

UNDP GEF APR/PIR 2007 – CLIMATE CHANGE

(1 July 2006 to 30 June 2007)

I. Basic Project Data

Official Title:	Malaysia Building Integrated Photovoltaic Technology Application Project (MBIPV)
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Country/ies:	Malaysia	PIMS Number	2754
		Atlas Project Number	00042090

Focal Area	CC	Project Type (FSP/MSP)	FSP
Strategic Priority	SP-5	Operational Programme	OP-7

Date of Entry into Work Programme	21 May 2004	Planned Project Duration	5 years
ProDoc Signature Date	11 May 2005	Original Planned Closing Date	30 September 2010
Date of First Disbursement	5 November 2005	Revised Planned Closing Date	N/A
Is this the Terminal APR/PIR?	NO	Date Project Operationally Closed (if applicable)	N/A


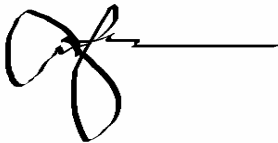
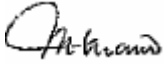
Date Mid Term Evaluation¹ carried out (if applicable)	N/A	Date Final Evaluation¹ carried out (if applicable)	N/A
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Dates of visits to project by UNDP country office	22 June 2007	Date of last TPR Meeting (NSC)	27 Mar 2007
Date of last visit to project by UNDP-GEF RTA	7 March 2007		

¹ If an evaluation has been carried out in the last 12 months the report should be attached to this document.

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Project Contacts:

Title	Name	E-mail	Date	Signature
National Project Manager / Coordinator	Ir. Ahmad Hadri Haris	hadri@ptm.org.my	30 Jul 2007	
Government GEF OFP ² (optional)	Dr. Teddy Lian Kok Fei	drlian@nre.gov.my		
UNDP Country Office Programme Manager	Mr. Asfaazam Kasbani	asfaazam.kasbani@undp.org	20 Aug 2007	
UNDP Regional Technical Advisor	Dr. Manuel Soriano	manuel.soriano@undp.org	20 Sep 2007	

Project Summary (as in PIMS and ProDoc)

The Malaysia Building Integrated Photovoltaic (BIPV) Technology Application Project, MBIPV, is intended to induce the long-term cost reduction of the non-emitting GHG technology (i.e. the photovoltaic or PV) via integration of the PV technology within building designs and envelopes. It is aimed at creating a sustainable BIPV market in Malaysia that will generate widespread BIPV applications. The MBIPV project will specifically focus on the market development for BIPV technology, and building the national capacities on three major areas: (a) policy and education; (b) technical skill and market implementation; (c) technology development support. The project will catalyze BIPV technology acceptance among the public, policy makers, financiers and building industry, which will lead towards a sustainable BIPV market beyond the completion of the project. The project objectives will be achieved via a multi-pronged approach: (1) BIPV information services, awareness and capacity building programs; (2) BIPV market enhancement and infrastructure development; (3) BIPV policies and financing mechanisms program; (4) BIPV industry development and technology localization program.

² In the case of a project involving more than 1 country, it is suggested that for simplicity only the OFP (optional) and Country Office Programme Manager from the lead country sign-off. If representatives from more than 1 country sign off, please add additional rows as necessary, clearly indicating the country name for each signature.

II. Progress towards achieving project objectives

Project Objective and Outcomes	Description of Indicator ³	Baseline Level ⁴	Target Level ⁴	Level ⁴ at 30 June 2007
Objective: The overall capacity (technical, policy, planning, institutional, fiscal, financial) both in government and the private sectors, to develop, design and make use of the BIPV energy potential and to develop local industry is significantly improved.	1) % of increased installed BIPV capacity against baseline ⁵	468 kWp ⁶	28%	42% (663 kWp)
	2) % of BIPV unit cost reduction against baseline	US\$8,266 (corrected from US\$7,900)	2%	11% (US\$7,370)
	3) No. of National BIPV program integrated into the 10th Malaysian Plan	0	0	0
Objective 1: BIPV Information Services, Awareness and Capacity Building Programs				
Outcome 1.1: Integrated information and awareness building program on BIPV	4) • No. of books/ magazines/ references available in the resource centre at PTM • No. of staff available as BIPV spokesperson	0	24	45
	5) No. of hits on the BIPV website and visitors each year that received information	0	120	22,202
	6) • No. of media articles published • No. of brochures distributed • No. of PVPS meetings attended	8 0 2	2 500 1	63 2,000 1
	7) • No. of media adverts published • No. of seminars/ workshops organized • No. of talks delivered	0 2 3	4 2 2	16 2 16

