



AFRICAN DEVELOPMENT BANK

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**PROJECT : INTEGRATED WIND/HYDRO AND RURAL
 ELECTRIFICATION PROGRAMME**

COUNTRY: KINGDOM OF MOROCCO

APPRAISAL REPORT

Date : May 2012

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Exchange Rate

August 2011

UA 1	12.5216	MAD
UA 1	1.59900	USD
UA 1	1.12132	EUR

Fiscal Year

1 January - 31 December

Weights, Units and Measures

T	Tonne = 1000 kg	kW	kiloWatt = 1000 Watts
GW	GigaWatt = 1000 MW or 1000000 kW	kWh	kiloWatt-hour = 1000 Wh
GWh	Gigawatt-hour = 1000 MWh	MVA	MegaVolt Ampere = 1000 kVA or 1000000 VA
toe	Tonne oil equivalent	MW	MegaWatt = 1000000 W or 1000 kW
kV	kiloVolt = 1000 Volt	MWh	MegaWatt-hour = 1000 kWh
kVA	kiloVolt Ampere = 1000 VA		

Acronyms and Abbreviations

ADB	African Development Bank	MIC	Middle-Income Country
ADF	African Development Fund	MTR	Mid-Term Review
AFESD	Arab Fund for Economic and Social Development	MV	Medium Voltage
APA	Advance Procurement Action	NIF	Neighbourhood Investment Facility
BD	Bidding Documents	ONE	National Electricity Authority
CDM	Clean Development Mechanism	ONEC	Energy, Environment and Climate Change Department
COMAFTEP	Moroccan Committee for Financing Clean Energies and Technologies	ONEE	National Water and Electricity Authority
CSP	Country Strategy Paper	ONEP	National Drinking Water Authority
CTF	Clean Technology Fund	OPsCOM	Operations Committee
EIB	European Investment Bank	PAR	Project Appraisal Report
ESIS	Environmental and Social Impact Studies	PCR	Project Completion Report
ESMP	Environmental and Social Management Plan	PIU	Programme Implementation Unit
EU	European Union	PPP	Public-Private Partnership
FH2	Hassan 2 Economic and Social Development Fund	RMC	Regional Member Countries
GDP	Gross Domestic Product	ROE	Return on Equity
HV	High Voltage	SESA	Strategic Environmental and Social Assessment
ICB	International Competitive Bidding	SIE	Energy Investment Company
IsDB	Islamic Development Bank	SME	Small and Medium-Sized Enterprises
LV	Low Voltage	UA	Unit of Account
MAFO	Morocco Country Office	UNFCCC	United Nations Framework Convention on Climate Change
MDB	Multilateral Development Bank	WB	World Bank

PROGRAMME INFORMATION SHEET

Client Information	
Borrower	ONE
Executing Agency	ONE

Sources	Amount in MUA	Amount (M EUR)	Instrument
ADB	320.25	359	Loan
ADB CTF	78.17	87.66	Loan
EIB	179.96	201.79	Loan
Other Financiers	1139.93	1217.17	Loan
KfW	62.54	70.13	Loan
EU/NIF	15.62	17.52	Loan
Bank of Austria	23.45	26.30	Loan
IsDB	125.07	140.25	Loan
Private Sector	913.25	962.97	
GVT (FH2-ONE-SIE)	54.20	60.78	Counterpart Funds
Total Programme Cost	1772.51	1987.55	

LOAN FINANCING INFORMATION		
	ADB	CTF
Loan Currency	EUR	USD
Interest Rate Type	Floating base rate with a free fixing option	NA
Base Rate (Floating)	6-month Euribor	NA
Contractual Margin	0.60%	NA
Funding Margin	Margin based on Bank's cost of borrowing relative to the 6-month Euribor. This margin is revised on 1 January and 1 July each year.	NA
Administration Fee	NA	0.25% of the loan amount payable in a single tranche
Service Charge	NA	0.25% per year on the loan amount disbursed and outstanding
Tenor	20 years	40 years
Grace Period	5 years	10 years

TIMEFRAME AND MAIN MILESTONES	
Concept Note Approval	11 June 2011
Programme Approval	June 2012
Effectiveness	December 2012
Last Disbursement	June 2018
Completion	June 2018
Last ADB Loan Repayment	June 2033

PROGRAMME SUMMARY

1. **Programme Overview:** The Integrated Wind/Hydro and Rural Electrification Programme is in keeping with the vision of Morocco's energy strategy whose aims are mainly to: (i) improve energy security; (ii) increase the share of clean and renewable energies in the energy mix, thereby mitigating the impacts of electric power generation on climate; and (iii) provide rural areas with access to energy. This Programme will result in a reduction in energy product imports and help to prevent the emission of 65 million tonnes of CO₂ over its total life-span. It will also foster greater private sector participation in electric power generation investments. It will result in the electrification of 86,000 households, representing about 516,000 Moroccans living in rural areas.

2. **Needs Assessment:** Morocco is almost 97% dependent on outside sources to meet its energy needs. Over the past ten years, electricity consumption in Morocco has increased at an annual average rate of 6% to 8%, due to the country's robust economic development and the implementation of a major Global Rural Electrification Programme (PERG). This rising demand for electricity is expected to continue at an annual rate of 5% to 7% over the next ten years (Refer to Annex IV), in line with estimated GDP growth of 5.5%. Morocco's energy strategy aims to increase the share of renewable energy in its energy mix from 10% in 2007 to 42% in 2020, i.e. about 6000MW of additional renewable energy sources.

3. **Bank's Added Value:** In 2009, the Bank assisted Morocco in the preparation of its Investment Plan to provide it with access to the concessional resources of the Clean Technology Fund (CTF). It then helped it to restructure the Plan in 2011, by focusing on Morocco's ambitious commitment to install 2000 MW of wind energy and 2000MW of hydro-energy by 2020. In October 2011, under its USD 150 million envelope for Morocco, the CTF Trust Fund Committee approved funding in the amount of USD 125 million for the Wind/Hydro and Rural Electrification Programme. This financing is to be channelled through ADB. The Programme will enable the Bank to bolster its role as a key energy sector actor, especially regarding the development of renewable energies in Morocco, and to support the green growth of the country's economy.

Knowledge Management: The Programme is one of a number of innovative programmes aimed at supporting large-scale clean energy generation projects which will help to transform the economies of the beneficiary regional member countries. The knowledge acquired under this Programme will help to accelerate implementation of Morocco's green growth vision, but also pave the way for its replication in other African countries. It is in keeping with the Bank's strategic vision for development of the African energy sector through the promotion of universal access on the basis of a low- carbon growth pathway. Finally, this Programme is one of the deliverables of the Bank's Climate Change Action Plan.

RESULTS-BASED LOGICAL FRAMEWORK

Country and Programme Name: Kingdom of Morocco/Integrated Wind-Hydro and Rural Electrification Programme Programme Objective: contribute to energy supply security through: i) the diversification of energy sources; ii) a reduction in greenhouse gas emissions (CO2) and the harmonization of rural and urban access rates.						
	Results Chain	PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS/MITIGATION MEASURES
		INDICATOR	Baseline Situation	Target		
IMPACT	<ul style="list-style-type: none"> Supply matches demand by increasing the share of renewable (wind) and hydroenergy in Morocco's energy mix Imports of primary energy reduced 	<ul style="list-style-type: none"> Share of renewable energy in electric power generation Country's dependence on primary energy imports 	10% (in 2007)	42% (in 2020)	Reports of Ministries (Energy, Economy and Finance)	<p>Developer selection- related risk: case of the selection of a developer that is technically or financially incapable of implementing the Programme, or where no developer submits a bid.</p> <p>Mitigation Measures: This risk will be mitigated by a two-stage bidding process involving pre-qualification and submission of a bid bond by the developer. Also, because of the financial crisis in Europe and the United States, many projects have not been carried through. Consequently some wind turbine manufacturers have themselves become involved in their development. In such cases, the worst-case scenario would be one where the latter represent the 'developer of last resort' in order to dispose of their production surplus in a low- risk project (sovereign guarantee) and where conditions are optimal to make Morocco a show-case for a wind turbine manufacturer. Thus, the Programme is structured so as to achieve economies of scale. ONE has fully understood this and the developers will follow the same reasoning which should even more significantly mitigate the risk of no developer submitting a bid.</p>
			97% (in 2010)	95% (in 2020)	Reports of Ministry of Energy	
EFFECTS	Rural and urban electrification rates harmonized.	Average electric power access rates in rural areas covered by the project	91% (2010)	97% (in 2014)	Reports of Ministry of Energy	<p>Fiduciary Risk: this risk is considered as significant due to the: i) current inexistence of the Tangiers 2 Specific Purpose Company (SPC); ii) the many sources of financing and iii) the need to adapt ONE's management system.</p> <p>Mitigation Measures: the establishment of a number of conditions precedent (requirement to set up the Specific Purpose Company, opening of special accounts; establishment of an accounting and financial management mechanism) to first disbursement, will considerably mitigate this risk.</p> <p>Technological Risk : this risk is defined by the fact that the technology envisaged for the programme (integrating wind and hydro energy) is not usual</p> <p>Mitigation Measure: This risk will be mitigated by the fact that ONE will specify in the pre-qualification file, the need for the developers to use technology certified by a globally recognized institution. Technical assistance will also be required for the Programme's implementation</p> <p>Risk of failure to mitigate the Programme's negative environmental impacts.</p> <p>Mitigation Measure: The environmental and social studies on the programme components will be submitted to the Bank for approval prior to disclosure of information. Proper implementation of the ESMP shall be a condition precedent to any disbursement.</p>
	Morocco's CO2 emission reduced	Morocco's CO2 emissions prevented		- 65 million tCO2 over the programme's entire economic life-span		
	Jobs created	Number of direct full-time jobs Number of temporary jobs	0(2011) 0(2011)	350 4000			Project Completion Report Project Completion Report
OUTPUTS	New wind power plants installed	Contribution to building capacity of installed wind farms	250 MW (2011)	+750 MW in 2017	Project Completion Report	<p>Risk of ONE weak implementation capacity</p> <p>Mitigation Measure: This risk is low since ONE has already satisfactorily implemented many wind/hydro and rural electrification projects. Furthermore, ONE will be provided with appropriate technical assistance</p>
	Hybrid hydro storage system and installed wind capacity	Effective capacity of hybrid hydro storage system (STEP)	464 MW (2011)	814 MW in 2017	Project Completion Report	

