# Document of The World Bank

Report No: 55210 v1

#### RESTRUCTURING PAPER

ON A

PROPOSED PROJECT RESTRUCTURING
OF
SUSTAINABLE ENERGY PROJECT
GLOBAL ENVIRONMENT FACILITY TRUST FUND GRANT – TF057107
BOARD APPROVAL: DECEMBER 19, 2006

TO THE

FYR MACEDONIA

JUNE 16, 2010

#### ABBREVIATIONS AND ACRONYMS

EE Energy Efficiency

ESCO Energy Service Company
FM Financial Management
FMR Financial Monitoring Report
GEF Global Environmental Facility
GoM Government of Macedonia

GWh Giga Watt-hour

IGA Investment-Grade Audit

MBDP Macedonian Bank for Development and Promotion

MoE Ministry of Economy
MoF Ministry of Finance
MW<sub>e</sub> Mega Watt (electric)
MWh Mega Watt-hour

NBRM National Bank of the Republic of Macedonia

NCB National Competitive Bidding PIU Project Implementation Unit

RE Renewable Energy S&I Supply and Installation

SEFF Sustainable Energy Financing Facility

tCO<sub>2</sub> Tons of Carbon Dioxide

TF Trust Fund

US The United States of America

WB The World Bank

Regional Vice President: Philippe Le Houerou
Country Director: Jane Armitage
Sector Manager / Director: Ranjit Lamech

Task Team Leader: Peter Johansen

# MACEDONIA, FORMER YUGOSLAV REPUBLIC OF SUSTAINABLE ENERGY GEF PROJECT

### **CONTENTS**

		Page
A.	SUMMARY	4
В.	PROJECT STATUS	4
C.	PROPOSED CHANGES	5
	APPRAISAL SUMMARY	
	NEX 1: RESULTS FRAMEWORK AND MONITORING	

#### SUSTAINABLE ENERGY GEF PROJECT

#### RESTRUCTURING PAPER

### **SUMMARY**

- 1.1 The project is supported by a Grant in the amount of US\$5.5 million and its development objective (DO) is to develop a sustainable market for energy efficiency (EE) and renewable energy (RE) by supporting the development of an enabling framework, institutional capacity, and necessary financing mechanisms.
- 1.2 Weak implementation capacity and a smaller-than-anticipated market response have resulted in slow progress towards DO achievement. In recognition of the key role to be played by the public sector in the development of a market for EE, it is proposed that the project be restructured to provide support for the development of Government's National Program for EE in public buildings which is to be implemented using market-based mechanisms and to bring to an end its pursuit of an energy service company (ESCO) model. The restructured project will continue to support market-based financing of EE and RE through a dedicated facility.
- 1.3 No revisions to the Global Environmental Objective are being proposed and existing safeguard arrangements will pertain to the restructured project. A reallocation of Grant proceeds and a revision to the results monitoring framework and indicators are being proposed, and an 18-month extension of the Closing Date is being sought to enable full achievement of the DO.

## **PROJECT STATUS**

- 2.1 Project implementation got underway in March 2007 about half a year after Board approval. As at June 14, 2010, progress on the project's three components is as follows:
  - Through its **Market Framework Component** the project has supported the establishment of feed-in tariffs, legislation and rulebooks on preferred generation from RE and Certificates of Origin. It has also supported the start-up of activities for establishing systematic measurements of wind speeds and a wind data base. However, progress has been slow and the implementation management of this component by the Energy Agency has not been satisfactory.
  - A Memorandum of Understanding (MOU) enabling the establishment of the ESCO has, to date, not been signed by the two intended ESCO partners. As such, the disbursement condition for the planned ESCO Component has not been met.

Additionally, several barriers relating to the public procurement law and ability of municipalities to make multi-year commitments continue to exist for ESCO operation in the country, and it is, therefore, not realistic to expect an ESCO structure to emerge in the short term.

