term review team for comment. These comments will be addressed by the project team, and the final version of the Tracking tools will be attached as annexes to the Mid-term evaluation report.

8. QUALIFICATION AND EXPERTISE REQUIRED OF THE EVALUATION CONSULTANTS

The consultants will be responsible for the delivery, content, technical quality and accuracy of the evaluation report, as well as the recommendations. The consultants will not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

Both consultants should ideally have the following competencies and attributes:

Experience with UN / UNDP / GEF result-based management evaluation methodologies. Project evaluation experiences within United Nations system will be considered an asset;
Experience applying SMART indicators and reconstructing or validating baseline scenarios;
Competence in project Adaptive Management
Demonstrable analytical skills;
Experience in reviewing or evaluating similar projects will be an advantage
Experience with GEF financed projects is an advantage

A. International Lead Consultant
Tertiary education in building science, engineering or in relevant climate change mitigation. Post-graduate or with relevant professional qualification is preferred;
More than 10 years of working experience in the national level capacity building projects, project management and evaluation,

climate change management and with a good knowledge of the state-of-the-art approaches and international best practices;
Prior knowledge of GEF and UNDP reporting frameworks, GEF principles and expected impacts in terms of global benefits, and the policy, legal and institutional environment of Malaysia would be an advantage;
Demonstrated experience in donor-funded project evaluation especially in UNDP/GEF structure and in undertaking complex programmatic reviews;
Familiar with project management and financial framework including output/outcome, LFA and impact analysis;
Excellent English writing and communication skills. Demonstrated ability to assess complex situations in order to succinctly and clearly distil critical issues and draw forward looking conclusions;
Ability to assess complex situations in order to succinctly and clearly distil critical issues and draw forward looking conclusions; and
Experience working in South East Asia region.

B. National Consultant
Tertiary education in science, engineering or in relevant climate change mitigation. Post-graduate or with relevant professional qualification is preferred;
More than 5 years of working experience in the national level capacity building projects, project management and evaluation, climate change management and with a good knowledge of the state-of-the-art approaches and international best practices;
Prior knowledge of GEF and UNDP reporting frameworks, GEF principles and expected impacts in terms of global benefits, and the policy, legal and institutional environment of Malaysia would be an advantage;
Familiar with project management and financial framework including output/outcome and impact analysis;
Familiar with the national institutional framework, government structure and local set-up of the project
Well versed with both English and Bahasa Malaysia and able to facilitate discussions among the local stakeholders.

Both positions will require the below competency level:
- Results orientated and accountability
- Capacity in planning and organizing
- Communication and trust
- Client orientation
- Organizational development and innovation

9. TERMS OF PAYMENT

Inception Report / workplan – 10%
Initial finding presentations – 20%
Draft Final Report – 30%
Final Report – 40%

APPLICATION PROCESS

All applications including P11 form, CV, technical, cover letter and financial proposals should be submitted via online only. Incomplete applications will be excluded from further consideration.

Recommended Presentation of Proposal: Introduction about the consultant/CV; Proposed methodology and workplan (max 1 page); financial proposal which includes proposed fee and local travel in Kuala Lumpur only (not including flight ticket, per diem which will be disbursed separately, where applicable, according to the UN rates). (note: UNDP office will purchase the ticket to Kuala Lumpur).

Criteria for Evaluation of Proposal: The selection will be made based on the educational background and experience on similar assignments. It will be a 70:30 combined weight scoring where the financial proposal will weigh as 30% of the total scoring.

More info at
http://www.gefweb.org/MonitoringandEvaluation/MEAbout/meabout.html
http://www.undp.org/gef/undp-gef_monitoring_evaluation/undp-gef_monitoring_evaluation.html
http://www.jkr.gov.my/bseep

Appendix 5: List of Documents Reviewed

- Project Initial Form (PIF);
- UNDP/GEF BSEEP Project Document;
- Inception Report
- Selected Output reports and documents produced under BSEEP: (i) Demo site selection report; (ii) Passive EE Guidelines.
- Minutes of Project Steering Committee Meetings and National Steering Committee meetings.
- Review/evaluation report: Rapid Evaluation Report April 2013
- Latest Project Implementation Report PIR
- QPRs
- Annual Progress Reports
- AWPs
- Decision of the KeTTHA Minister (Sept. 2013) related to the ESCO's involvement in government's buildings