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## Basic Data / Basic Project & Finance Data

### Basic Project Information

<b>PIMS ID</b>	3937
<b>Project Title</b>	Promoting Energy Efficiency in Commercial Buildings in Thailand (PEECB)

### Project Contact Information

Role	Name	Email Address
<b>Project Implementing Partner</b>	Mrs. Amaraporn Achavangkool Department of Alternative Energy Development and Efficiency (Thailand)	<a href="mailto:amaraporn@dede.go.th">amaraporn@dede.go.th</a>
<b>Is the Project Implementing Partner a civil society organization/non-governmental organization?</b>	No	
<b>Project Manager/Coordinator</b>	Mr. Kamol Tanpipat	<a href="mailto:kamolt@bright-ce.com">kamolt@bright-ce.com</a>
<b>UNDP Country Office Programme Officer</b>	Ms. Sutharin Koonpol, Ph.D	<a href="mailto:sutharin.koonpol@undp.org">sutharin.koonpol@undp.org</a>
<b>GEF Operational Focal Point (OFP)</b>	Mr. Kasemsan Chinnawasa Permanent Secretary Ministry of Natural Resources and Environment, Thailand	N.A
<b>Other Partners</b>		

### Terminal PIR

<b>Is this the terminal PIR that will serve as the final project report?</b>	No
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**General Comments on Basic Data**

Please insert additional comments not explained above.

Due to the delay in the government's recruitment process, the project only started full implementation in April 2013. Most of the activities are in progress according to the project schedule and MTR recommendations. The monitoring process has also been planned and started since the early stage of the project, however, the progress figures of each outcome would be able to be reported after the completion of each related activity which some of the outcomes are planned for the end of Y2016

## Development Objective Progress / Progress Toward Development Objectives

Objective / Outcome: Description of Objective / Outcome	Description of Indicator	Baseline Level	Target Level at end of project	Level at 30 June 2016
<b>Objective:</b> Improved energy efficiency in the commercial building sector	Cumulative energy savings from the buildings sector, GWh	0	396	123 GWh (Data from Building Energy Code center of DEDE based on 220 buildings only), total cumulative energy saving from whole level building sector is under preparation and expected to get the cumulative figure by end of this year.
	% Energy savings by EOP	0	1.2%	0.37%  (Data from Building Energy Code center of DEDE based on 220 buildings only), actual % energy saving from whole level building sector is under preparation and expected to get the final % energy saving by end of this year.
	% of new buildings fully complied with the new Building Energy Code by EOP	20%	60%	50% (Based on the number of buildings that submitted data to DEDE through BEC Center and passed whole building energy consumption criteria specified in BEC)
	% of new buildings in Thailand that are classified as energy efficient buildings by EOP	10%	40%	20%  Based on the number of building that submitted data to DEDE through BEC Center and achieved more than 10 % of energy saving compare to BEC, which is classified as energy efficiency building or High Energy Performance Standard Building (HEPS) according to the building category in Energy Efficiency Development Plan, EEDP
<b>Outcome 1:</b> Enhanced awareness of	% of overall commercial building stakeholders	0	80% (at least)	Level at 30 June 2016: 90%

the government, building sector and banks on EE technologies and practices	that agree to greater availability of pertinent information on EE technologies and practices through the PEECB project activities by Year 2015			<p>The activities related to this outcome are well in progress. Advised technologies and financial scheme (20% Direct Subsidy from DEDE) have been implemented to help the 12 demo buildings improve their energy efficiency The CBEEC has been regularly updated. Promotional package including the issues of quarterly Newsletter has been prepared and distributed to all stakeholders. Annual project seminar was regularly organized to disseminate project outcomes to all stakeholders, the latest one was held in February 2016. Based on PIR recommendation more than one seminar will be held this year.</p> <p>7 training courses on non-technical and technical target groups were organized, until end of June, and attended by more than 300 participants. Details of the training contents were uploaded in the PEECB website. Seminar feedback was evaluated with participants' satisfaction.</p>
	% of overall commercial building stakeholders that are satisfied with availability and quality of information available from the PEECB project by Year 2015	0	70% (at least)	Level at 30 June 2016 : 80%
Outcome 2: Effective implementation of favorable policies that encourage EE technologies and	No. of new policy measures for commercial building EE approved and implemented by Year 2015	0	2	<p>Level at 30 June 2016 : 2</p> <ol style="list-style-type: none"> <li>1. Commercial Building Disclosure has been implemented as a pilot project</li> <li>2. EE Procurement for government sector concept proposed by PEECB has been accepted by Comptroller General's</li> </ol>

practices for commercial building in Thailand				Department to integrate to E-market and E-Bidding.
	No. of fiscal policies approved by DEDE for implementation by Year 2013	0	1	Level at 30 June 2016 : 1 1. Revolving Fund for New Building.
	No. of short and long term action plans for commercial building EE integrated into DEDE's national Energy Conservation Program by EOP	0	1	In the process of coordination with DEDE Action Plan Team to integrate the project recommendation to the draft short and long term plan Level at 30 June 2016 : 1  1) Short term "5-year DEDE's Action Plan" has been developed. ENSOP to coordinate with DEDE' action plan team to link project recommendation to the draft short plan
<b>Outcome 3.1:</b> Improved confidence in applying EE technologies and practices in commercial buildings in Thailand	No. of commercial building owners/managers expressing interests and commitments in implementing EE investments by EOP	10	40	91  The survey conducted showed the interested in implementing EE investment at 91 persons.  <u>Reports of surveys conducted as parts of the training/outreach activities</u> 1. <u>PEECB Annual Seminar 24 FEB 2016 (include practitioners about 50% is management level)</u> 2. <u>PRE Manager Training 27-28 JUL 2016 (20 Surveys)</u> 3. <u>PEECB Demonstration Building Ceremony 25 AUG 2016 (Plan to get 100 Surveys)</u>
	No. of building EE projects that adopted EE measures and designs	5	10	12 demonstration buildings participated in the project on energy efficiency improvement through recommended technologies based on the suitable requirement of each building

	being demonstrated and promoted by EOP			
<b>Outcome 3.2:</b> Improved local technical and managerial capacity to design, manage and maintain EE technologies and practices	% of overall no. of demo building personnel that are gainfully employing learned skills on EE building design, operation and maintenance by Year 2015	0	70% (at least)	The implementation in all demonstration buildings will be completed around mid of July 2016. This activity will be completely conducted and monitored afterwards.  Reference from In-House Training Report
	No. of new buildings constructed that are partly or entirely based on the information regarding success of the demonstrations by EOP	0	20	20  <ul style="list-style-type: none"> <li>▪ 20 new building constructed reference from BEC Database</li> <li>▪ The technologies in these buildings are matched with the technology demonstrated by the project demonstration buildings</li> </ul> On-going activity
<b>Outcome 3.3:</b> Replication of demonstration projects within the commercial building sector	No. of new EE building projects designed based on, or influenced by, the results of the demonstration projects by EOP	0	20	22  <ul style="list-style-type: none"> <li>▪ 20 new building projects reference from BEC Database</li> <li>▪ 2 retrofit buildings</li> <li>▪ The technologies in these building are matched with the technology demonstrated by the demonstration building</li> </ul>