	Grid-connected electric generating capacity	Strengthening of electric power transmission network	0 MW in 2011	1270 MW in 2017	Project Completion Report	Risk related to the ONE-ONEP merger Mitigation Measure: this risk will be mitigated by the fact that ONEE will be managed by sector of activity. Risk related to ONE's financial situation Mitigation Measure: this risk will be mitigated by the fact that the Programme loans will be backed by Moroccan State guarantees.
	New power grid connections	Number of homes subscribed	2 162 893	2 248 893 (+86000 new homes)	Project Completion Report	
	New electric power distribution networks established	<ul style="list-style-type: none"> - Length of low voltage lines installed - Length of medium-voltage lines installed - Number of MV/LV transformer stations 		+ 8400 km (in 2014) + 3400 km (in 2014) + 1700 (in 2014)	ONE Reports Supervision missions	
ACTIVITIES	COMPONENTS		RESOURCES			
	A. 'Wind/Hydro Component'					
	Installation of 750 MW of wind farms		EUR 1311.49 million			
	Installation of 520 MW of hybrid hydro-power plants		EUR 470.05 million			
	A. 'Rural Electrification' Component					
	Construction of medium and low voltage lines		EUR 158.22 million			
C. 'Project Management' Component						
Management, Monitoring and Evaluation and Audit		EUR 47.81 million				

Estimated Project Implementation Schedule
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Activities	2011				2012				2013				2014				2015				2016				2017				2018			
	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Board Presentation and Approval																																
Signature of Loan Agreements																																
Effectiveness of Loans																																
Fulfilment of Conditions Precedent to 1st Disbursement																																
Procurement																																
Tangiers 2 Wind Farm																																
Koudia El Baida Wind Farm (substation and lines)																																
Abdelmoumen STEP																																
M'Dez El Menzel Hydro-Power Works																																
PERG																																
Programme's Physical Implementation																																
Tangiers 2 Wind Farm																																
Koudia El Baida Wind Farm (substation and lines)																																
Abdelmoumen STEP																																
M'Dez El Menzel Hydro-Power Works																																
PERG																																
Supervision – ESMP Implementation																																
Audit of Programme Accounts																																
Programme Completion																																

**REPORT AND RECOMMENDATIONS OF MANAGEMENT
TO THE BOARD OF DIRECTORS CONCERNING
A PROPOSED ADB LOAN TO THE NATIONAL ELECTRICITY AUTHORITY (ONE)**

Management submits the following report and recommendation on a proposed: (i) ADB loan of EUR 359 million; and (ii) a CTF loan of USD 125 million to the National Electricity Authority (ONE) of the Kingdom of Morocco to finance the Integrated Wind/Hydro and Rural Electrification Programme.

1 STRATEGIC THRUST AND RATIONALE

1.1 Programme Linkages with Country Strategy and Objectives

Morocco's Economic and Social Development Programme is underpinned by the implementation of structural and sector policies and reforms focused on major infrastructure projects. This Programme has been confirmed by the new Moroccan Government formed following the November 2011 parliamentary elections and is centred around the following five pillars: (i) acceleration of growth to 5.5%; (ii) turning Morocco into an investment and export hub; (iii) strengthening governance; (iv) making regionalization a vector of development; and (v) the promotion of intergenerational solidarity. Furthermore, the Kingdom's energy strategy, adopted in 2009, is focused on the improvement of the Kingdom's energy security and mitigation of climate change impacts while ensuring universal access to energy. The 'energy security' aspect is taken into account through the diversification and optimization of the energy mix as well as development of the country's renewable energy potential.

The Integrated Wind/Hydro and Rural Electrification Programme is aligned with Pillar 2 of the Country Strategy Paper (CSP) for the 2012-2016 period (i) Strengthening of governance and social inclusion; and (ii) (Pillar 2) Support to the development of 'green' infrastructure. The Programme is also in keeping with the strategic directions of the Bank's Medium-and Long-Term Strategy. Its implementation will contribute to the development of energy infrastructure and will support the creation of new, especially 'green' industries. It will also result in a gradual reduction in inter-regional economic development disparities and contribute to the development of socio-economic activities.

1.2 Rationale for Bank's Involvement

By participating in the Programme's financing, the Bank will support Morocco in implementing its Energy Programme. This is an integrated Programme combining the generation, transmission and distribution of electric energy. Through its power generation component, the Programme aims to resolve the problems of meeting rising demand for electricity while improving access to electricity for part of Morocco's population, especially people living in remote areas of the Kingdom. This should help to gradually reduce regional development imbalances and foster social inclusion.

This Programme will build green energy generating capacity and is consistent with ONE's 2010-2020 Equipment Plan. Through its wind and water power generation component, it will contribute to the fight against climate change and the development of renewable energies, and to meeting demand. This Programme will, moreover, provide a 'clean' response to the intermittent nature of wind energy in that it provides for the storage of surplus energy through hydraulic structures. From a cost standpoint, the programmatic approach is expected to result in economies of scale for the development of the Moroccan electric power generation system.

Since 2009, the Bank has been assisting Morocco in the formulation of its Investment Plan submitted to the Clean Technology Fund (CTF), the largest of the World Bank-managed Climate Investment Funds. This Plan was restructured in 2011 to focus on Morocco's ambitious vision of installing 2000 MW of wind, 2000MW of hydro and 2000 MW of solar energy by 2020. (Technical Annex B.9). In October 2011 the CTF's Trust Fund Committee approved concessional financing of USD 125 million for Morocco's Wind Energy Programme to be channelled through the Bank. The Programme is in keeping with the innovative approaches aimed at supporting large-scale clean energy generation initiatives with a transformational impact on the economies of the beneficiary regional member countries.

1.3 Donor Coordination

The Moroccan Government has made considerable aid coordination efforts. It proposes to establish a Geographic Information System (GIS) for real time monitoring of the different technical and financial partners' (TFP) interventions by geographical area, sector and amount. Donor assistance is fairly closely aligned with the Government's strategic priorities and there is no parallel project implementation unit. Several donors intervene in Morocco's energy sector by awarding loans or grants. They include the ADB (leader), WB, EIB, IsDB, EU, AFD, KfW and AFESD. There is a formal coordination framework for these donors' activities: the Energy Thematic Group (ETG), established at the initiative of the German Embassy and the European Commission Delegation. Coordination of the partners involved in this Programme is carried out through this thematic group.

Since 2009, specific monthly meetings on the theme of renewable energies have been held between development partners and Morocco. These meetings have enabled the Bank to coordinate its actions with those of the other institutions intervening in the Moroccan energy sector.

The Integrated Wind/Hydro Programme involves several partners which share Morocco's vision of developing a programmatic approach towards the implementation of its energy strategy. In this particular case, COMAFTEP already exists in Morocco and decides on project eligibility for CTF financing. This committee comprises representatives of several Ministerial Departments (Economy and Finance, Governance and General Affairs, Energy, Mines, Water and the Environment). COMAFTEP invites the different development partners to its meetings, depending on the subjects to be discussed.

2 PROGRAMME DESCRIPTION

2.1 Programme Description and Components

This Programme comprises the following three components:

A. **'Wind and Hydro-Power Generation'**: This component entails the construction of four wind farms with a total capacity of 750 MW. The Bank intervenes in two of these wind farms, Tangiers 2 and Koudia El Baida, located in the North of Morocco, under a PPP in the case of Tangiers 2 and direct financing for the Koudia El Baida transformer station and electric power lines. This component also includes a pumped energy transfer station (STEP) as well as a hydro-power complex with a total capacity of 520 MW, (ii) construction of HV lines and substations to evacuate the electric power generated to the national grid and (iii) technical assistance.

B. **'Rural Electrification' Distribution**: This component concerns the construction of MV and LV lines and MV/LV distribution sub-stations with a view to connecting 86,000 households in 25 provinces as shown in Annex V, in order to increase the electricity access rate to about 99%. This component will contribute to the achievement of the objectives of the National Global Rural Electrification Programme.

C. **‘Programme Management’**: This component comprises works control and supervision, implementation of the ESMP and the Programme audit. It includes the ESIS and ESMP of sub-projects, the implementation of environmental and social measures as well as audits and overall Programme monitoring and evaluation.

The Table 1 below presents the different Programme components.

	Component Name	Component Description		
		Subcomponent	Total Capacity (MW)	Total Investment (in million EUR)
A.	Wind and Hydro-Power Generation	Tangiers 2 Wind Farm (2013-2015): Acquisition of land, civil works, SCADA, wind turbines. connection to ONE grid	150	268.09
		Koudia El Baida Wind Farm (2014-2017) : Acquisition of land, civil works, SCADA, wind turbines. connection to ONE grid and construction of the Manjra shielded sub-station	300	515.98
		Djebel El Hadid**	200	392.42
		Midelt**	100	135.00
		Total (Wind Sub-Component)	750	1311.49
		Abed Abdelmoumen (2013-2017): Civil works, mechanical and electrical equipment and access road	350	213.43
		M’DEZ-El MENZEL Hydro-Power Complex (2013-2017) : Civil works. Water supply structures and hydro-power plants. Access roads	170	256.61
		Total (Hydro-Power Sub-Component)	520	470.05
	TOTAL	1270	1781.53	
B.	‘Rural Electrification’ Distribution	<ul style="list-style-type: none"> • Construction of MV and LV lines • Construction of MV/LV transformer stations • Connection of 86000 rural households to the power grid 		158.22
C.	Programme Management	<ul style="list-style-type: none"> • Sub-project ESIS and ESMP • Implementation of E&S (ESMP) and compensation measures • Works Control and Supervision • Project Management, Audit. Monitoring and Evaluation 		47.81
	Total Programme Cost	Wind and Hydro-Power + Rural Electrification + Programme Management		1987.55

**Not financed by ADB

2.2 Technical Solutions Retained and Other Alternatives Explored

The technical solution retained consists in creating an integrated energy Programme with a Generation Component, a Transmission Component and a Distribution Component. The advantage of this innovative solution is its positive impact on the entire value chain right to the end consumers. Due to its financial leverage effect, this solution will enable Morocco to immediately mobilize and safeguard part of the equipment investment plan.

This solution was prepared on the basis of different studies, especially preliminary and detailed designs as well as environmental impact studies. Technically, the Programme is optimized by the wind-hydro combination which guarantees the availability of peak power, thereby offsetting the intermittent nature of wind power on the basis of the following operating mode: during low electricity consumption periods, surplus wind energy generated is stored by pumping water from the lower basin of the STEP to its upper basin. In the event of an increase in demand, the stored energy is restored by turbinning water from the upper to the lower basin. This combination will improve the supply/demand match, while lowering generating costs and avoiding the use of fossil resources such as coal, oil or gas. The following alternatives have been explored:

Option	Descriptions and Characteristics	Reasons for Rejection
Traditional Thermal Plants	Continuing construction of traditional gas, coal or oil fired plants.	Negative Impacts: (i) on the trade balance of Morocco which already imports 97% of its primary energy; and (ii) on the environment as a result of CO2 emissions.
Electric Energy Imports	Electric energy imports from third countries.	This alternative appears economical to meet rising electric power demand but has: (i) the same negative impacts on Morocco's trade balance and (ii) raises a problem of security of supplies.
Other form of energy storage or reserve.	Batteries or other forms of reserve (gas turbines, diesel engines, etc.)	Having opted for the STEP will help to: (i) make savings on imports of fuel required to operate the thermal plants at peak periods; (ii) avoid the installation of additional turbines at a high cost; (iii) reduce CO2 emissions while preventing the build-up of spinning reserves at thermal plants using fossil sources; and (iv) store wind energy and enhance the efficiency of the electric power grid.
Decentralized Rural Electrification	Use of individual household supply systems and/or development of independent systems, not connected to the national grid.	This solution raises some problems of reliability and security of supply. The independent systems often use fossil fuels, which could create supply problems.