³ This should describe the quantitative indicator

⁴ This should be a quantitative numerical value

⁵ (inclusive of awarded Suria 1000 capacity but not yet commissioned)

⁶ Corrected from 465 kWp

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Project Objective and Outcomes	Description of Indicator³	Baseline Level⁴	Target Level⁴	Level⁴ at 30 June 2007
	<ul style="list-style-type: none"> • No. of developers' launching • No. of road show implemented 	1 0	1 1	2 2
Outcome 1.2: National BIPV database	8) No. of download from BIPV database and visitors each year that received information	0	50	5,100
Outcome 1.3: BIPV training courses	9) <ul style="list-style-type: none"> • No. of in-house training course organized • No. of support staff (PTM) fully trained. 	0 0	0 0	0 0
	10) <ul style="list-style-type: none"> • No. of training manual developed • No. of training institute established 	0 0	1 1	1 1
	11) <ul style="list-style-type: none"> • No. of trainings conducted • No. of participants enrolled • % of participants passing the exam 	0 0 0%	2 24 80%	1 15 80%
Outcome 1.4: Malaysian PV Industry Association	12) <ul style="list-style-type: none"> • No. of meetings organized (including pro-tem meetings) • No. of members (full and associate members) 	1 0	2 15	7 31
	Outcome 1.5: Quality control programs for local industry	13) <ul style="list-style-type: none"> • No. of BIPV quality consultants appointed • No. of BIPV systems checked 	0 0	0 0
	14) No. of companies approved as "Approved PV Service Provider" and one-stop centre	0	1	0
	15) <ul style="list-style-type: none"> • No. of BIPV award ceremony • No. of winners for BIPV award ceremony 	0 0	0 0	0 0

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Project Objective and Outcomes	Description of Indicator³	Baseline Level⁴	Target Level⁴	Level⁴ at 30 June 2007	
Outcome 1.6: Capacity building and awareness programs for policy makers and financial sector	16) <ul style="list-style-type: none"> • No. of participants • No. of local study missions • No. of international study missions 	0 0 0	15 1 1	27 2 0	
Outcome 1.7: International BIPV event for decision makers	17) <ul style="list-style-type: none"> • No. of international BIPV event hosted in Malaysia • No. of participants 	0 0	0 0	0 0	
Outcome 1.8: Disseminate information and lessons learn to regional ASEAN countries	18) No. of presentation at RE-SSN meetings and to other ASEAN countries	1	0	0	
Outcome 1.9: Impact assessment of BIPV technology development	19) No. of surveys conducted	0	1	1	
Component 2: BIPV Market Enhancement and Infrastructure Development Program					
Outcome 2.1: Standards and guidelines development	20) No. of PV standard published by DSM	0	0	0	
	21) No. building standard/guideline developed	0	0	0	
Outcome 2.2: Review and final design of the planned BIPV showcases	22) <ul style="list-style-type: none"> • No. of tender documents or approved design for BIPV showcase “office building” • No. of tender documents or approved design for BIPV showcase “Government building” • No. of tender documents or approved design for BIPV showcase “public access building” • No. of tender documents or approved design for BIPV showcase “residential property” 	0 0 0 0	0 1 1 1	0 1 1 1	
	Outcome 2.3: Hardware installation and operation of the BIPV showcases	23) <ul style="list-style-type: none"> • BIPV showcase “office building” installed capacity • BIPV showcase government building” installed capacity 	0 0	45 kWp 0	91.86 kWp 0