• The Sustainable Energy Financing Facility (SEFF) Component comprised of a loan guarantee facility and a loan facility set up on a co-financing basis with commercial institutions and the MDBP, framework agreements have been signed with four commercial banks. A pipeline of potential investment projects has been developed, however, the lack of technical assistance to identify and prepare investment projects and the, hitherto, slow due diligence procedures in the Energy Agency have been identified as key barriers to the use of the SEFF Credit Line. To date, only two operations totaling US\$163,000 have been financed using the SEFF credit line. The planned guarantee facility (US\$1.2 million) has not been activated due to lack of demand.

#### PROPOSED CHANGES

- 3.1 A restructuring of the project is proposed in order to address the current implementational weaknesses and challenges and to take into account existing market capacities. The restructured project would have three components: (i) Institutional Support and Technical Assistance; (ii) Financial Support for EE in Public Buildings; and (iii) SEFF credit line for RE/EE. Each component is summarized below:
- 3.2 Component 1: Institutional Support and Technical Assistance (US\$1.75 million) This component includes three sub-components:
  - Support for the development of a regulatory and institutional framework for RE including new activities such as a wind measurements?, as well as a RE Grid Integration Study.
  - Creation of a new project implementation unit (PIU) to be housed within the Ministry of Economy (MOE). The PIU will coordinate day-to-day management of project activities and work with other international donors involved in related programs. Activities of focus will include exploring options to mobilize suitable carbon finance resources; and working with the Inter-Ministerial Working Group charged with the preparation and implementation of a National Program for EE in Public Buildings.
  - Technical assistance (TA) will be provided to support preparation and implementation of a Program for EE in public buildings. This will include energy audits, supervision of construction and commissioning of EE pilot projects in public buildings (financed under Component 2).
- 3.3 **Component 2: Financial Support for EE in Public Buildings (US\$2.2 million)** This component will provide grant support for the EE retrofitting of public buildings, focusing on municipal schools and kindergartens. This activity will serve to develop some simple and replicable models that will serve to inform and influence

MOE's National Program for EE in Public Buildings. This program will consist of two phases, each one year in duration:

- <u>Phase 1</u>. The PIU will issue a call for expressions of interest from eligible municipalities and select a number of municipalities based on agreed criteria<sup>1</sup>. The PIU will then contract for energy audit and, subsequently, construction contracts which will be fully financed by the GEF project funds.
- <u>Phase 2</u>. The municipalities will be selected, in large part, based on their ability to provide co-financing. The PIU will procure energy audits for all identified facilities but only finance a portion of the investment with the GEF funds. The level of co-financing will depend on the funds actually available for co-financing in the municipal budgets.
- 3.4 Component 3: Sustainable Energy Financing Facility (SEFF) Credit line for RE/EE (US\$1.55 million). The SEFF guarantee facility will not be implemented and the funds originally provided will be reallocated. The SEFF RE/EE credit line (loan facility) under MBDP will continue with a total budget of US\$1.5 million, which will be matched dollar for dollar by MBDP with added co-financing from the participating commercial banks and some equity from the borrower. As before, MBDP will lend through its bank partners for eligible projects. A key difference is the proposed allocation of US\$50,000 to MBDP for the purposes of pipeline development and technical due diligence to enable them quickly identify and process commercially viable project proposals.
- 3.5 **The results framework and monitoring indicators** have been revised in order to reflect the proposed changes (Annex 1). At the PDO outcome level, indicators have been revised from "capacity installed", "electricity produced" and "electricity saved" to "capacity *licensed*", "expected electricity generated" and "expected electricity saved" in order to reflect project's heighted focus on barrier removal rather than construction; (ii) the reduced CO<sub>2</sub> emissions are being monitored on their expected lifetime reductions instead of actual annual reductions in order to capture the impact of investments that become operational after the closing date of the Grant.
- 3.6 **Institutional arrangements:** the newly established PIU under MOE will serve as the implementing agency for Components 1 and 2 and MBDP for Component 3. The PIU will serve as project manager, liaise between the project and relevant organizations, conduct procurement, monitor and report on all project activities. The PIU Project Manager will report to the State Counselor of MOE's Energy Department and will liaise closely with the Bank.