2.3 Programme Type

The operation is an investment Programme based on an 'integrated' approach which will make it possible to optimize transaction costs and capitalize on the synergies among the Programme components. A learning phase in stages and optimization of resources and their management will help to minimize transaction costs while providing benefits as a result of economies of scale between the different Programme phases. The outcome will be the lowest possible price per kWh generated.

The proposed instruments for the financing of this programme are an ADB loan and a CTF loan to be awarded to ONE with a sovereign guarantee from the Kingdom of Morocco. The CTF Trust Fund Committee has already approved the Moroccan Investment Plan, in particular, the allocation of USD 125 million to the ADB Programme. This programme approach was also selected in order to support Morocco in its efforts to seek concessional financing to develop renewable energies. In view of the importance of the activities targeted in the promotion of clean energy, the CTF loan coupled with the ADB loan will have a leverage effect on the mobilization of additional resources to implement the Programme.

2.4 Programme Cost and Financing Plan

2.4.1 Programme Cost: the total Programme cost, exclusive of taxes and customs duties, is estimated at EUR 1987.55 million, an estimated EUR 1191.16 million of which is in foreign exchange, with EUR 796.11 million in local currency. The Programme costs by component are presented in the following Table:

Table 2.3
Estimated Cost by Component (in thousand EUR)

Components	F.E.	L.C.	Total	% F.E.
A) Wind/Hydro Energy	1 032 805	688 051	1 720 856	52%
B) PERG	85 757	58 387	144 144	4%
C) Project Administration and Management	25 761	17 012	42 772	1%
BASE COST	1 144 323	763 449	1 907 773	58%
<i>Total Provisions for Contingencies</i>	<i>46 837</i>	<i>32 664</i>	<i>79 501</i>	
<i>Provisions for Physical Contingencies (2%)</i>	<i>23 530</i>	<i>16 084</i>	<i>39 614</i>	
<i>Provisions for Price Escalation (2%)</i>	<i>23 307</i>	<i>16 580</i>	<i>39 887</i>	
TOTAL COST in thousand Euros	1 191 160	796 112	1 987 273	59%

2.4.2 Programme Financing Arrangements: in addition to the ADB and CTF resources, this Programme will benefit from financing by IsDB, KfW, Austrian Cooperation, AFESD and NIF, as well as from private investors to be selected through a competitive bidding process in the case of the wind energy PPP. The national counterpart will be provided by the Government of the Kingdom of Morocco and will be covered by ONE, the Hassan II Sovereign Fund for Economic and Social Development and the Energy Investment Company (SIE). The financing plan by component and expenditure category is presented in the following Tables:

Table 2.4
Sources of Financing (in thousand EUR)

Sources of Financing	F.E.	Local Currency	Total	% Total
ADB	248 352	191 252	439 604	22%
Government (ONE, FH2, SIE)	39 520,70	23 466	62 987	3%
Other Donors	904 137	580 546	1 484 683	75%
TOTAL	1 192 010	795 264	1 987 274	100%
Percentage (%)	60%	40%	100%	

Table 2.5
Programme Financing Plan by Component and Source of Financing (in thousand EUR)

Components	ADB Financing	Government Financing	Other Donors' Financing	Total	% ADB+CTF
A) Wind/Hydro Energy	219 423	59 980	1 360 926	1 723 729	18%
B) PERG	114 617	-	120 417	174 826	12%
C) Project Administration and Management	-	487	8 715	9 202	0%
BASE COST	334 040	60 467	1 490 058	1 907 756	30%
	-	-	-	-	
<i>Total Provisions for Contingencies</i>	<i>17 586</i>	<i>2 520</i>	<i>59 395</i>	<i>79 501</i>	<i>1%</i>
<i>Provisions for Physical Contingencies (3%)</i>	<i>8 763</i>	<i>1 256</i>	<i>29 595</i>	<i>39 614</i>	<i>0,4%</i>
<i>Provisions for Price Escalation (2%)</i>	<i>8 823</i>	<i>1 264</i>	<i>29 799</i>	<i>39 887</i>	<i>0,4%</i>
TOTAL COST (thousand Euros)	351 627	62 987	1 549 453	1 987 256	18%

Table 2.6
Financing Plan by Expenditure Category (in thousand EUR)

Expenditure Categories	ADB		CTF/ADB		Government (ONE, FH2, SIE)		Other Donors		Total	TOTAL
	F.E.	L.C.	F.E.	L.C.	F.E.	L.C.	F.E.	L.C.		
1 - Goods	142779	109952	37 348	28762	28664	17 020	655 761	421 064	1057315	1 441 349
2 - Works	25 224	19 425	-	-	4 014	2 383	91 831	58 965	340 353	201 842
3 - Non-Intellectual Services	20 927	16 115	12 174	9 375	5 267	3 128	120 506	77 377	54 789	264 869
Base Cost	188 930	145 492	49 523	38 137	37 945	22 531	868098	557 404	1907773	1 908 059
Provisions for Physical Contingencies	4 951	3 812	-	-	788	468	18 023	11 573	53 357	39 614

Expenditure Categories	ADB		CTF/ADB		Government (ONE, FH2, SIE)		Other Donors		Total	TOTAL
	F.E.	L.C.	F.E.	L.C.	F.E.	L.C.	F.E.	L.C.		
Provisions for Price Escalation	4 985	10 839	-	-	793	471	11 147	11 652	17 786	39 887
Total Project Cost	198 865	160 143	49 523	38 137	39 526	23 469	904 268	580 629	1523600	1 987 560
Percentage (%)	10%	8%	2%	2%	2%	1%	45%	29%	100%	100%

Table 2.7
Disbursement Schedule of the Integrated Programme (in Thousand EUR)

COMPONENTS	2 012	2 013	2 014	2 015	2 016	2017	Total
A) Wind and Hydro Energy	430 214	344 171	344 71	344 171	172 086	86 043	1 720 856
B) PERG	36 036	28 829	28 829	28 829	14 414	7 207	144 144
C) Project Administration and Management	10 693	8 554	8 554	8 554	4 277	2 139	42 772
Base Cost	476 943	381 555	381555	381 555	190 777	95 389	1 907 773
Contingencies	19 875	15 900	15 900	15 900	7 950	3 975	79 500
Total Cost (thousand Euros)	496 818	397 455	397455	397 455	198 727	99 364	1 987 273

2.5 Programme Target Areas and Beneficiaries

The Programme concerns six (6) sites for the installations of the ‘wind/hydro power generation’ component and twenty-five (25) provinces for the ‘rural electrification’ distribution component, some of which are not easily accessible (Annex V). The Bank’s intervention will be in the North of the country. Some 86,000 homes will gain access to electricity under this component, i.e. about 516,000 Moroccans living in rural areas. The Programme will also provide financial support to local development initiatives through the resources generated by activities such as land acquisition. The integrated Programme will benefit both rural and urban communities in Morocco, contribute to a reduction in greenhouse gas emissions and improve access to energy for remote rural communities.

ONE’s consultations with stakeholders have revealed the value of the Programme for local development, especially through income-generating activities for women and youth. The development of renewable energies coupled with the generalization of rural electrification will represent a major contribution to the implementation of the ‘Emergence’ and ‘Green Morocco’ Plans. Indeed, the Programme’s ‘rural electrification’ component will have positive externalities at the national and regional levels. It will have a significant socio-economic impact in the areas concerned and will help to support economic growth, reduce the unemployment rate and increase the population’s purchasing power.

2.6 Participatory Approach

As part of the Programme’s ongoing environmental and social studies, specific consultations will be carried out for the different sub-components of the Programme’s ‘Wind and Hydro-Power Generation Component’. These will address consumers, Government agencies and local communities, land owners and the inhabitants of the Programme areas. For the ‘Rural Electrification’ component, public consultations already been carried out by the General Directorate of Local Communities of the Ministry of Interior have highlighted the population’s wish to be connected to the national grid. During Programme implementation, this participatory approach will be pursued through consultations for the implementation of the environmental and social plans.

2.7 Bank Group Experience and Lessons Learned, Reflected in Programme Design

In its design, the Programme benefited from lessons learned from the preparation and implementation of wind farm projects financed by the Bank and other development partners, particularly under public private partnerships (PPP). The Bank is supporting several similarly structured projects using Clean Technology Fund (CTF) resources or those of other development partners. These include the Eskom Renewable Energy Project (200 MW) in South Africa or the Aïn Beni Mathar thermal-solar plant (472 MW) in Morocco. These lessons mainly concern project structuring, the environmental and social approach, and technical approaches. They reveal: (i) the need to select sites on the basis of their natural endowments; (ii) the need to set up a solid and experienced team to carry out and implement the project involving internationally renowned specialists (given Morocco's already installed wind power capacity of 253 MW, useful knowledge will be transferred while limiting the operational and technological risks); (iii) the need to adopt an appropriate procurement method to attract the interest of major international firms at the pre-qualification stage (namely, the principle of transparency and sound management of processes).

The ONE-backed operations were satisfactorily implemented and have achieved the expected outcomes. ONE, Morocco's main electricity sector operator has the required experience and competencies to implement electricity sector investment projects and programmes. This observation has been confirmed by OPEV's review of electricity sector operations in regional member countries.

2.8 Key Performance Indicators

These key performance indicators are presented in the results-based logical framework and chiefly concern the share of renewable energies in electric power generation, the country's dependence on primary energy imports, the quantity of CO₂ gas emissions prevented and the electricity access rate in the rural areas served.

Regarding the performance indicators, the Programme executing agency (ONE) will be responsible for confirming the baseline situation and then monitoring and analysing their trend compared to those set out in the logical framework. These Programme performance indicators will be incorporated in the Programme's six monthly activity reports to be prepared by ONE. At different stages implementation, they will be analyzed and compared with the Programme's target values, international standards and the achievements of similar companies on the continent or elsewhere.