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Project Objective and Outcomes	Description of Indicator³	Baseline Level⁴	Target Level⁴	Level⁴ at 30 June 2007
	<ul style="list-style-type: none"> • BIPV showcase “public access building” installed capacity • BIPV showcase “residential property” installed capacity 	0	0	7.36 kWp
		0	20 kWp	5.25 kWp
Outcome 2.4: Evaluation of demonstration sites	24) No. of BIPV demonstration applications received	0	4	5
Outcome 2.5: Design and evaluation of technical and commercial viability for the demonstration projects	25) No. of BIPV demonstration projects evaluated and approved	0	3	5
Outcome 2.6: BIPV demonstration implementation and operation at government and private buildings	26) No. of BIPV demonstration installed capacity	0	20 kWp	18.10 kWp
Outcome 2.7: Review and promotion of national PV program "Suria 1000"	27) No. of review/assessment reports prepared	0	1	1
	28) <ul style="list-style-type: none"> • No. of adverts published • No. of launching/calls for “bidding” announced 	0 0	2 2	4 2
Outcome 2.8: Implementation and operation of "Suria 1000"	29) No. of BIPV systems awarded	0	8	14
	30) Awarded installed capacity under Suria 1000	0	40 kWp	58.26 kWp
	31) Cumulative of awarded BIPV installed capacity under Suria 1000	0	40 kWp	58.26 kWp
Outcome 2.9: Monitoring and evaluation of BIPV projects	32) No. of PV monitoring centre established	0	1	1
	33) No. of BIPV systems monitored	0	3	1
	34) No. of evaluation reports published	0	0	0
Outcome 2.10: Dissemination and promotion of demonstration program results	35) No. of information (BIPV system and results) disseminated	0	0	0
	36) No. of workshop participants	0	0	0
Outcome 2.11: Sustainable follow-up program design	37) No. of follow-up program submitted to EPU	0	0	0

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Project Objective and Outcomes	Description of Indicator³	Baseline Level⁴	Target Level⁴	Level⁴ at 30 June 2007
Component 3: BIPV Policies and Financing Mechanisms Program				
Outcome 3.1: Techno-economic analysis for grid-connected BIPV	38) No. of reports submitted to NSC	0	1	1
Outcome 3.2: Design and implementation of government incentives to utility and manufacturing industry	39) No. of reports on proposal and recommendation submitted to NSC	0	2	0
Outcome 3.3: Analysis on existing and new financial mechanism and fiscal incentives	40) No. of assessment reports submitted to NSC	0	1	1
	41) No. of proposal and recommendation submitted to NSC	0	2	1
Outcome 3.4: Implementation of a fiscal and financial framework for a sustainable follow-up program	42) No. of policy formulated and proposed to NSC	0	0	1
	43) No. of policy recommendations endorsed by Government	0	0	0
Outcome 3.5: Study on past experience and impact on international regulatory schemes	44) No. of assessment report submitted to NSC	0	1	1
Outcome 3.6: Review and integration of BIPV in existing regulatory schemes	45) No. of assessment report submitted to NSC	0	1	1
	46) No. of BIPV systems registered under SREP	0	16	4
	47) No. of reports on proposal and recommendation submitted to MEWC	0	1	1
Outcome 3.7: Implementation of an institutional and policy framework for a sustainable follow-up program	48) No. of policy formulated and proposed to MEWC	0	0	0
	49) No. of policy endorsed by Government in the 10 th Malaysia Plan	0	0	0
Outcome 3.8: Policy and financial framework implementation, monitoring and impact assessment	50) No. of annual policy impact assessment conducted during 10 th Malaysia Plan.	0	0	0
	51) No. of annual policy impact assessment completed and reviewed by MEWC	0	0	0

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Project Objective and Outcomes	Description of Indicator³	Baseline Level⁴	Target Level⁴	Level⁴ at 30 June 2007
Outcome 3.9: Government liaison and dissemination of results	52) No. of workshop participants	0	0	0
Component 4: BIPV Industry Development and Technology Localization Program				
Outcome 4.1: Activities on cost reduction of local BIPV products and system optimization for local condition	53) No. of MoA signed for product development activity	0	0	0
	54)			
	• No. of pre-commercialize inverter produced	0	0	0
	• No. of pre-commercialized inverter pilot tested	0	0	0
	• No. of industry collaboration (MoU) established	0	0	0
Outcome 4.2: International collaboration and transfer technology program	55)			
	• No. of industry missions completed	0	1	2
	• No. of international collaborative program materialized	0	0	5
	56)			
	• No. of business opportunity meetings organized	0	3	9
	• No. of MoUs generated between local & international parties	0	0	2
Outcome 4.3: Upgrading local industry capabilities	57)			
	• No. of industry research conducted	0	1	1
	• No. of business plans developed	0	6	0
	58) No. of company assisted (industry growth program)	0	0	0
Outcome 4.4: Establishment of BIPV Quality Control Center	59) No. of quality control centre (testing facility) established	0	1	0
	60) No. of international collaboration established.	0	0	0

