



CLEAN TECHNOLOGY FUND

MOROCCO: ONE WIND ENERGY PLAN – A PROPOSAL FOR REALLOCATION OF USD
30.71 MILLION IN CTF RESOURCES

SEPTEMBER 2016

1. INTRODUCTION

1.1 In October 28th, 2011, the Clean Technology (CTF) Trust Fund Committee (TFC) approved a loan of USD 125 million for the project entitled “*Morocco: One Wind Energy Plan*” submitted by the African Development Bank (AfDB), out of a total CTF allocation to this program of USD 150 million, with the balance of USD 25 million to be implemented by the World Bank Group (WBG). In February 2014, the CTF TFC approved a revised version of the CTF Morocco Investment Plan that reallocated the USD 25 million WBG’s allocation to the Clean and Efficient Energy Project.

1.2 AfDB started implementing the project following signature of the credit agreements in January 2013. In April 2016, during a supervision mission of the project, the Government of Morocco (GoM) informed AfDB that it would officially request¹ for a reallocation of USD 30.71 million in CTF resources from one of the project’s hydro sub-components to two wind sub-components.

1.3 The objectives of this document are twofold. First, presenting an implementation status report on the project as of today. Second, explaining in more detail the proposed reallocation, its rationale and impact on the project’s initial objectives and low-carbon growth potential, through the provision of a revised financing table and results framework.

2. PROJECT IMPLEMENTATION STATUS

2.1 As of September 2016, only the activities of the Koudia El Baida wind sub-component have started on the ground with the construction of two transmission lines (400kV and 255 kV) and the substation with completion expected by the end of 2016 and full disbursement during the first quarter of 2017. With regard to the Tanger II Wind Farm Project, the Public-Private Partnership contract is currently under negotiations with a consortium composed by three companies and the establishment of the Project Company shall be completed before the end of 2016 with construction starting in 2017. For the Abdelmoumen Pumped-Storage hydro sub-component, the procurement process is still ongoing which shall culminate with the selection of a consortium to build the infrastructure. The selection process should be over before the end of 2016.

2.2 Table 1 provides disbursement levels as of August 2016 of both CTF and AfDB’s loan per sub-component.

3. PROPOSED REALLOCATION

3.1 In April 2016 during an AfDB supervision mission, the GoM informed that due to long delays in the development phase of M'Dez - El Menzel hydro sub-component and the lack of visibility and clarity on

¹ See Official Letter in Annex I

the structuring of the project’s financial package and subsequent construction, it would officially request that the initial USD 30.71 million of this sub-component is reallocated to two wind sub-components, namely the Jbel El Hadid and the Midelt Wind Farms.

Table 1: Project’s Disbursements (in USD million and % as of August 2016)

Sub-Component	Initial CTF allocation	Disbursements	%	Initial AfDB allocation	Disbursements	%
Wind						
Tanger II	30.73	0.00	0.0%	40.00	0.00	0.0%
Koudia El Baida	33.58	11.86	35.3%	50.00	40.16	32.8%
Djebel el Hadid	0.00	0.00	0.0%	0.00	0.00	0.0%
Hydro						
Abdelmoumen STEP	29.98	0.00	0.0%	60.00	0.00	0.0%
M’Dez el Menzel	30.71	0.00	0.0%	74.00	0.00	0.0%
TOTAL	125.00	11.86	9.5%	359.00	40.16	11.2%

3.2 Table 2 below provides a comparator between the proposed activities under the initial CTF allocation and the one being proposed in this document. The total CTF envelope for the project remains unchanged at USD 125 million.

Table 2: CTF Allocations per Sub-Component – Initial vs. Revised Allocation (in USD million)

Sub-Component	Initial CTF allocation	Revised CTF Allocation
Wind		
Tanger II	30.73	30.73
Koudia El Baida	33.58	33.58
Djebel el Hadid	0.00	17.91
Midelt	0.00	12.80
Hydro		
Abdelmoumen STEP	29.98	29.98
M’Dez el Menzel	30.71	0.00
TOTAL	125.00	125.00

4. IMPACT OF THE PROPOSED REALLOCATION ON THE PROJECT’S INITIAL FINANCING PLAN

4.1 The proposed reallocation has an impact on the project’s initial financing plan. While the total investment under the initial proposal was estimated at USD 2.16 billion², with the proposed reallocation, the total investment is now estimated at USD 2.01 billion. This is due to the following reasons:

² At the time of project approval by the CTF TFC, a EUR/USD exchange rate of 1.426 was used to convert all EUR amounts into USD. In this document, the same exchange rate is used to ensure consistency.

- (i) Cancellation of the M’Dez el Menzel hydro sub-component that had a total estimated cost of USD 368.95 million;
- (ii) Addition of the Midelt Wind Farm with a total installed capacity of 150MW and with total costs estimated at USD 264.85 million;
- (iii) Revision of the Tanger II Wind Farm installed capacity from 150MW to 100MW, driving down the total estimated cost of this sub-component USD 264.85 million from an initial amount of USD 393.44; and
- (iv) Approved reallocation³ of the WBG’s USD 25 million share to another project, which led to the WBG’s not considering co-financing the project.