3 PROGRAMME FEASIBILITY

3.1 Programme Economic and Financial Performance

The programme's economic and financial analysis involves the presentation of assumptions, followed by the interpretation of results and a sensitivity analysis. It is supplemented by the presentation of ONE's financial situation.

3.1.1 Assumptions The main parameters of the model are: (i) the debt/equity ratio is 75/25 for SPV, (ii) the wind capacity factor used is the P75¹, (iii) the dates of commissioning of the wind farms are progressive and costs (investment and operation) are similar to those of the Tarfaya site that was built during the seller's market period and (iv) for the ERR, the cost of gas varies from MAD 175 to 280 million a 100-MW plant (ONE data). The programme's analysis is based on the assumption that the average selling rates increases will be applied as planned by ONE between 2013 and 2015 (see 3.1.4).

¹ The probability that the wind resource will be greater than or equal to 75%, which is consistent with the financial structure as well as the duration of the wind resource measurement campaign.

The economic rate of return (ERR) was calculated by estimating the consumer surplus, related to the contribution of rural electrification and increase in the production capacity compared to the costs would have been incurred in the event of utilization of other forms of energy by consumers. The financial rate of return (FRR) was calculated on the basis of investment costs and back flows presented in the tables under Technical Annex B7. However, these returns do not include the following positive externalities that strengthen the economic viability of this programme: (i) social benefits in terms of health, education, user satisfaction, (ii) local environmental benefits in terms of batteries avoided, (iii) local economic benefits in terms of job creation, (iv) overall economic benefits (macroeconomic) in terms of fiscal benefits.

3.1.2 *Financial and economic performance :*

Baseline Scenario	ERR: 60.7%	ENPV: MAD 5,424 million
	FRR: 5%	FNPV (12%): MAD 5,424 million

In Morocco, electricity rates are state-regulated and the average selling price per kWh is currently set at cMAD 78.45. The average cost per kWh generated by ONE, for all energy sources is cMAD 58.3/kWh. Developing renewable energy comes at a cost for Morocco. However, use of CTF concessional funds will result in savings of about cMAD 3/kWh, thus improving the economic sustainability of this programme. Indeed, the use of these concessional funds will result in a wind-generated cost price per kWh of cMAD 90.6, giving a financial return of 5.13% for the programme, given that neither STEP nor the PERG are project-specific income generators as such. It should also be noted that the production cost per "wind" kWh implies investment costs considered conservative in current market trends.

The programme's economic rate of return (ERR) meanwhile is underestimated at 60.7% and taking into account the PERG effect and the gas savings that a plant of the same capacity as Tanger 2 and STEP together would have generated. It also takes into account the number of starts avoided thanks to STEP. The positive ERR and FNVA demonstrate the decisive economic impact of the project .

Lastly, at the macroeconomic standpoint, implementation of this investment plan will ensure net financial savings of EUR 431million from an annual reduction in fuel oil imports for electric power generation by about EUR 467 million, taking into account the difference between the Programme's marginal cost and the average cost price for electricity generated by the ONE plants prior to implementation of the Programme.

It is important to note that with respect to the financial situation of ONE buyer of last resort for Tanger 2, the State undertook the recapitalization of ONE to the tune of MAD 3 billion as envisaged by the board of directors of that structure. This will strengthen ONE's financial base, and incidentally that of the programme. It should be noted that such recapitalization had already been done in 2009. Tariffs are expected to increase by 4% annually between 2012 and 2015. These two measures combined will enable ONE to contain its debt service coverage ratio which should still be equal to or higher than 1x over the period, while executing its investment programmes and incurring debt (64% debt ratio by 2015). The analysis ONE's financial position is presented in Annex A.2.7.

3.1.3 *Sensitivity:* In the light of the foregoing, there is need for the Kingdom to take support measures to ensure the programme's economic and financial viability, especially by covering the differential between the price at which ONE sells to the public and that at which it will buy from the private sector. the programme's economic and financial performance sensitivity has been analysed mainly in relation to rates and investment costs, the programme's two main components. Also, following this analysis, it should be noted that CTF's additionality varies from 2 to 4 cMAD per kWh.

Variation in programme's investment cost	FRR	Variation in wind feed-in tariff (from ONE's view)	FRR	Variation in wind feed-in tariff (from Kingdom's view)	Necessary support to Morocco (MAD million per year) at constant programme IPR
-20%	6.25%	-20%	5.34%	-20%	-15.91
-15%	5.94%	-15%	5.29%	-15%	1.72
-10%	5.65%	-10%	5.24%	-10%	19.34
-5%	5.38%	-5%	5.18%	-5%	36.97
0%	5.13%	0%	5.13%	0%	54.59
5%	4.90%	5%	5.08%	5%	72.22
10%	4.68%	10%	5.02%	10%	89.84
15%	4.48%	15%	4.97%	15%	107.47
20%	4.29%	20%	4.92%	20%	125.09

3.2 Environmental and Social Impacts

3.2.1 Environment: The Strategic Environmental and Social Assessment (SESA) for this Programme has been carried out and its summary was posted on the Bank's Website on 28 September 2011. The SESA presents the national context, the Programme's main expected environmental and social impacts and analysis of ONE's environmental and social (E&S) management institutional capacities. It led to the preparation of an environmental and social management framework plan. The categorization will be by subcomponent, as the Programme is implemented. With regard to the approval process, an environmental and social impact study will be prepared for each Category 1 sub-component, a summary of which will also be posted on the Bank's Website 120 days before presentation and an information note submitted to the Board. For Category 2 sub-components, an environmental and social management plan will be prepared and posted on the Bank's Website 30 days before presentation. To that end, ONE has already submitted to the Bank an interim version of the impact study of the Abed Monument STEP Abdelmoumem and the M'Dez-El Menzel Hydro-Power Complex, as well as an environmental and social management plan of the rural electrification component. New versions in response to the Bank's comments will be submitted in the third quarter of 2012. For wind energy projects, the impact studies and specific studies on bird fauna have been initiated and should be available in the 4th quarter of 2012.

This framework plan supports greater integration by ONE of environmental and social management in its organization in order to meet Bank requirements. In addition to the public consultation Programme, it is intended to recruit an environmentalist and external consultant for environmental and social monitoring as well as for the implementation of a training plan for the Environment Division staff.

3.2.2 Climate Change:

Mitigation: The wind energy component will result in an estimated reduction in greenhouse gases (GHG) estimated at 65 million tonnes of CO₂ over the Programme's life-span. This estimate has been calculated on the basis of an emission factor of 0.6336 tCO₂/MWh. The Programme will thus contribute significantly to slowing growth of Morocco's carbon footprint directly, by prevention of GHGs and indirectly, by facilitating the gradual penetration of wind energy into Morocco's energy mix, with a proven wind energy potential estimated at 25000 MW, of which 6000 MW is on the sites under study (i.e. 1.5 times peak demand), and cumulative power potential of 2280 MW in 2020 and 5520 MW in 2030

Adaptation: Energy security will be greatly strengthened by the STEP energy storage system. This security will enhance adaptation to peak power demand, determined to a certain extent by climate variations marked by colder winters and hotter summers.

3.2.3 Gender: The three main impacts of electrification on women's living conditions are as follows: an increase in women's work time at home, a reduced need for firewood collection, and the conduct of domestic income-generating activities. Thus, in homes benefitting from the Programme, there will be opportunities for petty trading and processing and conservation activities involving the use of electrical equipment. This will help to strengthen women's economic power as recommended in the Bank's 2009-2012 Gender Equality Action Plan (GEAP). This Programme will have an impact in terms of reducing rural women's vulnerability.

3.2.4 Social: The 'Wind/Hydro' power generation component will contribute to social inclusion, especially through job creation in the 'clean energy' sub-sector. It is, in fact, aimed at creating about 4000 jobs during the wind farm construction phase and 350 full-time jobs for the operation and maintenance. Moreover, international data indicates that, for one MW of 'green energy' generated, 4 to 5 full-time jobs will be created, which would mean about 4000 to 5000 new jobs under this Programme. The 'Rural Electrification' distribution component targets 2829 villages located in the remotest and most vulnerable areas of the national territory with, in particular, mountainous terrain and exposure to periods of cold weather. Access to electricity will help to improve the quality of life for households, by creating more opportunities for the installation of household appliances and facilitating access to communication systems, mainly audiovisual and on the Internet. Electrification also has the potential to create new jobs linked to the use of electric power (trading, partial processing, agricultural produce conservation, enhanced productivity, etc.).

4 PROGRAMME IMPLEMENTATION

4.1 Implementation Arrangements

ONE will be the Programme executing agency. It has considerable experience in the successful implementation of projects of similar complexity. It also has competent teams that have enabled it to construct wind farms (253,5MW), hydro-power plants (1770 MW) and implement rural electrification programmes. ONE's expertise will be aptly used to implement this Programme, part of which will take the form of a PPP. As in similar operations, ONE will be tasked with the selection of private developers supported by technical, legal and financial advisers. Technical Annexes B4 and B5 provide a detailed explanation of the fiduciary and procurement arrangements.

The Programme will be implemented by ONE's technical departments under the coordination of the Financial Directorate which will interface with the Bank. However, it should be noted that the Moroccan Authorities have merged the National Electricity Authority (ONE) and the National Drinking Water Authority (ONEP) into a single entity called the National Electricity and Drinking Water Authority (ONEE) under the provisions of Law no 46-09 on the ONEF, promulgated by Dahir no. 1-11-161 of 29/09/2011. This law specifies that the merger shall, in addition to the transfer of assets, involve the transfer of rights and obligations from ONE and ONEP to the new ONEE. However, since these 2 corporations have signed loan agreements with the Bank guaranteed by the Kingdom of Morocco, the transfer of rights and obligations can only be binding on the Bank with its express agreement. According to Section 11.05 of the General Conditions, 'Neither party may assign or transfer any of its rights or obligations under the Loan Agreement or the Guarantee Agreement, without the prior consent of the other party'.

In order to assess, with the Moroccan Authorities, the legal consequences of this merger on the Loan and Guarantee Agreements, the Bank conducted a mission to the two corporations and the Moroccan Authorities. The parties agreed on (i) the implementation modalities for the transfer of ONE and ONEP rights and obligations to ONEE as well as (ii) maintenance of the guarantees given to the Bank by the

Kingdom. Finally, it was agreed that, should both Authorities disappear pursuant to the establishment and effective start-up of ONEE, the latter would automatically replace each of them in all projects under consideration by the Bank but yet to be signed. The Moroccan party pointed out that, in order to ensure the successful fulfilment of its mission and smooth implementation of the projects, ONEE would adopt separate operational management for electricity and water.