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Rating of Project Progress towards Meeting Objective⁷

	2006 Rating	2007 Rating	Comments
National Project Manager/Coordinator	HS	S	In general, the project is progressing well and achieved most, and in some cases exceeded, its interim targets. Based on the current progress, the final project objective is achievable.
Government GEF OFP ⁸ (optional)			
UNDP Country Office	HS	S	The project is running well and received overwhelming response by the PV industry. Generally, the activities were well planned and executed as per timeline.
UNDP Regional Technical Advisor	S	S	Overall, the achievement of most of the targets for the PIR reporting period has satisfactorily contributed towards meeting the project objective and that of the component outcomes. This is based on the reported level of efforts as compared to the set targets for the period.

Action Plan to Address Marginally Unsatisfactory, Unsatisfactory or Highly Unsatisfactory Rating

Where a project has received a rating of MU, U or HU describe the actions to be taken to address this:

Action to be Taken	By Whom?	By When?
N/a		

⁷ Ratings: See instruction sheet for definitions of ratings. Use only:

HS - Highly Satisfactory; S – Satisfactory; MS – Marginally Satisfactory; MU - Marginally Unsatisfactory; U – Unsatisfactory; HU – Highly Unsatisfactory.

⁸ In the case of a project involving more than 1 country, it is suggested that for simplicity only the OFP (optional) and Country Office Programme Manager from the lead country sign-off. If representatives from more than 1 country sign off, please add additional rows as necessary, clearly indicating the country name for each signature.

III. Progress in Project implementation

List the 4 key outputs delivered so far for each project Outcome:

Project Outcomes	Key Outputs
Component 1: BIPV Information Services, Awareness and Capacity Building Programs	1. MBIPV website (www.ptm.org.my/bipv) is an important platform to disseminate information and has achieved more than 26,000 hit counts to date.
	2. 82 media articles and 20 media advertisements have been published by local and international media publications that created significant awareness on BIPV technology, resulting in excellent response to MBIPV Project initiatives.
	3. 20 public talks were delivered in various seminars and conferences, and 7 seminars/workshops have been organized, to increase knowledge of local professionals and industry, resulting in better appreciation of BIPV technology and excellent response to MBIPV Project initiatives.
	4. Malaysian PV Industry Association (MPIA) was registered on 5 th May 2006, and currently has 31 members to promote solar PV industry development.
	5. 2 ‘train the trainers’ and 1 in-house training courses have been conducted on BIPV system application to enhance competency and service quality of local players.
Component 2: BIPV Market Enhancement and Infrastructure Development Program	6. Malaysian Standard on Installation of Grid-Connected PV System (MS 1837) was published and launched in September 2005, and became as a quality reference and specification requirement for any BIPV project.
	7. 137 kWp of installed BIPV capacity has been commissioned and connected to the power utility system.
	8. Suria 1000 (1 st Call) was awarded to 14 applicants (58 kWp) out of 39 applications (155 kWp), whereby the successful applicants paid 47% for the BIPV system cost (against 25% target).
Component 3: BIPV Policies and Financing Mechanisms Program	10. Net-metering scheme has been agreed with TNB (power utility) to allow electricity generated by BIPV system to be sold to power utility.
	11. 4 assessments and studies have been completed and submitted to the Government for reference.
	12. 3 proposals to enhance BIPV application have been submitted to the Government where 1 proposal has been accepted and is being implemented.
	13. 4 BIPV systems have been registered to generate and supply electricity to the utility grid.
Component 4: BIPV Industry Development and Technology Localization Program	14. 3 milestones have been completed by UM towards commercializing a local grid-connected inverter.
	15. 1 international company (First Solar) invested into Malaysia by setting up a 220 MW plant capacity in Kulim to produce solar PV modules.
	16. 2 industry missions have been completed and 2 MoUs have been signed between local and international PV companies.
	17. 1 industry seminar was organized to facilitate business meetings and 2 industry assessments have been completed.
	18. UTM was appointed in May 2007 to establish and operate ‘Inverter Quality Control Centre’ (IQCC), to test new inverters and investigate any failure.