## Development Objectives Rating

<p><b>Project Manager / Coordinator</b> is the person managing the day to day operations of the project.</p>	<p>MANDATORY RATING MUST BE PROVIDED for projects under implementation in one country or regional projects where appropriate.</p> <p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Fully explain the critical risks that have affected progress.</li> <li>4. Outline action plan to address projects with DO rating of HU, U or MU.</li> </ol>
	<p><b>Satisfactory (S)</b></p> <p>The project has been implemented as scheduled since the date of assignment of the two consultants by DEDE in April, and August 2013 respectively. The assignment date is not the same date signed in the Project Document between UNDP and DEDE which was in November 2012. This made the project a slow start in the first year (2013) due to the long selection process of engaging the 2 project consultants, and made a slow down again in later half of 2013-the beginning of 2014 due to the political unrest. However with the 3 project components, DEDE and the two consultants have carried out all the activities to reach the output and outcome target as follows: 1) Enhanced awareness of the government, building sector on energy efficiency technologies and practices, 2) Developing favorable policies that encourage EE technologies and practices in commercial building, 3) Improving confidence in feasibility study and economic benefits of EE technologies and practices in commercial building through demonstration projects within the commercial building sector. In order to ensure work progress, the Project Board was set up and conducted several meetings, plus the official and unofficial cooperation and coordination among agencies concerned. The project activities have been carried out according to the approved plan and activities by the Project Board as follows:</p> <ol style="list-style-type: none"> <li>1. Project Seminars were held for 3 times (as of June 2016). As recommended by PIR. DEDE and the consultants organize more seminars starting from the year 2016 (3 seminars are planned instead of 1 as done before). However DEDE thought that, even though the PIR recommendations to raise profile and public attention in terms of the “EECB Awarded” is possible but this will</li> </ol>

be in duplication of DEDE's existing activities on "Thailand Energy Award" and ASEAN Energy Award where EE buildings are included.

2. 5 E-news letters were issued and uploaded in the PEECB website regularly.
3. 11 technical and 2 non-technical modules to boost capacity buildings in energy efficiency in commercial buildings were developed. Also, with the recommendations of PIR, an additional training programme for dissemination of BESM practice has been set to train people in EE sectors.
4. 7 training courses out of 13 were organized with the total of 313 attended participants from both related private and government sectors. The courses were based on the curriculum developed in each training module.
5. Website of the project has been established and available under the name of [www.dede-peececb.bright-ce.com](http://www.dede-peececb.bright-ce.com). It is now in effective with the uploaded data relating to the project implementation progress, such as PEECB E-news letter.
6. The building energy simulation models – a tool for facilitating building owners, engineers, investors, and other related EE personnel in assessing the energy consumption of the building has been accomplished with the design containing information about EE equipment, and for support part of information from the original DEDE's BEC. Now the EE building personnel both in government and private sectors have been trained to get acquainted with its application and to ensure that the system is practical and easy for end users.
7. In terms of the policy framework, the consultant proposed 3 key options - EE procurement, Energy Disclosure Programme, and Stepped Support on BEC were endorsed and 1 of them, Energy Disclosure Programme was brought for implementation by DEDE. For the EE procurement, DEDE and the consultant are working with the Comptroller General's Department (CGD) to consider the possibility of setting the standard of EE equipment that is in proportion with pricing set standard for the government e-procurement.

Based on the MTR recommendations to extend the best practice from this activity, the consultant unofficially discussed with those building owners on convincing them to expand such EE improvement to their affiliated buildings. Besides, DEDE will also present the certificate of participation in the project to the 12 building at the Project seminar to be held in August 2016. The certificate can be a symbol/brand image of their buildings in recognition of the importance of the EE policy promoted by the Government.

8. 12 buildings selected as a demonstration of EE practice have been in progress, 9 of them have accomplished the work of improving their EE buildings through the consultant recommendations based on suitable EE technologies, such as chillers, air-conditioning system, LED, split type, heat pump etc, whereas the remaining 3 buildings have been working to reach their target of EE technologies modification. For the implementation of this activity, the consultant has pushed the effort to promote the buildings. The



total amount of CO<sup>2</sup> reduction from these twelve buildings is estimated to be 3,005.03 ton (CO<sup>2</sup>). The buildings have been supported with the technical assistance and part of the government subsidy under the ENCON Fund of DEDE. The estimated own investment of these 12 building reached 80,041,565 Baht. The success of the 12 demonstration buildings have been disseminated through the project seminars and other related meetings/forums where possible.

9. Energy efficiency data base has been reviewed and compiled for use as the data filing in the BESM and the source of SEC normalization to find the benchmark of energy consumption in building. The study has been focused on hotel, office, hospital and department store. When the study is complete, the data will be available for all stakeholders to enter into the data downloaded in the website. The users need the username and password that can be requested from DEDE.
10. Measurement and verification was studied with 4 systems namely lighting, air-conditioning, motor/pump/fan, and hot water. The result of the study will be published in the form of guidebook and planning sheet and will be disseminated to the stakeholders concerned. During the study, 4 focus group meetings were convened to share useful ideas and comments from the target groups such as building staff, owners/providers executives, government official etc.

Response to Midterm Review, (MTR) recommendations

DEDE, as the project implementing agency, is aware of the MTR recommendations and tried to improve and modify whatever possible under the real circumstances. As such, DEDE started to review the log/frame analysis (PPM) to verify and ensure the results as targeted and the achievement of each quarter in accordance with the changing situation and submitted to UNDP together with the progress report of every quarter. Strengthening close cooperation and coordination has been made through related meetings and seminars and providing the useful information of the project to other agencies who are interested in the project details. DEDE recognizes the importance of the project sustainability as indicated in the PIR concern. Discussion, therefore, was made to find ways and means of how to sustain the outcome of the project. It is also of the DEDE's executives concern and therefore set certain possible projects to respond to the project extension. Besides, some policy framework such as energy disclosure programmes, one of the policy outcome of the project was implemented by DEDE.

However, there are some MTR recommendations that have not been brought for actions, such as the consultant to be engaged to review the project planning matrix which seems to be difficult in terms of time frame and the consultant's expertise and knowledge requirement to understand the project thoroughly, raising the awareness of the project achievement through the Award, dinner talk, which seems to be a duplication of work already done by DEDE. It may be possible, however, that the 12 demonstration buildings may be proposed to apply for Thailand Energy Award and ASEAN Energy Award, etc.