4.1.1 Institutional Arrangements: the Programme will be conducted by ONE, one of whose tasks will be to prepare specifications for implementation of part of the Programme under a PPP. It will, therefore, have to recruit developers as required for the different sites, to carry out certain works as well as technical, legal, economic and financial studies. ONE will also coordinate the different sources of financing. The institutional framework retained provides for a minority shareholding by ONE in the specific purpose company, while maintaining its status as purchaser of electric power generated, through a Power Purchase Agreement. The legal documents concerning the different transactions will be submitted for Bank clearance (“no-objection”). In the case of components entirely implemented by ONE, the Bank’s rules and procedures for public projects shall be applied. The following arrangements have therefore been agreed upon for the different components:

For the ‘Wind and Hydro-Power Generation’ Component:

- **Tangiers 2 Wind Farm:** This will be through a PPP, under which a specific purpose company (SPC) will be established to implement the project. The Bank will award two (ADB and CTF) loans to ONE, which will on-lend them to the specific purpose company in respect of debt and equity participation.
- **Koudia El Baida Wind Farm:** The Bank’s financings will be channelled towards the necessary public infrastructure for this wind farm. This mainly concerns the connection structures for the 400 and 225 kV transmission lines and sub-stations in the North of Morocco, (Anjra sub-station and connection to ONE grid). ONE will apply the Bank’s procurement rules and procedures.
- **Djebel El Hasid and Midelt Wind Farms:** These are PPP for which specific purpose companies will be established. The Bank is not participating in the financing of these wind farms.
- **Abdelmoumen STEP and M’Dez and El Menzel Hydraulic Structures:** These will be entirely constructed by ONE. The procurement procedures to be applied will be those of the Bank, which is participating in the financing of infrastructure. With regard to the STEP, the Bank will finance the civil works, access road, the electrical, electro-mechanical and hydro-mechanical equipment for the plant, and electricity network for the power that will be generated. With regard to the M’Dez and El Menzel hydro-power plants, the Bank will finance the civil works and the electrical, electro-mechanical and hydro-mechanical equipment.
- **The ‘Rural Electrification’ Component:** The Bank is participating in the financing of this component which concerns the electrification of rural areas in 25 provinces through the construction of new medium-voltage (MV) and low-voltage (LV) transmission lines, the installation of MV/LV transformer substations and connection of about 86000 households to the grid. This component will be entirely implemented by ONE.

4.1.2 Procurement Arrangements: All procurements of goods, works and services under this Programme and financed by the Bank will be in accordance with its relevant rules and procedures. Bank standard bidding documents (BD) will be used. For the financing of the PPP-Tangiers 2 component, a BD acceptable to the Bank has been prepared. However, in order to facilitate the participation of other partners (EIB, KfW, WB) a waiver concerning the application of the Bank's eligibility and origin criteria has been sought from the Board of Directors in conformity with the provisions of Article 1.17b of the Bank's Rules of Procedure for the Procurement of Goods and Works (R&P).

Procurement under the Programme falls within the remit of ONE's Supply and Procurement Directorate (DAM). DAM has sufficient, high quality human resources (about 60 professionals), familiar with the use of the Bank's procurement procedures and those of other donors (WB, AFD, EIB, KfW, IsDB, etc.) in implementing their development projects. DAM staff's familiarity with the Bank's procedures has been considered sufficient, given the previous experience. However, some necessary actions have been identified for implementation, in order to mitigate the risks identified. The procurement plan to be financed by the Bank has been prepared.

4.1.2.1. Special Procurement Arrangements

- (a) ONE operates on the basis of a precise implementation schedule for the different sub-projects. This schedule and the progress it has made in the preparation of rural electrification sub-projects and wind energy units prompted ONE to seek authorization to use the Advance Procurement Action (APA) procedure in accordance with the provisions of Article 1.9 of the R&P :
 - The 'Rural Electrification' component will entail 29 national competitive bidding processes in three tranches. To ensure timely implementation of these works, the Bank, in addition to advance procurement action, has authorized retroactive financing in the amount of EUR 22 million, for which Board of Director's approval is required.
 - The wind energy component will entail ICB for the selection of the private consortium for the development of the Tangiers 2 wind energy plant.
- (b) In view of ONE's capacities and the environment in which it operates, the retroactive financing procedure was authorized for certain procurements under the 'Rural Electrification Component'.
- (c) Given the complexity and innovative nature of the technologies and approaches which could be proposed for the 'Wind and Hydro-Power Generation' component, the following bidding procedures will be subject to pre-qualification pursuant to Articles 2.9 and 2.10 of the R&P and a two-stage competitive bidding procedure, as described in Article 2.6 of the R&P: (i) Selection of a consortium for the establishment of the Tangiers 2 SPC; (ii) supply and assembly of equipment for the Abdelmoumen Pumped Energy Transfer Station (STEP); and (iii) civil works and equipment for the M'Dez and El Menzel hydro-power plants.

4.1.3. Financial Management Arrangements: ONE will be accountable to the Bank and other donors for the implementation of the entire Programme and resource management. The SPC will be responsible for the implementation of the Tangiers 2 wind farm subcomponent.

4.1.3.1. Fiduciary Risks and Safeguard Measures: The financial management assessment concludes that there is a significant initial risk for this Programme, deriving from several factors: (i) the SPC responsible for the construction of the Tangiers 2 Wind Farm, i.e.15% of the Bank's financing, has not yet been established and, at this stage, its ability to ensure sound management of this subcomponent cannot be verified; (ii) this subcomponent requires a common management mechanism for the resources mobilized from different donors, which will be disbursed into a special Programme account, a further source of risk for the Bank; (iii) though ONE's financial management is considered to be reliable, there is need for measures to ensure the compliance of financial information and audit opinions produced concerning ONE projects with the Bank's general conditions and requirements. Satisfactory implementation of the priority action plan agreed upon will help to mitigate this risk and result in a low residual risk. Some of the measures constitute the conditions precedent of the ADB and CTF loans for the Tangiers 2 Wind Farm subcomponent.

4.1.3.2. Financial Management Arrangements: The Programme's financial management falls within the remit of ONE's Financial Directorate and involves other control departments (Operations Control, Internal Audit and the Audit Committee). The subcomponents implemented by ONE (i.e. 85% of the ADB and CTF financing) will use ONE's entire financial management system. The 'Tangiers 2 Wind Farm' subcomponent will depend on the SPC's financial management system and on ONE's cash-flow, control and reporting systems. Compliance with the following arrangements will ensure transparency and traceability in the use of funds invested and will provide adequate financial information: ONE will submit an annually approved note on its investment budget to the Bank. Though ONE does not maintain separate accounting for each project, some information can be reconstituted on the basis of the general accounting, and cost and budget allocations could be used to establish the Programme's financial statements. ONE and the SPC will implement appropriate, well-documented internal control procedures, especially concerning accounting entries, financial transactions, expenditure commitment and justification, the safeguarding of financial data and project assets. Internal verification will be carried out for each entity by an internal auditor and an audit committee. Because of its public shareholding ONE is subject to State financial control. A Programme activity report and interim financial report will be prepared every six months in a format acceptable to all the partners. The financial report will be prepared by ONE, incorporating information provided by the SPC, and submitted to the Bank 45 days after the end of the semester. In addition, annual project financial statements will be prepared in compliance with Moroccan accounting standards. The Programme will have on-site and off-site financial management supervision missions covering both ONE and the SPC. The Bank will ensure coordination with the other partners.

4.1.3 External Audit Arrangements: ONE's financial statements and those of the projects implemented on ADB financing will be audited annually by the ONE external auditor. Projects will be audited in compliance with international audit standards. The audit terms of reference will be determined in agreement with the donors and taking into account the relevant Bank requirements. The audit report on the Integrated Wind/Hydro and Rural Electrification Programme and that of ONE, accompanied by the letter to Management on the internal control of the project and of ONE will be submitted to the Bank no later than 6 months after the closure of the fiscal year concerned. The first Programme audit report will cover the period from the Programme start-up to 31 December 2012 (or 2013 provided the accounting period does not exceed 18 months). In addition, for the Tangiers 2 subcomponent, the internal audit report on the SPC accompanied by the letter to Management on the internal control will be submitted to the Bank no later than 6 months after closure of the accounting period concerned. Finally ONE remains subject to control by the Moroccan Court of Auditors.

4.1.4 Disbursement Payment requests concerning ADB and CTF loans will be made in accordance with the Bank's Disbursement Manual. In light of the planned activities and contracts, disbursements will be as follows:

4.1.5.1. For the Tangiers 2 Wind Farm Subcomponent: An on-lending agreement shall be concluded between ONE and the SPC, in terms of equity participation and debt. A mechanism shall also be put in place for the joint management of funds mobilized using the special account method. Under the conditions precedent to first disbursement the Bank must receive evidence of the opening by ONE of 2 special accounts (ADB loan and CTF loan) at the Bank Al-Maghrib through which the funds disbursed by the Bank will transit, and the opening by the SPC of a joint current account to receive the payment of the on-lent funds. It should be noted that the Bank will agree to replenish the ADB account and CTF account simultaneously or alternatively give priority to the disbursement of one of the loans. ONE shall be responsible for submitting its requests in the desired manner.

4.1.5.2. For all the other subcomponents implemented by ONE: disbursements will mainly be on the basis of the direct payment method. ONE could also use the Reimbursement method or the Special Account method. Finally, a disbursement letter will be reviewed by both parties during the loan agreement negotiations and submitted to ONE following the Bank's approval of the Programme.

4.2 Programme Monitoring

4.2.1 The main stages of the Programme are presented in Table 4.1 below:

Duration	Stages	Monitoring Activities/Feedback Loop
90 days	Approval and effectiveness	Loan Approval
		General Procurement Notice
		Loan Agreement Signature
		ADB Launching Mission
		Loan Agreement Effectiveness
Variable	Finalization of environmental and social studies for each sub-project	Submission to ADB of studies on each sub-project for no-objection and publication
Variable	Procurement	Issue of invitations to bid and award of contracts
Variable depending on the subcomponent in question	Programme's physical implementation	Execution of supplies and works contracts
		Preparation of periodic Project status reports
		Bank supervision missions
		Project environmental and social monitoring
		Bank's Mid-Term Review
120 days	Audit of Programme accounts	Recruitment of auditor
		Conduct of annual audits
70 days	Programme completion	Borrower's project completion report
		Preparation of Bank's Project Completion Report

4.3 Governance

ONE is a public enterprise of an industrial and commercial nature under the oversight of the Ministry in charge of Energy. It is the main national electricity sector operator and is responsible for generation, transmission and distribution of electric power. ONE is subject to Morocco's control system (National Public Procurement Directorate, Internal Audit, External Audit, State Comptroller) which has not raised any cases of obvious irregularities with regard to its procurement and contract management. Furthermore, ONE has appropriate internal control structures. The Authority's financial statements are audited annually by external auditors.