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Rating of Project Implementation⁹

	2006 Rating	2007 Rating	Comments
National Project Manager/Coordinator	S	S	The project is well implemented whereby the public is more aware about BIPV application, resulting in satisfactory outcome and impact to the local BIPV market and solar PV industry.
Government GEF OFP ¹⁰ (optional)			
UNDP Country Office	S	S	The project is running well according to the timeline.
UNDP Regional Technical Advisor	S	S	Most of the planned target outputs during the PIR reporting period were satisfactorily achieved, some even exceeded by more than 50%.

Action Plan to Address Marginally Unsatisfactory, Unsatisfactory or Highly Unsatisfactory Rating

Where a project has received a rating of MU, U or HU describe the actions to be taken to address this:

Action to be Taken	By Whom?	By When?
N/a		

⁹ Ratings: See instruction sheet for definitions of ratings. Use only:

HS - Highly Satisfactory; S – Satisfactory; MS – Marginally Satisfactory; MU - Marginally Unsatisfactory; U – Unsatisfactory; HU – Highly Unsatisfactory.

¹⁰ In the case of a project involving more than 1 country, it is suggested that for simplicity only the OFP (optional) and Country Office Programme Manager from the lead country sign-off. If representatives from more than 1 country sign off, please add additional rows as necessary, clearly indicating the country name for each signature.

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IV. Risks

1. Please annex to this report a print out of the corresponding Atlas Risk Tab (please use landscape format and only print the frame).

Business Unit: NYS10
 Award Id: 00038180
 Description: PIMS 2754 CC FP: Building Integrated Photovoltaic (BIPV)
 Implementing Partner: 01933 National Execution
 Award Start Date: 06/01/2005 Award End Date: 31/12/2009
 Report Period From: 01/07/2006 Report Period to: 30/06/2007 Total Award Amount: 3,904,540.32

Section 1. Project Implementation

A. UPDATED PROJECT RISKS

Type	Date	Description	Date	Manager Resp	Critical Status
ENVIRONMENTAL		No Record			
FINANCIAL	09/07/2006	Shortage of PV modules due to high world market price may affect the overall BIPV system price and the supply of PV modules for the BIPV project.	09/07/2006	MBIPV project is inviting its PV partners to provide guaranteed PV supply with committed price (within certain range and on bulk purchase), coupled together with open tender systems, in order to secure the best price for the PV modules.	N
FINANCIAL	20/09/2007	Reduced project budget from GEF fund by about 11% due to appreciation of local currency against US\$	20/09/2007	Reducing GEF budget requirement in implementing project activities whenever possible and spending in more prudent manner. Also prioritize expenditure from GEF Fund in the early part of the project period in order to reduce the impact of local currency appreciation.	Y
OPERATIONAL	20/09/2007	Reduced motivation and commitment from the project team members due to high challenging barriers in implementing project activities	20/09/2007	Streamlining project activities with focus on key priorities and making team members to complement each other. Also provide empowerment to each team members in order to create ownership in their activities while enhancing team spirit.	Y
			20/09/2007		

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POLITICAL	09/07/2006	Government acceptance towards proposals to improve supportive frameworks for BIPV/RE promotions.	09/07/2006	MBIPV project team is preparing and planning to prepare several study reports, namely 1) techno-economic analysis of grid-connected BIPV, 2) analysis on existing and new financial mechanism and fiscal incentives, and 3) study on past experience and impact on international regulatory schemes, to obtain political support by the National Steering Committee (NSC), and subsequently by the Government of Malaysia, for development of sustainable and enabling BIPV frameworks.	Y
REGULATORY		No Record			
STRATEGIC	09/07/2006	The ability and commitment of University Malaya (UM) to find suitable industry partners to commercialize the inverter.	09/07/2006	BIPV project team is monitoring and working closely with UM to identify future potential market prospect and match-make with suitable industry partners. Activities were planned to expose UM to existing inverter market status and exchange knowledge with existing inverter manufacturers.	N