	<p>In conclusion, it can be said that the project has been well progressed and can be completed within the project time period. DEDE and the the PMU have been working to fulfill the project objects with outstanding activities which have been shortly briefed above. Certain recommendations of the PIR was brought for improving some project barriers mentioned by PIR. DEDE and the consultant are implementing towards the successful outcome as stated in the revised matrix. The project sustainability has been recognized and started to discuss with DEDE and other related agencies such as TGO, BMA who have recognized the benefit of this project.</p>
<p><b>UNDP Country Office Programme Officer</b> is the UNDP programme officer in the UNDP country office who provides oversight and supervision support to the project.</p>	<p>MANDATORY RATING MUST BE PROVIDED for projects under implementation in one country. Not necessary for regional or global projects.</p> <p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating, for example, if your rating differs from the rating provided by the project manager please explain why.</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Fully explain the critical risks that have affected progress.</li> <li>4. Outline action plan to address projects with DO rating of HU, U or MU.</li> </ol> <p><b>Moderately Satisfactory (MS)</b></p> <p>The DO rating is satisfactory as the project is progressing according to the work plan in its 3<sup>rd</sup> year, with sufficient adjustment in response to the Midterm Review’s recommendations, to meet most of the project targets. There are still gaps and critical risks in the monitoring and documentation of results, as well as the replication potential and sustainability of the project results.</p> <p>The positive trend in this reporting period include:</p> <p>(1) <b>Substantive progress made in the 12 demonstration buildings towards energy efficiency measures:</b> pre-feasibility study review, M&amp;V baseline survey, and proposed EE measures with financial support were completed for all 12 demo buildings; with 7 demo buildings already make the investment and put in place the measures, with support from the project.</p>

	<p>The projected GHG reduction from the demo buildings once the measures are put in place in all buildings, is 3788.69 ton/ year.</p> <p><b>(2) Training modules, 11 technical and 2 non-technical, were completed</b> with full adoption and endorsement from DEDE. These modules aim to reach out to wider audience in commercial building sector, targeting not only technical personnel, but also project developers, building owners, and designers. 2 technical training courses have been conducted with positive feedbacks from the participants.</p> <p><b>(3) Progress made in EE Procurement policy recommendation</b> with the agreement from the Ministry of Finance’s Comptroller General’s Department (CGD) to integrate the EE procurement guidelines to the overall government’s procurements to support the cabinet resolution that targets 10 per cent of the energy usage yearly. LED lighting and Split-type AC will be the pilot items to be introduced to the e-bidding for public procurement process. DEDE, through the project, is now supporting the CGD to develop the special specification of these appliances.</p> <p><b>(4) Improved communication and coordination with related agencies</b> to link the project results with the broader national policies on climate change mitigation actions. This includes raising the issues in the project board meetings for advice, and sharing information with responsible agencies (Office of Natural Resources and Environmental Policy and Planning, Thailand Greenhouse Gas’s Management Organisation), on NAMA and the follow-up of the Paris Agreement.</p> <p>The critical risks identified during this reporting period are:</p> <p>(1) In response to the Midterm Review’s recommendation on improving monitoring and documentation of results, the project team has revisited the logical framework to ensure that all the targets are clearly understood and good documentation is in place to report the results against the targets. Regular project monitoring meetings are conducted. However, the systematic documentation of results has not yet been fully operated and more effective means to measure the results from trainings and the use of simulation as well as the data base system will need to be developed to better capture the project’s outcomes. UNDP will work with DEDE and the project management team to further improve this system by end of Q3/2016.</p> <p>Replication potential and the sustainability of the demonstration buildings’ impacts: the project has made substantial progress on demonstration buildings in this reporting period as mentioned above. However, as the demonstration measures are under way, it will be important for the project to focus on how these demonstration buildings can leverage interests and commitment from other commercial building owners to invest on EE measures, to meet the project target.</p>
<p><b>GEF Operational</b></p>	<p>HIGHLY RECOMMENDED but NOT mandatory for projects under implementation in one country. Not necessary for regional or global projects.</p>

<p><b>Focal point</b> is the government representative in the country designed as the GEF operation focal point.</p>	<p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Provide recommendations for next steps.</li> </ol> <p>[DO rating in 2016]</p> <p>[comments]</p>
<p><b>Project Implementing Partner</b> is the representative of the executing agency (in GEF terminology). This would be Government (for NEX/NIM execution) or NGO (for CSO Execution) or an official from the Executing Agency (for example UNOPS).</p>	<p>RECOMMENDED but NOT MANDATORY for projects under implementation in one country and regional projects.</p> <p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Provide recommendations for next steps.</li> </ol> <p>Satisfactory (S)</p> <p>The overview of the project has been progressed significantly according to the project schedule. As the project director, I am quite satisfied with a good participation from both DEDE personnel and relevant stakeholders in the focus group and necessary meetings/seminars. The project received a lot of valuable comments and recommendations beyond expectation as a result of well organizing of the project team. Weekly meetings also moved the activities onward smoothly.</p>

	<p>DEDE appointed relevant officers from Bureau of Energy Regulation and Conservation, Bureau of Human Resource Development and Bureau of Energy Efficiency Promotion to be the members of Project Management Units (PMU) in order to supervise the implementation of the project and to ensure that the results of the project will effectively support the country's Energy Efficiency Development Plan (EEDP).</p> <p>The outcomes of each component indicated the positive trend towards the project objectives. In order to ensure the effectiveness of the implementation of the project, the Project Board (PB) consisting of representatives from all relevant government agencies and professional associations was set up. The PB has actively worked on giving useful inputs and recommendations in the 5<sup>th</sup> PB Meeting (January 2016). Annual budget, annual target and annual project planning were widely discussed and approved by the project board. The second PB meeting for Y2016 is planned for 28<sup>th</sup> July 2016 in order to closely supervise and monitor the last year implementation activities. The second project seminar for Y2016 is also planned for 25<sup>th</sup> August 2016 to disseminate the project results to target group.</p> <p>With an attempt to work towards the project implementation goals, DEDE followed the MTR recommendations by conducting more frequently activities on cooperation, coordination and project dissemination, such as increasing more Project Board Meeting twice a year, holding project seminar twice a year, participating more in relevant meetings and discussions as well as revising the log frame analysis that is in compliance with the recommended MTR.</p> <p>Last but not least, it is believed that the implementation of the project which is to be completed within timeframe will yield GHG emission reduction at EOP with the completion of the 12 demonstration buildings the application of BESM, the SEC normalization application, trained personnel, M&amp;V guidebook availability, as well as the extension of activities to further secure the sustainability of the project that can be pushed forward by DEDE.</p>
<p><b>Other Partners:</b> For jointly implemented projects, a representative of the other Agency working with UNDP on project implementation (for example UNEP or the World Bank).</p>	<p>RECOMMENDED but NOT MANDATORY for jointly implemented projects.</p> <p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol>