4.2 The revision of the installed capacity associated with the Tanger II Wind Farm projects results from difficulties faced by the GoM concerning land acquisition issues in project site area which led to the reduction in the installed capacity associated with the project.

4.3 Table 3 below compares the expected installed capacity and power generation output between the initial and the revised proposal on the basis of the proposed reallocation. While the total installed capacity is expected to increase by 30 MW and average production in GWh to increase by 334 hours, the impact of the proposed reallocation is overall considered residual.

Table 3: Installed Capacity and Power Generation – Initial vs. Revised Reallocation (in USD million)

	Wind Sub-Component		Hydro Sub-Component	
	Initial CTF Allocation	Revised CTF Allocation	Initial CTF Allocation	Revised CTF Allocation
Installed Capacity (MW)	550	750	520	350
Operation hours (h)	8,700	11,860	3,600	2,420
Average Production (GWh)	1,760	2,400	936	630

4.4 Annex II shows the updated financing table that takes into account the revised figures highlighted in this proposal.

5. IMPACT OF THE PROPOSED REALLOCATION ON THE PROJECT’S INITIAL OBJECTIVES AND ON LOW-CARBON GROWTH

5.1 In terms of results and other key indicators, changes will be marginal even though positive in terms of impact. Table 4 below provides an updated results framework in line with the Revised CTF Results

³ Approved by the CTF TFC in February 2014

Framework dated January 2013 as well as further changes in terms of CTF cost-effectiveness and savings in GHG emissions.

Table 4: Updated Project Key Indicators

Indicators	Initial CTF Allocation	Revised CTF Allocation
GHG Emission Reduced or Avoided (million tons of CO ₂ equivalent)		
Annual	1.70	1.74
Project Life	33.80	34.6
CTF Allocation (USD million)		
AfDB (USD million)	125.0	125.0
WB (USD million)	25.0	0.0
Volume of Direct Finance Leveraged Through CTF Funding (USD million)		
Total (USD million)	2,016.4	1,885.0
MDBs	453.6	234.1
Government of Morocco (USD million)	162.6	120.1
Private Sector (USD million)	209.6	270.7
Bilateral (USD million)	173.0	617.0
Others (USD million)	1,227.3	910.1
Installed Capacity (MW)	1,070	1,100
Potential GHG Emission Savings (MtCO ₂)		
Annual (MtCO ₂)	1.70	1.74
Project Lifetime(MtCO ₂)	33.80	34.60
CTF Cost Effectiveness (USD per ton of CO ₂)	4.20	3.61
CTF Leverage (CTF/Co-financing)	1 / 16.28	1 / 15.08

6. CONCLUSIONS

6.1 The overall implementation of the program has been positive and over the next 6 months, disbursements are expected to increase considerably. The proposed reallocation will facilitate implementation and shall contribute to advancing the wind program being implemented by the GoM in partnership with its Development Partners.

6.2 Pursuant to the request submitted by the GoM, the AfDB invites the CTF TFC to approve the proposed reallocation of USD 30.71 million in CTF resources from the M'Dez - El Menzel hydro sub-component to two wind sub-components, namely the Jbel El Hadid and the Midelt Wind Farms.

ANNEX I: Request Submitted by the Government of Morocco

[See document attached to this proposal].

ANNEX II: Updated Project Financing Table

Table A: Initial Financing Plan

COMPONENT	EQUITY		DEBT COVERAGE						TOTAL
	ONE	Private	CTF AfDB	CTF WB	AfDB	WB	EIB	Others	
Wind									
Tanger II	34.43	63.93	30.73	0.00	76.46	0.00	0.00	187.89	393.44
Koudia el Baida	78.42	145.64	33.58	0.00	73.42	0.00	0.00	565.20	896.26
Djebel el Hadid	49.75	0.00	0.00	25.00	0.00	124.25	0.00	0.00	199.00
Hydro									
Abdlemoumen STP	0.00	0.00	29.98	0.00	86.95	0.00	173.01	18.84	308.78
M'Dez el MEnzel	0.00	0.00	30.71	0.00	92.49	0.00	0.00	245.75	368.95
TOTAL	162.60	209.58	125.00	25.00	329.32	124.25	173.01	1,017.68	2,166.43

Table B: Financing Plan Following Reallocation

COMPONENT	EQUITY		DEBT COVERAGE						TOTAL
	ONE	Private	CTF AfDB	CTF WB	AfDB	EIB	KfW	Others	
Wind									
Tanger II	8.93	26.76	30.73	0.00	62.57	24.70	24.40	0.00	178.09
Koudia el Baida	78.42	145.64	33.58	0.00	73.42	0.00	0.00	565.20	896.26
Djebel el Hadid	19.25	57.78	17.91	0.00	0.00	147.55	47.73	59.92	350.14
Midelt	13.50	40.53	12.80	0.00	11.12	99.82	99.82	0.00	277.59
Hydro									
Abdlemoumen STP	0.00	0.00	29.98	0.00	86.95	173.01	0.00	18.84	308.78
TOTAL	120.10	270.71	125.00	0.00	234.06	445.08	171.95	643.96	2010.86