<sup>&</sup>lt;sup>1</sup> level of preparedness, potential for energy savings, stage of decentralization

# 3.7 **Financing**

Project Costs (US\$ million)		
Components/Activities	Current	Proposed
OLD Component 1: Market Framework	1.00	-
Capacity building	0.90	-
Monitoring and Administration	0.10	-
<b>NEW Component 1: Institutional support and</b>		1.75
technical assistance	-	
<u>Framework for Renewable Energy</u>	-	0.63
Project Implementation Unit	-	0.25
TA for EE in Public Buildings	-	0.87
OLD Component 2: Utility-Based ESCO	0.80	-
Strategic ESCO partner	0.30	-
Energy audits	0.10	-
Investments in EE	0.40	-
<b>NEW Component 2: Financial Support for EE</b>		
in Public Buildings	-	2.20
Phase 1	-	1.20
Phase 2	-	1.00
Component 3: Sustainable Energy Financing	2 = 0	
Facility	3.70	1.55
Credit Line	2.50	1.50
Guarantee Facility	1.20	0.00
Technical Support (pipeline dev./ due diligence)		0.05
Total Project Costs	5.50	5.50

A breakdown of restructured project costs by category and sub-category is shown in the table below:

# 3.8 Financing Plan for the restructured project is provided in the table below (in USD millions)

Component	GEF	GOM	MBDP	Banks	Pvt Sec	Total
1. Inst Support	1.75	0.00	0.00	0.00	0.00	1.75
2. Financial	2.20	1.00	0.00	0.00	0.00	3.20
3. SEFF	1.55	0.00	1.50	2.35	1.45	6.85
Total	5.50	1.00	1.50	2.35	1.45	11.80

#### 3.9 **Disbursement arrangements**

In the case of the components implemented by MoE, the funds will flow via a Special Account opened in the National Bank of the Republic of Macedonia (NBRM). With respect to the two components implemented by the MoE, a mirror Denar account is opened within the Treasury Single Account to serve as operating accounts for withdrawals from the foreign currency account. The Authorized Allocations for the Special Accounts will be \$200,000 in respect of the MoE Special Account and \$700,000 in respect of the MBDP.

#### 3.10 **Reallocations**

It is necessary to reallocate funds from the ESCO component (Part B) and the guarantee sub-component (Part C.1), which both will be removed from the restructured project, to the revised component 1 due to the increased emphasis on technical assistance and to the EE investments in component 2. The Table below illustrates the reallocations that also includes a reduction of the allocation for sub-loan under the credit line (Part C.2) and a new allocation for consultant's services for the SEFF (for due diligence and pipeline development).

<b>Category of Expenditur</b>	·e	Allocation		% of Financing			
Current	Revised	Current	Revised	Current	Revised		
Goods, Works,	Same	\$1,000,000	\$1.750,000	100%	100%		
Consultant's services,							
Training and							
Incremental Operating							
Costs under Part A of							
the Project							
Goods, Works,	Goods and	\$450,000	\$2,200,000	100%	100%		
Consultant's services,	Works,						
Training and	under						
Incremental Operating	revised						
Costs under Part B of	Part B of						
the Project	the Project						
Sub-Loans under Part B		\$350,000	0	100%	-		
of the Project							
Guarantees under Part		\$1,200,000	0	100%	-		
C.1 of the Project							
Loans under Part C.2 of		\$2,500,000	\$1,500,000	100%	100%		
the Project							
Consultant's services		-	\$50,000	-	100%		
under Part C of the							
Project							
Total		\$5,500,000	\$5,500,000				