2. For any risks identified as “critical” please copy the following information from Atlas:

Risk Type	Date Identified	Risk Description	Risk Management Response
Financial	20/9/07	Reduced project budget from GEF fund by about 11% due to appreciation of local currency against US\$	Reducing GEF budget requirement in implementing project activities whenever possible and spending in more prudent manner. Also prioritize expenditure from GEF Fund in the early part of the project period in order to reduce the impact of local currency appreciation.
Operational	20/9/07	Reduced motivation and commitment from the project team members due to high challenging barriers in implementing project activities	Streamlining project activities with focus on key priorities and making team members to complement each other. Also provide empowerment to each team members in order to create ownership in their activities while enhancing team spirit.
Political	9/7/06	Government acceptance towards proposals to improve supportive frameworks for BIPV/RE promotions.	MBIPV project team is preparing and planning to prepare several study reports, namely 1) techno-economic analysis of grid-connected BIPV, 2) analysis on existing and new financial mechanism and fiscal incentives, and 3) study on past experience and impact on

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			international regulatory schemes, to obtain political support by the National Steering Committee (NSC), and subsequently by the Government of Malaysia, for development of sustainable and enabling BIPV frameworks.
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V. Adjustments to Project Strategy

Please report any adjustments made to the project strategy, as reflected in the logical framework matrix, since the Project Document signature:

Change Made to:	Yes/No	Reason for Change
Project Objective	No	
Project Outcomes	No	
Project Outputs/ Activities / Inputs Component 2	Yes	<p>Changes were made to the target installed capacity of BIPV demonstration and Suria 1000 programs. These changes were made in order to mitigate the operational risks in implementing the project as there is a greater interest in the Suria program while there is a different group of stakeholder who is interested in the demonstration program. However, the changes did not affect the target objectives of Component 2 nor the overall budget.</p> <p>Original: The target installed capacities for BIPV demonstration activity (Component 2.6) is 400 kWp, and for Suria 1000 program (Component 2.8) is 1,000 kWp.</p> <p>Adjustment: The revised target installed capacities for BIPV demonstration activity (Component 2.6) is 200 kWp, and for Suria 1000 program (Component 2.8) is 1,200 kWp.</p>
Project Outputs/ Activities / Inputs Component 4	Yes	<p>Changes were made to the project outputs and indicators based on comments and reviews made by the Project Review Committee and National Steering Committee during inception period. These changes were made in order to enhance the cost effectiveness of the project activities and to enhance the realization of the Component 4 objectives. The changes did not affect the target objectives of Component 4 nor the overall budget.</p> <p>Original: The project component was comprised of 4 sub-activities to produce various outputs, as indicated in the original logical framework matrix.</p> <p>Adjustment: The project component strategy was revised, as indicated in the Inception Report:</p> <ul style="list-style-type: none"> ▪ Activity 4.1: Only 1 product development activity (instead of 2) will now be implemented (on local inverter). ▪ Activity 4.2: Focus is towards improving quality and reliability on technical support and after sales services of local PV service providers through linkage/collaboration with international companies/manufacturers. ▪ Activity 4.3: Focus is towards identifying local business opportunity in BIPV value chain, and strengthening quality of PV service providers. ▪ Activity 4.4: 2 quality control centers (instead of 1 facility for compliance test) will be setup to promote quality assurance on inverters and localized mounting mechanisms.

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Adjustments to Project Time Frame

If the duration of the project, the project work schedule, or the timing of any key events such as project start up, evaluations or closing date, have been adjusted since project approval please explain the changes and the reasons for these changes.

Change	Reason for Change
N/a	

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VI. Financial Information

Please present all financial values in US\$ millions to 2 decimal places only (e.g. \$3,502,000 should be written as \$3.50m)