	<p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Provide recommendations for next steps.</li> </ol> <p>[DO rating in 2016]</p> <p>[comments]</p>
<p><b>UNDP Technical Adviser</b> is the UNDP-GEF Technical Adviser.</p>	<p>MANDATORY RATING MUST BE PROVIDED for all projects.</p> <p>Please review the cumulative progress toward end-of-project targets as noted in the DO tab of this PIR and provide a rating on this progress. Please consider the following questions before selecting a DO rating:</p> <ol style="list-style-type: none"> <li>1. Have all the results framework/logframe indicators been updated to end of June this year? Is sufficient evidence available to confirm the data provided? Has this evidence been uploaded to the PIR? If indicators could not be reported on please explain why in the DO rating comments section.</li> <li>2. Do the indicators adequately measure cumulative progress toward the project objective and outcomes? If not then please explain the mitigating circumstances in the DO rating comments.</li> <li>3. Consider the likelihood that the project will achieve its stated objective and outcomes and end-of-project targets by the planned project closure date.</li> <li>4. Consider whether sufficient measures will be in place by project closure to facilitate the long-term sustainability of results (e.g. exit strategy, new partnerships, indirect GEBs generated in the ten years after closure, additional co-financing, etc.).</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating (do not repeat the project objective).</li> <li>2. Note trends, both positive and negative, in achievement of outcomes as per the updated indicators provided in the DO sheet.</li> <li>3. Fully explain the critical risks that have affected progress.</li> <li>4. Outline action plan to address projects with DO rating of HU, U or MU.</li> </ol> <p><b>Moderately Satisfactory (MS)</b></p> <p>Based on the realized levels of achievement in each of the project component as compared to the set targets for the PIR 2016 reporting period, overall, the projects progress towards the achievement of its development objective is rated Moderately Satisfactory. The extent by which the planned deliverables were achieved from the implemented activities under each component were in line with the end-of-project levels, as per the projects' Annual Targets as well as the recommendations from the MTR and PIR 2015. There have been positive trends, in the achievement of outcomes under all three components. Examined outcome by component by component, the project results towards the development objective can be assessed as follows: At the Objective level on improving energy efficiency in the commercial building sector, the cumulative energy savings from the building sector amounted to 123 GWh (versus the 396 GWh targeted by EOP. The project achieved 0.37 % energy savings (vs. the 1.2% savings targeted by EOP); 50% of new buildings have fully complied with the new Building Energy Code (vs. the 60% targeted) and 20% of new buildings in Thailand are classified as EE buildings (vs. the 40% targeted by EOP) classified as energy efficiency building or High Energy Performance Standard Building (HEPS) according to the building compliance with the Energy Efficiency Development Plan being administered by DEDE. This positive</p>

trend is very encouraging. The energy savings and corresponding GHG emission levels that are reported are based on the energy data from 220 buildings that reported to the Buildings Energy Code center of DEDE. These figures need to be further validated to ascertain how much are directly and indirectly attributable to the project. This should be done, by Q1 2017, in the run up to the terminal evaluation.

The level of accomplishments are higher compared to the set end-of-project (EOP) as observed in the other indicators too. For example, in Component 1, 90% of overall commercial building stakeholders (vs. the 80 % targeted) agree to greater availability of pertinent information on EE technologies and practices through the PEECB project activities. The building energy simulation models – a tool for facilitating building owners, engineers, investors, and other related EE personnel in assessing the energy consumption of the building has been accomplished with the design containing information about EE equipment, and for support part of information from the original DEDE's BEC. Now the EE building personnel both in government and private sectors have been trained to get acquainted with its application and to ensure that the system is practical and easy for end users. Similarly, in component 2 the project has promoted and implemented the EE building technologies and financial scheme (20% Direct Subsidy from DEDE). Additionally a Revolving Fund for New Building proposed by the project and endorsed by DEDE. A 5 year action plan has been developed for EE in commercial buildings. Two new policy measures for commercial building EE approved (vs. 2 targeted by EOP) including the Commercial Building Disclosure which has been rolled out as a pilot as well as the Energy Efficiency Procurement (EE-Procurement) policy which has been accepted by the Comptroller General's Department. The possibility of integrating it with the government's E-market and E-Bidding systems are under discussion.

Almost 100 commercial building managers and practitioners have expressed interest and commitment in implementing EE building investment, through surveys conducted in component 3. Out of the surveyed participants 50% are at the management level as compared to the targeted 40%. Testament to this interest is the participation of 12 building owners (vs. 10 targeted) in the EE building demonstrations by adopting the energy efficiency improvement measures suitable to the building designs. Nine of the demos have accomplished the work of improving their EE buildings employing suitable EE technologies, such as chillers, air-conditioning system, LED, split type air-conditioners, heat pumps, etc., whereas the remaining 3 buildings have been working to reach their target of EE technologies modification. The project plans to start monitoring the EE measures as early as Q3 2016. The total amount of CO<sub>2</sub> GHG reduction from these twelve buildings – which have received PEECB technical assistance and financial support through DEDE's ENCON Fund- is estimated to be 3,005 ton CO<sub>2</sub>. The estimated private company investment on these 12 building reached 80,041,565 Baht (USD 2.4 million). There are 20 new buildings constructed (vs. 20 targeted), based on information derived from the BEC Database, applying the EE technologies that are promoted and successfully demonstrated in the PEECB demo projects.

	<p>The project framework has been reviewed in the MTR and was found to be consistent with the project design, plan and objectives and relevant to the needs of the stakeholders. DEDE, as the project implementing agency, has considered the MTR recommendations to improve the project logframe analysis wherever possible based on prevailing circumstances and project objectives. The PMU has revisited the logical framework in coordination and concurrence with UNDP to ensure that all the targets are clearly understood and results reported appropriately against the targets. However, the systematic documentation of results is still work in progress. The use of simulation as well as the data base system will need to be further developed to better capture the project's outcomes.</p> <p>The project has focused on the replication of the demonstration of EE technologies as gained from the 12 demos to enhance the sustainability of the project results in fully achieving the agreed GEBs (GHG reduction) and other objective level targets even after the project ends. However, as the demonstration of the EE building technologies is being completed, the project is endeavoring to sustain the momentum towards leveraging the private sector interests and commitment by other commercial building owners to decide and invest on EE building measures in line with the project overall objectives. It is recommended that the PMU includes sustainability (post-project exit arrangements) to carry on the project results and achievements.</p> <p>There is a critical risk reported on operational aspect on coordination with related agencies regarding the implementation of the demonstration buildings due to changes in selected sites and some internal problems of the building owners. This affected the realization of the project objectives as the project was originally expected to end originally in November 2016. The key development opportunity, and simultaneously critical risk, facing the project will be to ensure the new Building Energy Efficiency Building Code is enforced. Without such a mandatory Code in place, the project's long-term benefits will be compromised.</p> <p>On the overall, the project progress has been moderate and on track to achieve most of its major relevant objectives albeit with some shortcomings mainly due to the lack of time to complete all activities within the originally planned closure date. Cognizant of this, the PMU plans to request an extension of the project closure to be 30 June 2017. It is likely that the project will end with a high note but for this reporting period an MS rating is deemed appropriate and conservative. The reliability of the reported values and consistency of supporting information furnished during PIR 2016 need to be further verified and confirmed during the terminal evaluation of the project.</p>
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**General comments on Development Objective Rating**

NA
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<b>DO Progress: Rating Definitions</b>	
Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives and yield substantial global environmental benefits without major shortcomings. The project can be presented as “good practice”.
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives and yield satisfactory global environmental benefits with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.

## Adjustments: evidence to support annual Implementation Progress Rating

Please complete all sections of this tab. The IP Ratings on the next tab of this PIR should be informed by the inputs in the Adjustments tab. The responses should also be used by the UNDP Country Office to complete the UNDP annual project quality assurance assessment during implementation; the questions under “Annual Project Quality Assurance Assessment” have been aligned with that system. If you have any general comments about the information in this section of the PIR, please note them at the bottom of this page. Please upload the following documents as relevant on the approve/submit tab: project board meeting minutes; stakeholder consultation documents; lessons learned and other knowledge management materials.