- 3.11 **Financial Management.** The PIU in MoE will need a FM person to prepare project financial reports when implementation responsibilities have been taken over from the Energy Agency. The Bank will monitor that the special account opened for Energy Agency is closed, and another one opened for MoE. The FM responsible person will be selected through a competitive process and will be a full time project staff. Having the FM officer in place will be a condition to shift FM responsibilities to the MoE. The MoE and MBDP will submit separate full sets of Financial Monitoring Reports (FMRs). The reporting is based on the Treasury systems for Components 1 and 2, and MBDP systems for Component 3. There are no outstanding audits.
- 3.12 **Procurement.** All goods, works and services (other than consultants' services) shall be procured in accordance with the provisions of Section I of the Guidelines: Procurement under IBRD & IDA Credits, May 2004 and all consultant services shall be procured in accordance with Section I and IV of the Guidelines: Selection and Employment of Consultants by World Bank Borrowers, May 2004.
- 3.13 The Procurement capacity of MoE has been assessed and an experienced Procurement Expert will be included in the PIU. This Procurement Expert worked in the Energy Agency during the first phases of the project and has attended adequate training including one-on-one training offered by Bank procurement staff. Contracts for Goods and Works estimated to cost less than \$200,000 may be procured through the National Competitive Bidding (NCB) and Goods and Works estimated to cost less than \$100,000 may be procured through the Shopping Method. Goods and Works, including Supply and Installation contracts, estimated to cost less than \$350,000 equivalent per contract, required under Part C of the Project, may be procured in accordance with commercial practices acceptable to the Bank. The Bank will prior review the first two packages of the NCB, Shopping and the commercial practice methods, and all packages for Consultant Services. The Bank will post review the remaining contracts during the supervision missions.
- 3.14 **Closing Date**. An eighteen-month extension of the current Closing Date (March 31, 2011) to September 30, 2012 is proposed to enable completion of the proposed activities and full achievement of the project's development objective.
- 3.15 **Implementation schedule.** The Implementation Schedule has been revised to provide for the proposed phased approach to completing the investment projects in municipal buildings.

	FY10		FY	11			FY	12		FY13
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Set up PIU		X								
Sign MOUs with		Phase			Phase					
cities		1			2					
Complete public			Phase			Phase				
building audits			1			2				
Commissioning of					Phase				Phase	
EE projects					1				2	
Completion of				X						
Plan for										
Implementation of										
National Program										
for EE in public										
buildings										
SEFF commits					X					
GEF funds										

## **APPRAISAL SUMMARY**

4.1 **Economic and financial analysis.** The cancellation of the guarantee facility and the introduction of a capital grant have implications on the economic incremental cost analysis. After the proposed changes a unit abatement cost will be 7.7 US\$/tCO2. This is a cost efficient CO2 reduction representing around 70% of the present market price for certified emission reductions.

#### 4.2 **Risk Evaluation**

Risk	Risk	Risk Mitigation Measures
	rating	
	(after	
	mitigation)	
Component 1 – Institutional Support and Te	chnical Assist	ance
Ability of MoE/MoF to arrange quick and	S	The transfer of the PIU responsibility
realistic transition of PIU from EA to MoE		will be a disbursement condition for
		component 1
Time delays in project implementation as a	M	PIU establishment will be an
result of an untimely establishment of PIU		effectiveness condition
and lack of procedural guidance		Project Implementation Plan to be
		finalized within one month after
		establishment of PIU
Component 2 – Financial Support for EE in	Public Buildir	ngs
Ability of municipalities to ensure co-	M	Coordination with MSIP <sup>2</sup> to fully
financing during Phase 2		explore options for co-financing
		No minimum co-financing
		requirement specified
Tender procedures get delayed	N	PIU will be in charge of procurement.

<sup>&</sup>lt;sup>2</sup> Municipal Services Improvement Project (IBRD Loan)

10

Risk	Risk rating (after mitigation)	Risk Mitigation Measures
		FM and procurement training will be provided to PIU staff
Component 3 – SEFF		
Partner banks are not interested in participating	N	Agreements between MBDP and partner banks signed
Project pipeline development is not happening	N	MBDP maintains pipeline of projects with the total investment need of US\$ 3-4 million
		Financial support for further pipeline development will be provided to MBDP
The private sector will not be willing to invest in RE/EE projects	M	Legislative support, adequate feed-in tariffs and similar price incentive will be supported by GEF SEP project
Private sector is not willing or able to finance development costs	M	Guarantee market for clean energy entrants through policy measures Financial support for IGA development will be provided Strong interest from the private sector demonstrated by existence of project pipeline
Default rate on direct loans exceeds anticipated level	М	Support for due diligence to MBDP will be provided under TA  Monitor default rates during project implementation, checking against projections and comparable market benchmarks
SEFF is not sustainable	М	MBDP declares willingness to continue pipeline after the grant component is fully consumed  Reflows will be used to develop further pipeline
Overall risk rating	M	