Name of Partner or Contributor (including the Private Sector)	Nature of Contributor ¹¹	Amount used in Project Preparation (PDF A, B)	Amount committed in Project Document ¹²	Additional amounts committed after Project Document finalization ¹¹	Estimated Total Disbursement to 30 June 2007	Expected Total Disbursement by end of project
GEF Contribution	GEF	\$0.13	\$4.70		\$1.47	\$4.70
Cash Co-financing – UNDP Managed						
UNDP (TRAC)	UN Agency	\$0	\$0	\$0	\$0	\$0
Cash Co-financing – Partner Managed						
Ministry of Energy, Water and Communications (MEWC)	Government	\$0	\$1.01	\$0	\$0.17	\$1.01
Energy Commission (ST)	Government	\$0	\$4.25	\$0	\$0.42	\$4.25
Government of Malaysia	Government	\$0.10	\$2.06	\$0	\$0.49	\$2.06
Malaysia Electricity Supply Industry Trust Account (MESITA)	Industry sector	\$0	\$0.92	\$0	\$0.71	\$0.92
Private sector and industry	Private and industry sector	\$0	\$5.55	\$0	\$0.43	\$5.55
EC-ASEAN Energy Facility	Multilateral donor	\$0	\$0	\$0.12	\$0.12	\$0.12
In-Kind Co-financing						

¹¹ Specify if: UN Agency, other Multilateral, Bilateral Donor, Regional Development Bank (RDB), National Government, Local Government, NGO, Private Sector, Other.

¹² Committed amounts are those shown in the approved Project Document. These may be zero in the case of new leveraged project partners.

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Government of Malaysia	Government	\$0	\$3.84	\$0	\$4.09	\$3.84
Private sector and industry	Private and industry sector	\$0.01	\$2.63	\$0	\$0.03	\$2.63
Total Co-financing		\$0.26	\$20.26	\$0.12	\$6.46	\$20.38
Total for Project		\$0.26	\$24.96	\$0.12	\$7.93	\$25.08

Comments

Please explain any significant changes in project financing since Project Document signature, or differences between the anticipated and actual rates of disbursement:

- 1) Additional co-financing amounting to US\$ 0.12 million was received from EC-ASEAN Energy Facility to implement capacity development activities. The amount was approved after the Project Document was signed and was utilized in second half of year 2005.
- 2) Co-financing amount of US\$ 1.77 million committed by Government of Malaysia (via SIRIM Berhad) as indicated in the project document is no longer available due to unavailability of fund allocation to SIRIM under the 9th Malaysia Plan for that purpose. Nonetheless, the Government of Malaysia is substituting the fund with co-financing towards construction of buildings for BIPV installations, of equivalent or more amount than the earlier commitment. To date, about US\$ 4.2 million has been committed to construct the PTM-ZEO building with 92 kWp BIPV systems as an important showcase.

VII. Additional Financial Instruments used in the Project

This section only needs to be completed if the project provides funds to any Financial Instruments such as: Trust Funds, Sinking Funds, Revolving Funds, Partial Credit Risk Guarantees, Microfinance services, Leasing or Insurance mechanisms.

If this project does not use any Additional Financial Instruments skip this and go to Section VIII.

Financial Instrument	Financial Institution Responsible for Management	Basis for Selection of Financial Institution

For Each Financial Instrument please complete the following two tables:

Name of Financial Instrument:

Source of Funds (add rows for each source)	Funds Committed in Project Document	Amount Disbursed to Date	Issues or Comments
GEF			

Rating of Performance of Financial Instrument¹³

	2006 Rating	2007 Rating	Comments
National Project Manager/Coordinator			
Government GEF OFP			
UNDP Country Office			
UNDP Regional Technical Advisor			
Overall Rating			

¹³ For ratings, use only:

HS - Highly Satisfactory; S – Satisfactory; MS – Marginally Satisfactory; MU - Marginally Unsatisfactory; U – Unsatisfactory; HU – Highly Unsatisfactory.

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Action Plan to Address Marginally Unsatisfactory, Unsatisfactory or Highly Unsatisfactory Rating

Where a project has received a rating of MU, U or HU describe the actions to be taken to address this:

Action to be Taken	By Whom?	By When?
N/a		

End of Project Situation

What is to happen to any funds remaining in the Financial Instrument at the end of the project?

N/a

VIII. Lessons

Are there any lessons from this project that could benefit the design and implementation of other GEF-funded projects? Please list up to three and indicate which one/s could be worth developing into case studies of good/bad practice.

i) Project budget is reduced due to the loss of fluctuation of the foreign exchange.