### **Annual Project Quality Assurance Assessment**

<b>Project Governance</b>	
Are at least 40 percent of the personnel hired by the project, regardless of contract type, female?	Yes
Dates of Project Steering Committee/Board meetings during reporting period (30 June 2015 to 1 July 2016)	27 January 2016
Did the Project Board function as intended this reporting period?	Yes
Please add any comments on project governance.	-
<b>Annual Work Planning</b>	
Have project inputs been procured and delivered on time and budget this reporting period?	Yes
Will the project be able to close on time as planned?	No, it will need to request for an extension to close in June 2017, to make up for the delay during the inception phase.
Please add any comments on annual work planning	-
<b>Stakeholder engagement and target groups</b>	
Please discuss how stakeholders and target groups were directly engaged in the decision-making, implementation and monitoring of the project this reporting period.	During the reporting period, the project organized its 3 <sup>rd</sup> annual seminar to present the project results to building owners and government agencies. There were over 100 participants attending.
<b>Monitoring &amp; Evaluation (M&amp;E)</b>	
Please discuss how the project M&E Plan was implemented and used to support effective project management this reporting period (e.g. please consider whether progress data against the indicators in the project results framework was reported using credible data sources and collected according to the M&E plan, including sex disaggregated data as relevant; whether lesson learned were used to take corrective actions as necessary; whether evaluations were conducted following the UNDP-GEF guidance available at <a href="http://www.undp.erc.org">www.undp.erc.org</a> ; and other issues as relevant).	The project management team meets regularly on a monthly basis. UNDP programme officer meets with the project management team on a quarterly basis to discuss the progress and problems. The midterm review was conducted as planned, with strong engagement of the implementing partner and key stakeholders.
<b>Social &amp; Environmental Standards</b>	
Were any new social and environmental impacts and risks identified this reporting period?	No
Please discuss how social and environmental impacts and risks were managed this reporting period, as relevant.	-

### **Project Planning**

If delays have occurred in reaching key projects milestones - the inception workshop, the Mid-term Review and/or the Terminal Evaluation - then note below the current status of that milestone, the original planned and actual/expected dates, and comments to explain the reasons for the delays and their implications.

<b>Key Project Milestone</b>	<b>Status</b> (pick one option below)	<b>Original Planned Date</b>	<b>Actual/Expected Date</b>	<b>Comments</b> including reasons for delays and their implications
<b>Inception Workshop</b>	delayed/completed	Oct 2012	May 2013	The project has been actually commenced on April 2013 due to government procurement process to select the consultants to implement the project.
<b>Mid-term Review</b>	delayed/completed	October 2014	July 2015	Due to the delay in setting up the PMU, the mid-point evaluation started instead in April 2015.
<b>Terminal Evaluation</b>	delayed/pending	November 2016	January 2017.	Current project end date is November 2016.
<b>Project Closure</b>	delayed/pending	November 2016	June 2017.	The project is currently seeking and extension to 30 June 2017.

### **Critical Risk Management**

Select from below the critical risks only that appear in the ATLAS project risk log and briefly describe actions undertaken this reporting period to address each critical risk. Please ensure that any 'social' risks identified during the environmental and social screening of the project are reflected in the ATLAS risk log under type/description 'other'. Note that the total number of critical risks is used to calculate the overall risk rating of the project. The methodology to determine the overall risk rating is explained further on this page.

<b>Current/Active Critical Risks</b> (pick one option below; add rows as necessary)	<b>Critical Risk Management Measures Undertaken in 2016</b>
Operational	<p>The coordination with related agencies is one of the critical activities of this project. In this regard, the project team has increased a number of meetings or face-to-face discussion with related agencies in order to get collaboration and commitment.</p> <p>One of the outcomes of component no.3 is to demonstrate the implementation of energy efficiency measures in actual buildings. The demonstration buildings have been selected since last PIR, however, during this reporting period, the implementation in the demonstration has been delayed due to the actual site condition. In this regard, the project team has to closely supervise and monitor the progress of each demonstration site. This delay has caused the progress of the project in finalize the demonstration projects and realize the level of CO<sub>2</sub> reduction emission.</p>

## Implementation Progress Rating

<p><b>Project Manager / Coordinator</b> is the person managing the day to day operations of the project.</p>	<p>MANDATORY RATING MUST BE PROVIDED for projects under implementation in one country or regional projects where appropriate.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Summarize annual progress and address timelines of project output/activity completion in relation to annual workplans.</li> <li>3. Outline the general status of project expenditures in relation to annual budgets, the effectiveness of project management units in guiding project implementation, and the responsiveness of the project board in overseeing project implementation.</li> </ol>
	<p><b>Satisfactory (S)</b></p> <p>The project has been commenced since April 2013. Two consultants have been engaged to implement the project namely, BRIGHT Management Consulting Co.Ltd. (BMC) and Engineering Solution Provider Co.Ltd. (ENSOP). BMC, contracted in April 2013, is responsible for project management and all activities of component-1. ENSOP, contracted in August 2013, is the main consultant for component-2 and-3.</p> <p>As mentioned earlier, the activities of each outcome has been completed as planned even though there is a bit behind a schedule due to unseen situation such as change of demonstration buildings and their internal problems. As it is a long term project, the activities implemented will not be able to yield the result immediately for example the GHG reduction that can be effective after the finished task. The PIR concern on separate working of the two consultants is not in fact in the intention of the project management. As the work is complimentary, the two consultant has been working together every week and monitored by the working group comprising DEDE team. DEDE has not seen any work separation and independent working situation of the two consultants.</p> <p>The implementation of the project up until the end of June 2016, was completed as planned and came out in a concrete result such as the developed 13 technical and non-technical modules and the trainings organized during the year 2015-2016. The training courses already organized were – EE and eco-friendly building design, EE and eco-building development, Life cycle cost analysis, EE and eco-friendly building design (hospital and office building), Measurement and verification, Building energy simulation model. There were also a site visit included in the programme. Some of the venues of the training were also used to be a sample case of the study visit.</p>

	<p>Besides with the long period of data collection, study review on related information, finally resulted in the formulation of BESM, M&amp;V study of 4 systems of lighting, motor/pump/fan, air-conditioning, and hot water. The recommendations were to be published in a form of guidebook, and SEC normalization. The 12 buildings have gone far with completed improvement of the 9 buildings, left behind the 3 that have to be completed within the end of this year. For such completion, the amount of CO<sup>2</sup> reduction could be estimated as mentioned earlier.</p> <p>With the remaining time and the budget of the project, DEDE and the consultation plan to implement the activities that are still to be completed such as the training programmes developed under the 13 modules, M&amp;V training, BESM training, the project seminars, dissemination of the project achievement of 12 demonstration projects, EE tools to help promote EE building, useful information and data base. The project result will be brought for further expansion nationwide.</p>
<p><b>UNDP Country Office Programme Officer</b> is the UNDP programme officer in the UNDP country office who provides oversight and supervision support to the project.</p>	<p>MANDATORY RATING MUST BE PROVIDED for projects under implementation in one country. Not necessary for regional or global projects.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol> <p>Please justify your rating and address the following points in your comments. The QORs and delivery data in the ERBM portfolio project monitoring report should inform your rating. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating. If your rating differs from the rating provided by the project manager please explain why.</li> <li>2. Summarize annual progress and address timeliness of project output/activity completion in relation to annual workplans.</li> <li>3. Outline the general status of project expenditures in relation to annual budgets, the effectiveness of project management units in guiding project implementation, and the responsiveness of the project board in overseeing project implementation.</li> </ol> <p><b>Moderately Satisfactory (MS)</b></p> <p>The overall implementation progress rating is Moderately Satisfactory (MS) as most of the planned activities and outputs of 2015 are met, with Midterm Review conducted as planned in July 2015.</p> <p>The specific rating for each aspect of the implementation progress is detailed as follows:</p> <ul style="list-style-type: none"> <li>• <b>Progress in delivery of outputs:</b> Satisfactory (MS) – this is because the annual outputs represent sufficient progress to achieve the outcomes with caution on the risks regarding the monitoring, reporting, and documenting</li> </ul>