By not implementing the ESCO component and aligning activities more closely with Government's efforts on EE in public buildings, the project's overall risk rating is reduced to M (moderate) from that of S (substantial) determined at Appraisal.

# ANNEX 1: Results Framework and Monitoring

MACEDONIA, FORMER YUGOSLAV REPUBLIC OF: SUSTAINABLE ENERGY GEF PROJECT

<u>Project Development Objective (PDO)</u> : To develop a sustainable market for EE and RE by supporting the development of an enabling framework, institutional capacity, and necessary financing mechanisms
Revised Project Development Objective: The PDO remains unchanged

PDO Level Results	re	D=Dropped C=Continue	Unit of	Baseli		Cum	nulative Ta	rget Value	S**			Data Source/	Responsibility		
Indicators*	Core	N= New R=Revised	N= New		Measure	ne	YR1	YR2	YR3	YR4	YR5	YR6	Frequency	Methodology	Data Collection
Indicator One: Introduction of an enabling regulatory and incentive framework for RE		С	Framework in place	n/a	Framewor k in place						Annual	PMR	Energy Agency		
Indicator Two (OLD): Capacity installed from new RE (MWe)		D	MWe	0	0	2.5	2.5	2.5	2.5		Annual	M&E consultants report	M&E consultan		
Indicator Two (NEW): Total RE capacity licensed		N	MWe	0	0	0	0.75	1.0	6.6	0.04	Annual	Energy Regulatory Commission (ERC)	PIU		
Indicator Three (OLD): Electricity generation from new RE (MWh)		D	MWh	0	0	10,950	21,900	32,850	43,800		Annual	M&E consultants report	M&E consultan		
Indicator Three (NEW): Expected electricity generated from new RE,		N	GWh	0	0	0	54.8	41.2	530	2.1	Annual	Energy Regulatory Commission	PIU		

PDO Level Results	re	D=Dropped C=Continue	Unit of	Baseli		Cum	ulative Tai	get Values	E	Data Source/	Responsibility fo		
Indicators*	Core	N= New R=Revised	Measure	ne	YR1	YR2	YR3	YR4	YR5	YR6	Frequency	Methodology	Data Collection
lifetime												(ERC)	
Indicator Four (OLD): Electricity saved (MWh)		D	MWh	0	3,037	25,978	41,498	55,331	67,476		Annual	M&E consultants report	M&E consultan
Indicator Four (NEW): Expected energy saved from EE, lifetime		N	GWh	0	0	0	7.2	98.9	110.9	2.3	Annual	MoE, MBDP	PIU
Indicator Five (OLD): Increased share of "new" RE in national energy supply		D	%	0	0	0.16	0.33	0.50	0.66		Annual	PMR	Energy Agency
Indicator Five (NEW): Value of EE projects financed		N	US\$ million	0	0	0	0.21	1.75	1.96	0.04	Annual	PIU, MBDP	PIU
Indicator Six (OLD): Reduction in CO <sub>2</sub> emissions at the national and project level (t/y)		D	tCO2/y	0	3,725	45,298	70,582	94,109	115,880		Annual	PMR	Energy Agency
Indicator Six (NEW): Reduction in CO <sub>2</sub> emissions at the national and project level, lifetime		N	tCO2	0	0	0	56,753	128,201	586,442	3,997	Annual	ERC, MoE, MBDP	PIU
			1		INTE	ERMEDIA	TE RESUL	TS	ll.	il.	И		
Intermediate Result (Compone	nt Or	ne): Increase	d in-country k	nowledge	and impro	ved frame	work and r	narket for	EE and R	E develo	pment		
Revised Intermediate Result (C	omp	onent One):	Intermediate R	esult rem	ains uncha	nged							
Intermediate Result indicator One: Training of stakeholders		D	Completed	n/a	Compl. 1 <sup>st</sup> train.	Compl. 2 <sup>nd</sup> train.	Compl. 3 <sup>st</sup> train.	Compl. 4 <sup>st</sup> train.	Compl. 5 <sup>st</sup> train.		Annual	PMR	Energy Agency
Intermediate Result indicator Two: TA for Establishment of		R	Completed and approved	n/a	Compl. and approved						Annual	ERC	PIU