In the context of this Programme, the governance risk is very low and could emerge in the procurement process. The Bank's experience with ONE has shown that the existing governance practices and control systems are satisfactory. Moreover, the risk is mitigated by the fact that the donors will ensure strict application of their relevant rules and procedures. The Bank's supervision missions and technical and financial audits will ensure conformity between the bidding documents, works and services actually completed, disbursements and the provisions of the Loan Agreements.

Finally, the involvement of the highest Moroccan Authorities in the Programme's steering attests its importance.

There is currently no specific regulatory body in Morocco for the electricity sector. Regulation is carried out at Government level by the Ministry in charge of Energy and a committee comprising other Ministries. These arrangements partly explain the rate fixing process. ONE's economic and financial context is influenced by: (i) the cost of electric power generation which depends on the volatility of fuel prices; and (ii) State-controlled selling prices per kWh. A tariff study is being finalized. A diagnostic study of the existing tariff system has been carried out. The final report will bring about decisions which will impact positively on ONE's financial situation.

The forthcoming ONE and ONEP merger under ONEE could constitute a governance risk. However, this risk is moderate insofar as, from an operational standpoint, it is planned to separate electricity and water-related activities. Furthermore, both entities are implementing Bank-financed projects.

4.4 Sustainability

For the 'Wind and Hydro Power Generation' component, the Programme's sustainability will be guaranteed by: (i) the use of long-term PPP set-ups for wind farms, namely the establishment of operating and maintenance contracts over the life-span, under the responsibility of the private sector; (ii) the key role of ONE which has many years of experience in implementing similar projects, the satisfactory management and operation of electric power plants and transmission and distribution networks; (iii) the strong commitment of the Moroccan Government reflected in the ongoing far-reaching legal and institutional reforms in the sector to achieve "green" economic growth. Recurrent, especially annual operating, costs remain low in comparison to the initial investment and are estimated at 2% of the investment cost.

3.4.1 For the Programme's 'Rural Electrification' Component, the sustainability of investments is mainly dependent on ONE's technical and financial capacity to guarantee the upkeep and maintenance of the equipment and structures built. From a technical standpoint, ONE has the necessary human capacities and resources to carry out this task. In the past, ONE has satisfactorily managed the operating, upkeep and maintenance costs of its equipment. The appropriate budget allocations are regularly made. Despite this, ONE's financial situation has deteriorated in recent years. The ONE and ONEP merger as well as the measures envisaged to gradually redress the situation are likely to mitigate this risk and ensure satisfactory equipment maintenance.

4.5 Risk Management

The Programme's implementation may be faced with the following risks, for which mitigation measures have been identified.

	Risks	Mitigation Measures	Risk Level
1	Risk related to the selection of the developer: this is the risk of selecting a developer that is technically and financially incapable of implementing the Programme	This risk will be mitigated by a two-stage bidding process with pre-qualification and requirements in terms of financial and technical references (construction of similar structures especially at international level) and requirements for recognized certification	Moderate
2	ONE's weak implementation capacity	This risk is low due to the fact that ONE has already implemented many wind/hydro and rural electrification projects. ONE will also recruit the necessary expertise	Low

	Risks	Mitigation Measures	Risk Level
3	Technological Risk: due to the hybrid nature of the Programme combining wind and hydro energy requiring strict management of the energy generated by regulatory and control mechanisms based on highly efficient software with which ONE has limited experience.	This risk will be mitigated by the fact that ONE will specify in the contracts the need for developers to use proven technologies. Furthermore, ONE already has experience in the management of a large-scale complex power grid with different plants and different energy sources including fossil, hydro-electric and wind energy.	Low
4	Risk of management and governance in transition: Risk related to the ongoing merger between ONEP and ONE	This management risk will be mitigated by the fact that the ONE experts are dedicated to the Programme's implementation. In addition, the Law establishing the single entity (ONEE) provides for the transfer to ONEE of all previous commitments of ONE and ONEP. ONEE will be organized so as to maintain the separation of electricity and water-related activities.	Moderate
5	Environmental and Social Risk: Risk that the Programme's negative impacts will not be mitigated	The subproject E&S studies will be submitted to the Bank for prior approval. ESMP implementation will be a condition precedent to disbursement of the subproject.	Low
6	Fiduciary Risk: this risk is considered as substantial due to: (i) the current non-existence of the Tangiers 2 Specific Purpose Company; (ii) the large number of sources of financing; and (iii) the need to adapt ONE's management system.	The establishment of a number of conditions precedent to first disbursement (requirement of the establishment of the Special Purpose Company and opening of special accounts); establishment of an accounting and financial management mechanism three months later will considerably mitigate this risk.	Substantial

4.6 Knowledge Building

The Programme presents a unique framework for the dissemination of new knowledge for the Bank and Moroccan Government. For the Bank, it constitutes a new experience as leader in a Programme benefiting from 'climate' concessional financing. The Programme will entail acquisition of new financial and technical knowledge, especially regarding the implementation of innovative projects in support of large-scale clean energy generation initiatives with a transformational effect on the economies of the beneficiary regional member countries. The Programme's structuring is innovative for the Bank. It will permit the financing of 2 components (Wind and Hydro-Power Generation and Rural Electrification) through a single Programme. This structuring has a threefold benefit and will: (i) additionally support the different components contributing to the generation, transmission and distribution of 'green' energy; (ii) reduce transaction costs for the Bank and Borrower; and, (iii) improve understanding of the sector. The use of energy storage technology through water pumping will enable the Bank to develop its expertise in the use of this technology for use in other projects.

For Morocco, implementation of this Programme under a PPP will enable it to acquire and deepen knowledge on cutting-edge wind technologies. The collaboration envisaged between the private partnership and the wind turbine manufacturer will result in economies of scale which will ultimately lead to lower generation costs. Furthermore, there will be a transfer of knowledge to the private developer during the wind turbine manufacturer's warranty period, in order to ensure the smooth functioning of the wind farm over its operational period. The Government will complement the physical investments with the necessary investments for human capital development and Research and Development (R&D). This could lead to the creation of specializations in wind energy engineering, the training of technicians, and R&D activities in a PPP. In its role of executing agency and project owner, ONE will benefit from considerable exposure during the construction and operational phases. Finally, the population will benefit from this new knowledge, especially

young people and the SME/SMI that will have the opportunity of working on the sites during the construction of the infrastructure.

5 LEGAL FRAMEWORK

5.1 Legal Instrument

The Bank will finance this Programme through: (i) an ADB loan to ONE; and (ii) a CTF loan to ONE awarded by the Bank in its capacity as implementing agency of the CTF Trust Fund, both loans being accompanied by a sovereign guarantee from the Kingdom of Morocco.

In view of the investment cost of the ‘wind and hydro-power generation ‘component of the Programme as described in its financial model, the Programme will benefit from concessional terms for the CTF loan. For the Tangiers 2 Wind Farm components, part of the ADB and CTF loans will be on-lent to a private developer selected on the basis of international competitive bidding. In principle, the on-lending will be on market terms but, given the specificity of the Programme relating to renewable energies whose cost price is higher, it would be inappropriate to increase the cost of electric power. The on-lending will be conducted on conditions to be defined to the Bank’s satisfaction, between the Borrower and private developer of the Tangiers 2 Wind Farm subcomponent, following the latter’s selection.

5.2 Conditions Associated with Bank’s Intervention

5.2.1 Conditions Precedent to Effectiveness of the ADB Loan and CTF Loan:

The ADB Loan Agreement and CTF Loan Agreement shall become effective on the dates of their signature. The ADB and CTF Guarantee Agreements shall become effective on the date of fulfilment by the Guarantor, to the Bank’s satisfaction, of the conditions stipulated in Section 12.01 of the General Conditions.

5.2.2 Conditions Precedent to First Disbursement of the Resources of the ADB Loan and CTF Loan:

- (i) In addition to the effectiveness of each Loan and Guarantee Agreement, the first disbursement from the resources of each loan shall be subject to the fulfilment by the Borrower, to the Bank’s satisfaction, of the conditions stipulated in Section 12.02 paragraph (a) points i) and ii) of the General Conditions.

The first disbursement of resources of the ADB loan and CTF loan allocated to each Programme subcomponent shall, moreover, be subject to the fulfilment by the Borrower, to the Bank’s satisfaction, of the following conditions:

5.2.3 Common Conditions Precedent to First Disbursement of Each Subcomponent of the Programme for the ADB Loan and CTF Loan:

- (i) Provide the Bank with evidence of conclusive financial arrangements for the Programme subcomponent concerned, by presenting evidence of the approval of the subcomponent’s financing by the other donors and the availability of the counterpart funds for the said subcomponent; and

- (ii) Provide the Bank, depending on the environmental and social impact, with the environmental and social impact studies and/or the Environmental and Social Management Plan (ESMP) and, where applicable, the Compensation and Resettlement Plan (CRP) of the Programme subcomponent concerned.

5.2.4 Special Conditions Precedent to First Disbursement of the Tangiers 2 Wind Farm Subcomponent for the ADB Loan and CTF Loan:

- (i) Provide a certified copy of: (a) the signed and registered Articles of Association of the SPC (Specific Purpose Company) responsible for the construction of the Tangiers 2 Wind Farm; (b) the SPC's registration certificate; (c) the Power Purchase Agreement between the Borrower and the SPC; and (d) the on-lending agreement for all or part of the resources of each loan by the Borrower to the SPC, mentioning that: (1) the financial and accounting information shall be submitted to ONE by the SPC on a six-monthly basis; and (2) the SPC's annual financial statements shall be audited by its external auditor, in accordance with Moroccan standards, taking into consideration the donors' harmonized terms of reference;
- (ii) Provide the Bank with the original and certified copy of the certificate confirming the opening by the Borrower of two special accounts for the project in a bank deemed acceptable to the Bank for the payment of the resources of each Loan (ADB and CTF) including full bank references for the account and with the names of the persons authorized to make disbursements from them;

5.2.5 Other ADB Loan and CTF Loan Conditions

The Borrower shall, moreover, to the Bank's satisfaction:

- (i) Provide evidence of the establishment of a programme-contract between the Government and ONE including, in particular, the Borrower's recapitalization and the revision of electricity tariffs no later than six (6) months after the signature of the Loan and Guarantee agreements;
- (ii) Provide, as the works progress, and no later than the start-up of works in the area concerned: (a) evidence of the payment of compensation to parties affected by the Programme for the subcomponent concerned, in compliance with the relevant Bank policies and procedures, the Environmental and Social Management Plan (ESMP) and, if applicable, the Compensation and Resettlement Plan (CRP) for the subcomponent concerned; and/or- where, for reasons beyond the Borrower's control, compensation is not possible, either partly or fully; (b) evidence of the lodging of the amounts allocated to such compensation in an escrow account in a commercial bank authorized to that effect;
- (iii) No later than twelve (12) months after the signature of the loan agreements and guarantee agreements, have: (a) prepared a training plan for ONE's Environment Division staff; (b) recruited an environmentalist; and (c) recruited an external consultant for the Programme's environmental and social monitoring; and

- (iv) No later than three (3) months after the first disbursement of the resources of the loans relating to the Tangiers 2 Wind Farm subcomponent, provide evidence that the specific purpose company has: (a) appointed a qualified and experienced financial manager; (b) established an internal or outsourced accounting system capable of producing accounts in compliance with recognized standards and integrating cost and budget-based monitoring; and (c) prepared a financial management manual deemed satisfactory by the Bank.