	<p>of results, as well as replication potential and sustainability as explained in the Development Objective Rating.</p> <ul style="list-style-type: none"> <li>• <b>Efficiency in delivery of outputs:</b> Moderately Satisfactory (MS) – this is because although the project has spent the resources as planned, the effectiveness of the results are not evident and there is a need to strengthen the quality of deliveries including systematic documenting and reporting of results.</li> <li>• <b>Quality of Risk Management:</b> Satisfactory (MS) – this is because the project managed to address the shortfalls in the policy outcomes in the previous reporting period, by stepping up the coordination efforts with senior management level of DEDE and with concerned agencies in order to push forward the policy recommendations, with good result on the EE procurement policy.</li> <li>• <b>Quality of Adaptive Management:</b> Satisfactory (MS) – this is because the project has made sufficient responses to the Midterm Review recommendations in the area of simplifying and getting common understanding of the logical framework and the project targets, better coordination and communication with wider stakeholders, and improving coordination and synergy of the project management unit.</li> </ul>
<p><b>GEF Operational Focal point</b> is the government representative in the country designed as the GEF operation focal point.</p>	<p>HIGHLY RECOMMENDED but NOT mandatory for projects under implementation in one country. Not necessary for regional or global projects.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative.</li> <li>3. Provide recommendations for next steps.</li> </ol> <p>[IP rating in 2016]</p> <p>[comments]</p>
<p><b>Project Implementing Partner</b> is the</p>	<p>RECOMMENDED but NOT mandatory for projects under implementation in one country or regional projects.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> </ol>

<p>representative of the executing agency (in GEF terminology). This would be Government (for NEX/NIM execution) or NGO (for CSO Execution) or an official from the Executing Agency (for example UNOPS).</p>	<ol style="list-style-type: none"> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol> <p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative.</li> <li>3. Provide recommendations for next steps.</li> </ol> <p><b>Satisfactory (S)</b></p> <p>According to the progress and the results of this project, we are very optimistic with the project. We have confidence on the project outcomes that could help DEDE strengthening Energy Efficiency Development Plan particularly in building sector.</p> <p>The recommended new policies such as the EE Procurement would be able to strengthen the procurement process concerning not only the price of the equipment but also the energy efficiency. The Energy Saving Certificate is a new idea to encourage the buildings to implement further energy conservation measures.</p> <p>Building Energy Simulation Model, BESM is quite friendly for designer to use broadly and would also be able to use as a tool to help our staffs monitor the implementation of Building Energy Code.</p> <p>Training structure on Energy Efficiency in Commercial Buildings, one of the outcomes of component-1, is very useful for human resource development. The structure covered all target groups namely, project owner or developer, designer, professional who works in the buildings and project consultants. The project team is currently working closely with Bureau of Human Resource Development, DEDE, to integrate the new developed curricula together with the existing curricula. The training courses have been organized for 7 times during this reporting period, and has been planned to organize for the rest of the project.</p> <p>The outcomes which are progressing, DEDE will also plan to take further action to move forward for implementation phase upon completion of each related activity.</p>
<p><b>Other Partners:</b> For jointly implemented projects, a representative of the other Agency working with UNDP on project implementation (for example UNEP or the World Bank).</p>	<p>RECOMMENDED but NOT mandatory for jointly implemented projects.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol>

	<p>Please justify your rating and address the following points in your comments. Please keep word count between 200 words minimum and 500 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating.</li> <li>2. Note trends, both positive and negative.</li> <li>3. Provide recommendations for next steps.</li> </ol>
	[IP rating in 2016]
	[comments]
<p><b>UNDP Technical Adviser</b> is the UNDP-GEF Technical Adviser.</p>	<p>MANDATORY RATING MUST BE PROVIDED for ALL projects.</p> <ol style="list-style-type: none"> <li>1. Please rate the efficiency in delivery of outputs. For example, in this reporting period, is project delivery on target with the Annual Work Plan? Is cumulative project delivery on track?</li> <li>2. Please rate the quality of project governance and project management. For example, in this reporting period did the Project Board address critical issues? Did the project manager effectively implement the decisions of the Project Board?</li> <li>3. Please rate the quality of risk management. For example, in this reporting period were project risks, including any social and environmental safeguard risks, managed effectively,?</li> <li>4. Please rate the quality of adaptive management. For example, in this reporting period were actions taken to address implementation issues identified in the PIR last year?</li> <li>5. Please rate the quality of monitoring and evaluation. For example, in this reporting period were sufficient financial resources allocated to project monitoring and evaluation?</li> </ol> <p>Please justify your rating and address the following points in your comments. The QORs and delivery data in the ERBM portfolio project monitoring report should inform your rating. Please keep word count between 500 words minimum and 1200 words maximum.</p> <ol style="list-style-type: none"> <li>1. Explain why you gave a specific rating. If your rating differs from the rating provided by the UNDP Country Office Programme Officer and/or the Project Manager please explain why.</li> <li>2. Summarize annual progress and address timelines of project output/activity completion in relation to annual workplans.</li> <li>3. Outline the general status of project expenditures in relation to annual budgets, the effectiveness of project management units in guiding project implementation, and the responsiveness of the project board in overseeing project implementation.</li> </ol>
	Moderately Satisfactory (MS)
	<p>The Project Management Unit is to be congratulated for improving the pace of delivering project activities and outputs in line with the 2016 AWP. The positive trends observed in the implementation of the project during this period are: significant progress in the implementation of EE measures across all 12 demonstration buildings resulting to energy savings and GHG reduction; completion of the training modules with wider reach and favorable feedback; discussion with the Comptroller General’s Department to integrate the EE building procurement guidelines in the government procurement system as well as improved communication and coordination with related agencies. As of June 2016, as seen in the DO Table above, however, completing the delivery of remaining EOP outputs and outcomes lack the time to meet the project expectations, thus prompting the project team to request an extension up to June 2017. With the remaining time and possible extension as requested and the remaining budget, the project proceeds to implement the activities that are still to be completed such as the training programs developed under the 13 modules, M&amp;V training, BESM training, the project seminars, dissemination of the project achievements of 12 demonstration projects, effective implementation of the EE tools to help promote EE building. Therefore, the efficiency of delivery of outputs has been rated as Moderately Satisfactory</p>



considering the abovementioned achievements and the effort of the PMU to push the delivery of the slow moving outputs.

In terms of financial performance in 2015/2016 AWP budget requested, with the expenditure of USD 371,813.17 and budget of USD 761,885.34, the delivery rate translates to 48.80% as of July 13, 2016 with some payables committed within the period. At this stage of the project implementation, the overall expenditure since inception is USD 2,017,842.76 compared to the total GEF budget of USD 3,637,273.00 or 55% spent and fund balance of USD 1,619,430.24 as of 31 December 2015. On the overall, delivery rate on budget requested is Moderately Satisfactory.