PDO Level Results	re	D=Dropped C=Continue	Unit of	Unit of Baseli Measure ne		Cum	ulative Tar	rget Value		Data Source/	Responsibility fo		
Indicators*	Core	N= New R=Revised	Measure		YR1	YR2	YR3	YR4	YR5	YR6	Frequency	Methodology	Data Collection
feed-in tariff for RE				<del>'                                    </del>									
Intermediate Result indicator Three: TA for Development of pipeline of EE and RE projects		D	Completed and approved	n/a		Compl. and approved					Annual	PMR	Energy Agency
Intermediate Result indicator Four: MoU between PIU and municipalities signed		N	Number	-	0	0	0	3	5	-	Annual	PIU	PIU
Intermediate Result (Compone	nt Tv	vo): Establi	shment of an or	perating u	tility-based	1 ESCO							
Revised Intermediate Result (C	Comp	onent Two):	: Contracts und	er Financi	al Support	t for EE in P	ublic Bui	Idings are	awarded				
Intermediate Result indicator One (OLD): Number of staff		D	Number	-	3	5	7	10	12		Annual	PMR	ESCO
Intermediate Result indicator Two (OLD): Capital deployed by owners		D	1000 US\$	-	300	560	820	1,300	1,740		Annual	PMR	ESCO
Intermediate Result indicator Three (OLD): Number of performance guarantees signed		D	Number	-	3	5	7	10	12		Annual	PMR	ESCO
Intermediate Result indicator Four(OLD): Volume of performance contracts signed (US\$)		D	1000 US\$	n/a	180	300	420	600	720		Annual	PMR	ESCO
Intermediate Result indicator One (NEW): Volume of energy audits and S&I contracts signed under the Financial Support for EE in Public Buildings		N	1000 US\$	-	0	0	0	1,296	1,160	-	Annual	PIU	PIU

PDO Level Results	re	D=Dropped C=Continue	Unit of	Baseli		Cum	ulative Tar	get Values	**		E	Data Source/	Responsibility fo
Indicators*	Core	N= New R=Revised	Measure	ne	YR1	YR2	YR3	YR4	YR5	YR6	Frequency	Methodology	Data Collection
Intermediate Result indicator Two (NEW): Volume of energy audits and S&I contracts co-financed		N	1000 US\$	-	0	0	0	0	348	-	Annual	PIU	PIU
Intermediate Result (Component Three): Increased investment in RE and EE projects													
Revised Intermediate Result (C	omp	onent Three): I	ntermediate	Result rer	nains unch	anged							
			,										
Intermediate Result indicator One: Volume of loans guaranteed		D	1000 US\$	-	0	1,500	1,750	1,750	1,000		Annual	M&E consultant reports	M&E consultants
Intermediate Result indicator Two: Volume of loans made from SEFF		R	1000 US\$	-	0	0	142	550	550	50	Annual	MBDP	PIU
Intermediate Result indicator Three: Volume of additional co- financing		R	1000 US\$	-	0	0	163	1,850	1,850	150	Annual	MBDP	PIU
Intermediate Result indicator Four: Total financing of RE		R	1000 US\$	-	0	0	97	1,950	1,950	160	Annual	MBDP	PIU
Intermediate Result indicator Five: Total financing of EE		R	1000 US\$	-	0	0	210	450	450	40	Annual	MBDP	PIU