5.3 Undertakings

The Borrower shall undertake:

- (i) To ensure that the Bank's resources are solely used for procurement of the goods, works and services required for the Programme;
- (ii) To implement, or have implemented and executed, the Environmental and Social Management Plans and, if applicable, the Compensation and/or Resettlement Plans for each subcomponent in accordance with the relevant Bank policies and guidelines;
- (iii) Not to start-up works in a given area without the affected persons in that area having been fully compensated, notwithstanding Paragraph 5.2.5 (ii); and
- (iv) To provide, no later than 31 January of each fiscal year, the envisaged work plan for the said period (investment budget).

5.4 Compliance with Bank's Policies

The structuring of the Integrated Wind/Hydro and Rural Electrification Programme is innovative. The SESA which was carried out does not replace the project-specific environmental and social assessment (ESS);

5.4.3 In view of the specificity of this investment plan comprising subcomponents to be implemented over the 2013-2017 period, specific conditions precedent have been adopted to ensure that, for each subcomponent, a specific Environmental and Social Impact Study (ESIS), an Environmental and Social Management Plan (ESMP) and, if required, a Compensation and Resettlement Plan (CRP), are prepared and submitted to the Bank for its "no-objection", prior to any disbursement. In other words, through the disbursement conditions, the Bank shall ensure that all subcomponents are compliant with its environmental and social policies and procedures.

6 RECOMMENDATION

Management recommends that the Board of Directors: (i) exceptionally waive the application of the country of origin rule concerning the procurement of goods, works and services for the subcomponent relating to the Tangiers 2 Wind Farm; (ii) approve: (a) an ADB Loan of EUR 359 million with authorization to carry out retroactive financing of eligible expenditure committed prior to approval of the loan by ONE for the rural electrification component, up to EUR 22 million; and (b) a CTF loan of USD 125 million to ONE, both loans being backed by a sovereign guarantee from the Kingdom of Morocco, to finance the Integrated Wind/Hydro and Rural Electrification Programme under the conditions and modalities stipulated in this report.

Country's Comparative Socio-Economic Indicators
Please replace

Morocco - Development Indicators				
Social Indicators	Morocco		Africa	Developing countries
	1990	2011 *		
Area ('000 Km²)	711		30 323	80 976
Total Population (millions)	24,8	32,3	1 044,3	5 732,2
Population growth (annual %)	1,9	1,0	2,3	1,3
Life expectancy at birth, total (years)	64,1	71,8	56,0	67,1
Mortality rate, infant (per 1,000 live births)	64,6	27,7	78,6	46,9
Physicians per 100,000 People	...	62,0	58,3	109,5
Births attended by skilled health staff (% of total)	...	...	50,2	64,1
Immunization, measles (% of children ages 12-23 months)	79,0	98,0	77,9	80,7
School enrollment, primary (% gross)	68,3	113,7	100,4	107,2
Ratio of girls to boys in primary education (%)	67,6	94,3	90,9	100,0
Literacy rate, adult total (% of people ages 15 and above)	...	56,1	65,1	80,3
Access to Safe Water (% of Population)	75,0	81,0	64,5	84,3
Access to Sanitation (% of Population)	52,0	69,0	41,0	53,6
Human Develop. (HDI) Rank (Over 187 Countries)	...	130	n.a	n.a
Human Poverty Index (% of Population)	...	31,1	34,7	...
Morocco				
Economy	2000	2009	2010	2011
GNI per capita, Atlas method (current US\$)	1 312	2 832	2 939	...
GDP (current Million US\$)	37 060	90 907	95 043	105 014
GDP growth (annual %)	1,8	4,8	3,7	4,6
Per capita GDP growth (annual %)	0,6	3,8	2,7	3,6
Gross Domestic Investment (% of GDP)	25,5	35,6	38,5	39,6
Inflation (annual %)	1,9	1,0	1,0	1,5
Budget surplus/deficit (% of GDP)	-5,5	-2,2	-3,0	-5,5
Trade, External Debt & Financial Flows	2000	2009	2010	2011
Export Growth, volume (%)	3,3	-10,1	31,8	15,6
Import Growth, volume (%)	3,6	5,0	-4,1	10,6
Terms of Trade (% change from previous year)	-7,4	5,7	-32,2	-4,8
Trade Balance (mn US\$)	-3 235	-16 279	-20 011	-23 834
Trade balance (% of GDP)	-8,7	-17,9	-21,1	-22,7
Current Account (mn US\$)	-478	-4 952	-4 124	-5 447
Current Account (% of GDP)	-1,3	-5,4	-4,3	-5,2
Debt Service (% of Exports)	32,4	7,5	6,6	6,1
External Debt (% of GDP)	48,6	23,3	23,6	24,0
Net Total Inflows (mn US\$)	600,7	2 082,4	...	...
Net Total Official Development Assistance (mn US\$)	418,8	911,6	...	...
Foreign Direct Investment Inflows (mn US\$)	422,2	1 951,7	1 303,7	...
External reserves (in month of imports)	3,6	4,7	4,4	...
Private Sector Development & Infrastructure	2000	2005	2010	2011
Time required to start a business (days)	...	12	12	12
Investor Protection Index (0-10)	...	3	3,3	5
Main Telephone Lines (per 1000 people)	49,5	44,1	117,3	...
Mobile Cellular Subscribers (per 1000 people)	81,3	407,8	1 001,0	...
Internet users (000)	6,9	151,4	496,6	...
Roads, paved (% of total roads)	54,6	59,6	...	...
Railways, goods transported (million ton-km)	4 576	5 919	...	...

Source: ADB Statistics Department, based on various national and international sources

* Most recent year

Last Update: October 2011

MOROCCO: INTEGRATED WIND/HYDRO AND RURAL ELECTRIFICATION PROGRAMME

Annex II.

Status of Bank Group's Active Portfolio in Morocco as at end January 2012

Number	Project Name	Approval Date	Signature Date	Effective Date	Closing Date	Average age of project (years)	Effectiveness Deadline (months)	Loan currency	Amount Approved		Cumulative Disbursement in Loan Currency by Project/ in EUR by sector	Cancellation in loan currency	Undisbursed Amount in Loan Currency by Project/ in EUR by sector	Cumulative Disbursement Rate (in %)		Share in the portfolio
									in Units of Account	in Loan Currency (total by sect. in EUR)				Current	Projection for Q1 2012	
AGRICULTURAL SECTOR																
1	Tech. Supp. Proj. Prom. of Young Entrepreneurs - MIC GRANT	12-Jan-11			30-Jun-12	1,2	3,5	UA	48 641 851	55 310 809	2 254 112		111 846 755	4,1%	15,4%	3,3%
2	Nat. Irrigation Water Saving Programme (PNEE)	14-Dec-09	4-Mar-10	2-Jul-10	31-Dec-15	2,3	6,7	EUR	47 651 651	53 590 000	1 609 400		51 980 600	3,0%	15,0%	
3	Tech. Ass. To Protec. Progr. to Sauvegarder the Oases of South Morocco (POS) - MIC GRANT	28-avr-09	31-juil-09	31-juil-09	30-mai-12	2,9	3,1	UA	496 000	496 000	386 338		109 662	77,9%	60,0%	
4	Tech. Supp. to Irrig. Infrast. Dev't - MIC GRANT	21-févr-11	17-mars-11	17-mars-11	31-déc-12	1,1	0,8	UA	494 200	494 200	158 834		335 366	32,1%	32,1%	
TRANSPORT SECTOR																
5	2nd Phase of Nat. Rural Road Prog. (PNRR 2)	5-sept-07	23-nov-07	8-mars-08	31-déc-13	4,5	6,2	EUR	41 754 428	45 000 000	45 000 000		0	100,0%	100,0%	
6	3rd Airport Project	16-avr-09	8-mai-09	22-oct-09	31-déc-13	2,9	6,3	EUR	214 456 130	240 000 000	2 827 617		237 172 383	1,2%	11,2%	
7	Infrastructure Repair in 7 ports - MIC GRANT *	1-Apr-10	17-mars-11	17-Mar-11	31-Aug-12	2,0	11,7	UA	600 000	600 000	0		600 000	0,0%	40,0%	
8	Project to Increase the Capacity of the Tanger-Marrakech Rail.	17-déc-10	17-mars-11	29-Jun-11	1-sept-15	1,3	6,5	EUR	253 452 847	300 000 000	0		300 000 000	0,0%	10,0%	
ENERGY SECTOR																
9	Ain Beni Mathar 2 Thermo-Solar Power Station Project	17-déc-07	7-avr-08	16-oct-08	31-déc-14	4,3	10,1	EUR	145 321 214	151 420 000	151 400 000		0	100,0%	100,0%	
10	Electricity Transmission and Dist. Network Dev't Progr.	2-Dec-09	11-Dec-09	29-Apr-10	31-Dec-14	2,3	4,9	EUR	101 830 388	109 820 000	9 920 545		99 899 455	9,0%	10,0%	
SOCIAL SECTOR																
11	Tech. Ass. for Est. of SIG & Health Mapping - MIC GRANT	12-déc-08	23-déc-08	23-déc-08		3,3	0,4	UA	970 406	1 139 937	544 942		594 995	47,8%	47,0%	0,1%
12	Private Education Dev't Supp. Strategy - MIC GRANT	11-mars-11	17-Mar-11	17-Mar-11		1,0	0,2	UA	500 000	500 000	0		500 000	0,0%	60,0%	
WATER AND SANITATION SECTOR																
13	Ninth DWSS Project	21-juil-06	18-déc-06	16-mai-07	30-juin-13	5,7	10,0	EUR	309 565 848	365 074 246	80 162 879		284 911 367	22,0%	30,7%	#####
14	Tenth DWSS Project	16-nov-08	23-déc-08	17-juil-09	31-déc-13	3,3	8,1	EUR	70 666 446	81 000 000	61 625 163		19 374 837	76,1%	80,0%	
15	Tenth DWSS Project	16-nov-08	23-déc-08	17-juil-09	31-déc-13	3,3	8,1	USD	30 702 510	33 840 000	6 835 599		27 004 401	20,2%	50,0%	
16	Eleventh Rabat-Casa DWSS Project	12-May-10	19-aout-10	13-Janv-11	31-Dec-14	1,9	8,2	EUR	34 540 816	53 340 000	11 834 867		41 505 133	22,2%	50,0%	
17	Eleventh Rabat-Casa DWSS Project	12-May-10	19-aout-10	13-Janv-11	31-Dec-14	1,9	8,2	USD	135 258 333	162 310 000	0		162 310 000	0,0%	1,0%	
18	Maouz Water Table Artific. Replenishment Proj. - AWF GRANT	12-Janv-09	8-mai-09	8-mai-09	30-nov-12	3,2	3,9	EUR	36 706 667	55 060 000	1 882 207		53 177 793	3,4%	1,0%	
MULTISECTOR																
18	Guarantee System Improvement Project - MIC GRANT	1-Janv-11	17-Mar-11	17-Mar-11	1-Janv-13	1,2	2,5	UA	201 445 338	225 734 406	134 529 840		91 204 566	59,6%	59,7%	#####
19	Fin. Market Contr. Consolidation Project - MIC GRANT	13-déc-10	17-Mar-11	17-Mar-11	15-déc-12	1,3	3,1	UA	464 988	464 988	159 388		305 600	34,3%	26,3%	
20	Financial Sector Dev't Project II (PADESF-II)	23-nov-11	23-Nov-11	6-déc-11	31-déc-12	0,3	0,4	EUR	480 350	480 350	171 410		308 940	35,7%	30,0%	
21	Inst. Support to SG UMA (Multinational) - MIC GRANT	30-avr-09	28-mai-09	28-mai-09	30-déc-12	2,7	0,9	UA	200 000 000	224 000 000	134 000 000		90 000 000	59,8%	59,8%	
	Statistical Capacity Building II		15-mars-11					UA	500 000	500 000	110 735		389 265	22,1%	100,0%	
PRIVATE SECTOR																
22	Argan Fund for Infrast. Dev't	17-févr-10	21-juil-10	21-juil-10	31-déc-18	2,1	5,1	EUR	170 250 000	188 611 111	609 000		14 391 000	4,1%	3,0%	11,4%
23	Loan to the Royal Phosphate Authority /u	29-juin-11				0,7		USD	14 000 000	15 000 000	609 000		14 391 000	4,1%	3,0%	