On project governance and project management, the project team has strengthened the implementation through closer cooperation, coordination, information sharing and regular focused group discussions, meetings and seminars with project stakeholders and other related agencies with the aid of relevant project details and updates in order to reach collective decision and direction. Through this approach, the project team received a lot of valuable comments and recommendations in continuously improving the project implementation performance. DEDE appointed relevant officers from Bureau of Energy Regulation and Conservation, Bureau of Human Resource Development and Bureau of Energy Efficiency Promotion to be the members of PMU in order to supervise the implementation of the project and to ensure that the results of the project will effectively support the country's Energy Efficiency Development Plan (EEDP). The Project Board (PB) has been responsive and worked on giving useful inputs and recommendations such as those generated in the 5<sup>th</sup> PB Meeting (January 2016) on the critical policy recommendations, annual target and project planning. It is recommended that the PB is takes on a more championing role to push new policy frontiers in advancing the endorsement of the new Buildings Energy Code Therefore, the quality of project governance and management: Moderately Satisfactory.

As the project nears closure, the project has been exerting much effort in mitigating the reported critical risk for the year on operational aspect on coordination with related agencies regarding the implementation of the demonstration buildings as mentioned above. To mitigate this risk, the project team pushed for closer cooperation, coordination, information sharing and regular focused group discussions, meetings and seminars with project stakeholders and other related agencies to reach common decision and direction and motivating participation on agreed action plans. The project managed to address the difficulties in the policy development and adoption outcomes experienced last year with favorable result on the EE building procurement policy. Therefore, quality of risk management is rated Moderately Satisfactory

DEDE recognizes the importance of the project sustainability as indicated in the PIR. Discussion, therefore, has been underway to identify ways and means of how to sustain the outcome of the project. It is also of the DEDE's executives concern and therefore set certain possible projects to respond to the project extension. Besides, some policy framework such as energy disclosure programs, the support to the recently proposed revolving fund as well as the ENCON fund are some of the means

of providing financial support for future replications of EE measures and ensuring project accomplishments are sustain well beyond the EOP. . The project sustainability has been recognized and started to be discussed with DEDE and other related agencies such as TGO, BMA who have recognized the benefit of this project and saw the great importance of sustaining the project results and GEBs so far achieved.

In the course of project implementation towards completion, the PMU continued to adapt its management into directions that will bring contributions to the overall global environmental benefits. Several of the MTR recommendations have been taken on board, such as refining the logical framework; forging new partnerships within and outside the government in order to sustain the achievement of the project in long-term; as well as recruiting more demo projects in order to implement replications of the achieved project results. The project has made efforts in developing international linkages, by proactively participating at the International Symposium on Buildings EE organized in New Delhi, India. During and after the event it has successfully shared project results and experiences with countries involved in similar buildings EE projects. Moving on the PMU has to ensure that strategic partnerships are established and sustained with key national agencies, municipal governments and associations in the building sector. With this performance, the quality of adaptive management is rated Moderately Satisfactory.

On M&E, based on the performance evaluation conducted by the MTR, the project has resolved to improve the monitoring, reporting and feedback system. However, active monitoring and reporting by the IP and UNDP CO needs to be substantially improved. This is particularly with regards to substantiating reported progress with underlying documented evidence supporting materials. It is suggested that the CO ascertains that available UNDP results based management tools including the PIR are taken seriously as comprehensive and an important M&E tool and sufficiently used. There is significant room for improving the quality of M&E, hence, it is rated as Moderately Satisfactory.

Overall, the project’s implementation performance is rated Moderately Satisfactory since the implementation of some components is in compliance with the project implementation plan except for only few that were subject to remedial action. The project is anticipated to focus its attention on the timely execution of the remaining project activities and on translating activities into scalable and long lasting impacts on the ground.

***General comments on Implementation Progress Rating***

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<b>Implementation Progress: Ratings Definitions</b>	
Highly Satisfactory (HS)	Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
Satisfactory (S)	Implementation of most components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
Moderately Satisfactory (MS)	Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.
Unsatisfactory (U)	Implementation of most components is not in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of none of the components is in substantial compliance with the original/formally revised plan.

## Gender

All projects must complete this section.

This information is used in the UNDP-GEF Annual Performance Report, UNDP-GEF Annual Gender Report, reporting to the UNDP Gender Steering and Implementation Committee and for other internal and external communications and learning.

<p><b>Has a gender analysis been carried out this reporting period?</b>  <i>Please note that all projects approved in GEF-6 (1 July 2014 through 30 June 2018) are required to carry out a gender analysis.</i></p>	<p>Will be carried out in the future</p>
<p><b>If a gender analysis has been carried out what were the findings?</b></p>	<p>N/A</p>
<p><b>Does this project specifically target women or girls as key stakeholders?</b></p>	<p>No</p>
<p><b>Please specify results achieved this reporting period that focus on increasing gender equality and improving the empowerment of women.</b>  <i>Results reported can include site-level results working with local communities as well as work to integrate gender considerations into national policies, strategies and planning. Please explain how the results reported addressed the different needs of men or women, changed norms, values, and power structures, and/or contributed to transforming or challenging gender inequalities and discrimination.</i></p>	<p>The project is open for men and women to participate in all activities. In this reporting period, we have had women participation in following activities;</p> <ol style="list-style-type: none"> <li>1. Project Management PEECB Project Director, 5 out of 14 PB members, 1 of PMU member and a number of administrative staff are women</li> <li>2. Design Development There are a number of women as engineers and experts in design development team</li> <li>3. Software Programmer</li> <li>4. Participants in the Project Annual Seminar</li> </ol>
<p><b>Please upload the gender analysis and any other documents related to the project's gender-related results.</b></p>	<p>[uploading only possible in PIR system; list here the files that you plan on uploading]</p>

### General comments on Gender

## Communicating Impact

All projects must complete this section.

***Tell us the story of your project, focusing on how the project has helped to improve people's lives.***

Please use 500 words or less.

Avoid UN jargon, acronyms, and technical terms. Use plain language.

Include quotes from beneficiaries, if possible, and be sure to provide their names

The following questions can be used as guidance for your story:

What is this project about – the issue, interventions, and impacts?

Who are the beneficiaries of this project?

How have project interventions improved people's livelihoods?

What was the most notable achievement during this reporting period?

This text will be used for UNDP corporate communications, the UNDP-GEF website, and/or other internal and external knowledge and learning efforts.

The Department of Alternative Energy Development and Efficiency (DEDE), a government agency responsible for energy conservation development, in cooperation with the United Nations Development Program (UNDP) has implemented the project on Promoting Energy Efficiency in Commercial Buildings – PEECB with financial support partially from GEF, and co-financing from Thai private and government sectors. The project's goal is to reduce greenhouse gas emission from the commercial buildings by promoting the use of building energy efficiency (EE) technologies. Its objectives are to;

1. Enhance awareness on energy efficiency in commercial buildings in Thailand including the establishment of EE Information Center, personnel training, and development of the energy use simulation programme for commercial buildings in Thailand
2. Study and set the policy framework, practical long and short term implementation plans for commercial buildings EE promotion, as well as evaluate and improve policy measures of EE in commercial buildings
3. Demonstrate the application of EE technologies in commercial buildings which can be disseminated and replicated to other buildings.