Most of GEF funded projects are implemented over a long period. In MBIPV Project case, it is for 5 years. In this respect the GEF fund is committed in US\$ while the cost of implementing the project is in the local currency. As such, any appreciation of local currency will greatly influence the project, as lesser fund will become available to effectively implement the project due to the exchange rate. In MBIPV case, the project now has a shortage of about 11% of its GEF Fund due to the appreciation of Malaysia's local currency since the project was endorsed by GEF Council in June 2004. It is recommended that the actual cost of project implementation in local currency is considered whenever the fund is disbursed.

ii) Mobilization of the project team at the implementing agency

In order to achieve its goal, the project has to be aggressively implemented right from the start. As such, any administrative delay or disruption to the project team is potentially disruptive. Unfortunately, most human resource matters have to be directly handled by the project team with little support from the host agency where the contracts for national consultants and support staff have to be renewed every year. The final year contracts of project team members would have to be treated with care as the motivation may be low due to the project coming to an end. Therefore, any GEF funded project should give extra consideration on the mobilization of the project team and in particular during its final year, with proper care to establish a good and sound support process mechanism to cater for HR related matters of the project team members.

iii) Empowerment for more efficient procurement process

While it is strongly important to maintain transparency and governance in any procurement exercise, it is also suggested that the National Project Manager/Coordinator be allowed up to a certain limit to make any relevant procurement. This allowance will greatly reduce administrative procedure in small procurement exercise and will allow the project to be implemented more effectively. However, procurement of higher limits shall still follow the approved procedure and any exercise to split the procurement shall not be allowed. Financial audit will still be implemented to ensure the financial process is fair and has met all the proper procedures.

IX. Project Contribution to GEF Strategic Targets in Climate Change

GEF increasingly would like projects to report on their quantitative impacts to date. The metrics below is designed to measure and report on the level of achievement of a climate change project for the PIR 2007 process based on the performance indicators. It should be complementary to other qualitative achievement descriptions used as part of the PIR reporting process. Projects may be unable to report data for some of the performance indicators listed below because the specific performance indicator may not be relevant to that project or data may not be available yet. Project managers are requested to complete the information in the “2007 Value” column at the portfolio-level and for the Operational Program and Strategic Objective to which the project belongs. An approach to retrofitting the GEF 4 indicators to projects prepared in accordance with GEF 3 strategic priorities (SPs) is provided in the PIR instructions.

Project Impact Metrics for Climate Change Indicators

CC Performance Indicator	Impact Metric	2007 Value
Portfolio-level (all CC projects)		
Annual CO ₂ reduction	Emissions avoided (Mt CO ₂ /year) ¹⁴ during PIR reporting period	136.7 t-CO ₂ /year (at 0.63 t-CO ₂ /MWh) from 123 kWp newly commissioned systems, and 58 kWp awarded under Suria 1000 programme.
Cumulative CO ₂ reduction	Emissions avoided (Mt CO ₂) ¹³ since start of project	157.9 t-CO ₂ accumulated (at 0.63 t-CO ₂ /MWh) since the start of the project, from 14 kWp BIPV systems in operation since 2005/06, and additional 181 kWp BIPV systems installed and awarded in 2006/07.
Market transformation	Number of markets that the project has influenced, developed or transformed	36 BIPV projects (27 residential, 9 commercial buildings) were created influencing 16 different companies directly.
OP 7: Low GHG Emitting Energy Technologies		
Stakeholder interest in the new technology	Indicator 1: Growth in interest in the selected technologies, as measured by the number of stakeholders (public or private enterprises) indicating interest in procuring or supplying the technology.	39 individuals applied for SURIA 1000, significantly large numbers of enquiries received to install BIPV at respective buildings, to invest in PV manufacturing, and to become a PV service provider. Questions related to solar PV were also raised by members of Parliament, and several cabinet members.

¹⁴ Please refer to the GEF Methodology on CO₂ Reduction Calculations, available at

http://gef.undp.org/index.pl/climate_change_key_documents

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Electricity generated from on-grid renewable sources	Indicator 2: Annual electricity production from grid-connected renewable energies that were installed under the influence of the project (MWh / year)	233.83 MWh/year (at 1200 kWh/kWp/year) is produced since the start of the project, from 14 kWp BIPV systems in operation since 2005/06, and additional 181 kWp BIPV systems installed and awarded in 2006/07.
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