To meet with the project objectives and GHG reduction goal, DEDE and UNDP agreed to implement this 4 Years project covering activities being categorized therein comprise;

Component 1: Awareness Enhancement on Building EE Technologies and Practices

Component 2: Updated and More Effective Policy Measures on EE in Commercial Buildings

Component 3: EE Building Technologies and Application Demonstration

The project set the objectives to be in consistent with the Energy Ministry's Energy Efficiency Development Plan, EEDP which has the target with long term reduction of energy import and environmental impact through energy efficiency in commercial buildings.

Since the project has been commenced in April 2013, several activities have been organized during the past period. Summarization of the notable results of the implemented activities in this reporting period are;

1. Organizing 7 training courses under the developed training program for technical and non-technical modules
2. Development of Building Energy Simulation Model, BESM
3. Development of 3 x Newsletters (No.3- 5)
4. Organizing of PEECB Annual Seminar on 24 February 2016

5. Development of detailed recommended policy on Energy Efficiency Procurement (EE-Procurement), Stepped BEC, and Energy Building Disclosure
6. Development of detailed database on construction materials and energy efficiency equipment
7. Development of detailed study on Specific Energy Consumption (SEC) for Office Building (hotel, hospitals, department stores)
8. Development of M&V methodology for Air Conditioning and Lighting System
9. Demonstration buildings have been in progress of EE improvement under the financial support and recommended technologies
10. Conducting the baseline analysis for all demonstration buildings
11. Conducting M&V process for all demonstration buildings
12. Preparation of dissemination materials to promote the results from all demonstration buildings
13. Preparation of list of potential list of proven technologies
14. Conducting survey to identify potential and interested buildings to implement the technologies adopted from the demonstration buildings

The results and outcomes of the project will enhance the energy efficiency policy of the country and will also promote the concept of energy efficiency buildings in Thailand. Energy Efficiency Buildings Concept of PEECB will not only concern about energy saving but also the quality of life of the people who live or work in the buildings.

***What is the most significant change that has resulted from the project this reporting period?***

The most significant change could be positive or negative and could relate to any aspect of the project such as direct beneficiaries, communities, partnerships, policy. The purpose of this section is to capture lessons learned and changes that many not be revealed through the project’s logical framework or other parts of the PIR.

This text will be used for internal knowledge management in the respective technical team and region.

The outcomes of the PEECB Project might be able to change mindset of the developers, building owners and all related stakeholders with regard to the development of Energy Efficient Buildings. The information and knowledge provided in each project activity during this reporting period might be able to create awareness and provide detail information and necessary implementation tools that will be able to assist all stakeholders in developing Energy Efficiency Buildings.

***Describe how the project supported South-South Cooperation and Triangular Cooperation efforts in the reporting period.***

Describe the main focus of the efforts. What is the evidence that the initiative(s) contributed to results?

This text will be used for internal knowledge management in the respective technical team and region.

NA

***Project links & social media***

Please list below the website addresses (URLs) that exist for this project, including any links to social media sites. Please include: Project website, Project page on

<http://dede-peecb.bright-ce.com/>

the UNDP website, Adaptation Learning Mechanism (UNDP-ALM) platform, Facebook, Twitter, Flickr, YouTube, Google +	
Please share hyperlinks to any media coverage of the project, for example, stories written by an outside, external source.	
Please upload any supporting files, including photos, videos, stories, and other documents.	[uploading only possible in PIR system; list here the files that you plan on uploading]

***General comments on Communicating Impact***

## Partnerships

All projects must complete this section. Please enter "N/A" in cells that are not applicable to your project.

This information is used to get a better understanding of the work GEF-funded projects are doing with key partners, including the GEF Small Grants Programme, indigenous peoples, the private sector, and other partners. The data may be used for reporting to GEF Secretariat, the UNDP-GEF Annual Performance Report, UNDP Corporate Communications, posted on the UNDP-GEF website, and for other internal and external knowledge and learning efforts. The RTA should view and edit/elaborate on the information entered here.

Partners	<i>Give the name of the partner(s), and describe the partnership, recent notable activities and any innovative aspects of the work. Please do not use any acronyms. (limit = 2000 characters for each section)</i>
Civil Society Organisations/NGOs	N/A
Indigenous Peoples	N/A
Private Sector	There are 12 commercial buildings participating in this project as the demonstration sites namely, (1) Saint Gabriel's College, (2) Provincial Electricity Authority (PEA)-Office Building, (3) CP Tower 2, (4) Double A, (5) Energy Complex Office Building, (6) Kasikorn Bank Office Building, (7) Centara Grand Hotel at Central World, (8) Chaweng Garden Beach Resort, (9) Grand Mercure Bangkok Fortune Hotel, (10) Samrong General Hospital, (11) Aikchol-I Hospital and (12) Aikchol-II Hospital.
GEF Small Grants Programme	N/A
Other Partners	N/A

### General comments on Partnerships



## Environmental or Social Grievance

This section must be completed by the UNDP Country Office if a grievance related to the environmental or social impacts of this project was addressed this reporting period.

It is very important that the questions are answered fully and in detail.

*If no environmental or social grievance was addressed this reporting period then please do not answer the following questions.*

*If more than one grievance was addressed, please answer the following questions for the most significant grievance only and explain the other grievance(s) in the comment box below.*

<b>What environmental or social issue was the grievance related to?</b>	NA
<b>What is the current status of the grievance?</b>	NA
<b>How would you rate the significance of the grievance?</b>	NA
<b>Please describe the on-going or resolved grievance noting who was involved, what action was taken to resolve the grievance, how much time it took, and what you learned from managing the grievance process (maximum 500 words). If more than one grievance was addressed this reporting period, please explain the other grievance (s) here.</b>	NA

Rating	Description
Minor	The grievance had/has a low impact on the day-to-day implementation of the project.
Significant	The grievance had/is having a significant impact on the day-to-day implementation of the project, but the project is still expected to achieve its objective.
Serious	The grievance had/is having a serious impact on the day-to-day implementation of the project, and there is a risk (50% or higher) that the project may not be able to achieve its objective.

## Sustainable Development Goals

The UNDP-GEF Technical Advisor and Programme Associate must complete this section. Please select one or more Sustainable Development Goals that align with the results, impact and type of work of the project. For more information on the Sustainable Development Goals please visit <http://www.un.org/sustainabledevelopment/>.

Goal 1	End poverty in all its forms everywhere
Goal 2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3	Ensure healthy lives and promote well-being for all at all ages
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5	Achieve gender equality and empower all women and girls
Goal 6	Ensure availability and sustainable management of water and sanitation for all
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10	Reduce inequality within and among countries
<b>Goal 11</b>	<b>Make cities and human settlements inclusive, safe, resilient and sustainable</b>
<b>Goal 12</b>	<b>Ensure sustainable consumption and production patterns</b>
<b>Goal 13</b>	<b>Take urgent action to combat climate change and its impacts</b>
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

	<b>Goal 17</b>	Strengthen the means of implementation and revitalize the global partnership for sustainable development
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