Summary:

Total Portfolio Amount

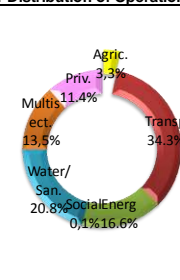
In Units of Account

Loans (14 projects)

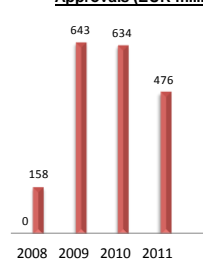
Grants (9 projects)

En Euros

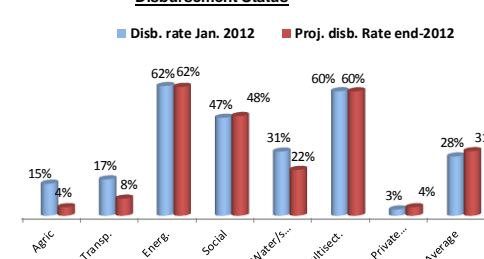
Sector Distribution of Operations



Approvals (EUR million)



Disbursement Status



	Current	Proj. 2011
Total Disbursements in Euros	427 248 935	520 410 513
Disbursement Rate	28,4%	30,9%
Average Amount per Operation (in UA)	67 649 475	
Average Effectiveness Deadline (months)	5,5	
Loans	6,8	
Grants	3,2	
Average Age of Portfolio (years)	2,3	
Loans	2,8	
Grants	2,0	

Note: The grey areas relate to operations that are not yet effective.

(u): Project that is not yet in force and consequently not included in the determination of the total portfolio disbursement rate.

* MIC: Middle-income countries

** AWF: African Water Facility

Annex III.

Development Partners' Interventions by Sector in Morocco

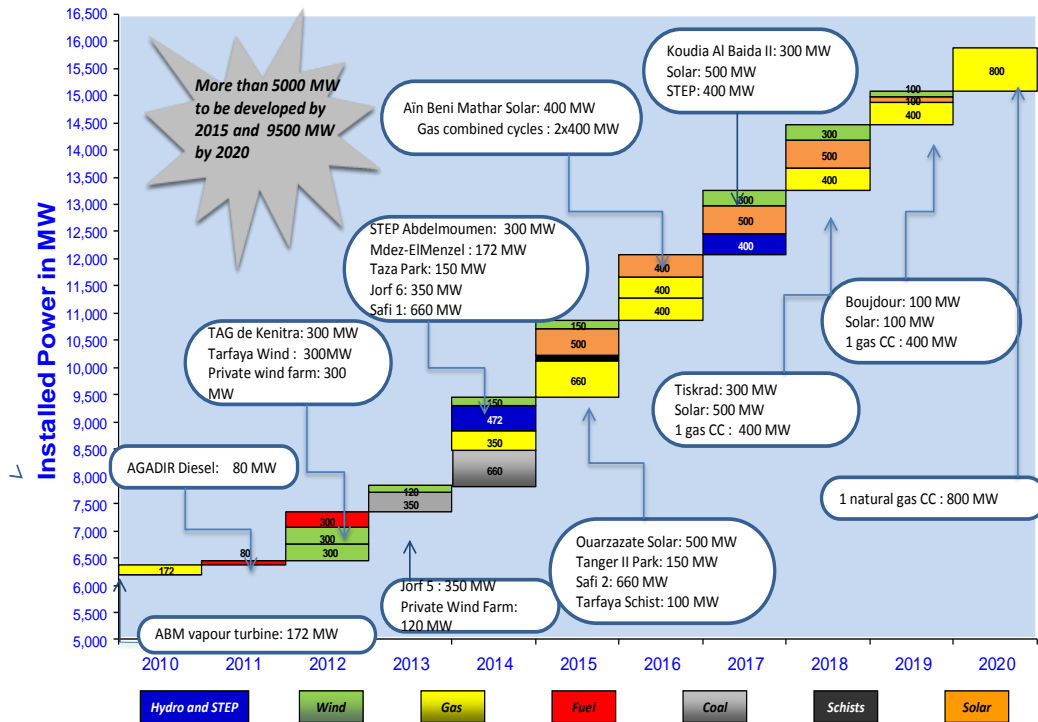
Technical and Financial Partners (TFP)	TFPs' Active Portfolio at end December 2011 (million EUR)	Share of Total	TFP Major Sectors of Concentration (*)
ADB	2 207.98	22.07	G, I, S
EIB	1 941.78	19.41	I, S
EU (+ Neighbourhood Investment Facility)	1 844.33	18.43	G, S
France (+ AFD and PROPARCO)	1 204.03	12.03	G, I, S
IBRD	637.33	6.37	G, I, S
JICA	542.27	5.42	I, S
SDF	213.43	2.13	I, S
AFESD	204.14	2.04	I, S
USAID	92.38	0.92	G, S
Italy	64.76	0.65	I, S
IFAD	52.29	0.52	S
Belgium	46.84	0.47	I, S
Kuwait Fund	41.67	0.42	I, S
OPEC Fund	38.27	0.38	I, S
Germany	34.71	0.35	I, S
Spain	351.51	3.51	G, S
UNDP	14.50	0.14	G, S
Abu Dhabi Fund	12.72	0.13	I, S
IsDB	460.00	4.6	I, S
UNFPA	0.46	0	S
Total	10 005.40	100	

*G : Governance, I : Infrastructure, S : Social

Electric Power Supply and Demand Forecasts



EQUIPMENT PLAN 2010-2020



EUR 8 billion (DH 90 billion) investment from 2010 to 2015
With 65% concerning ERs.

Year	2008	2012	2020	2030
MV Demand	4240	5500	8500	12000
MV Supply	5292 (end 2007)	8774	17287	NA

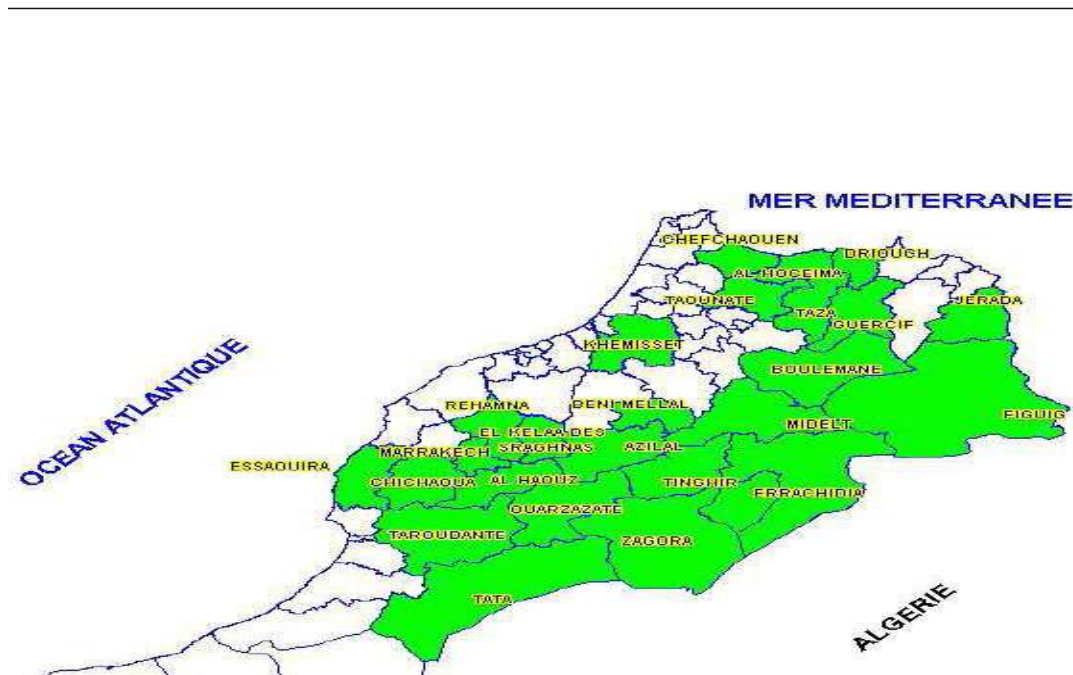
Source: National Energy Strategy - to 2030

Maps of Programme Area

WIND ENERGY COMPONENT



PERG COMPONENT



This map has been provided by the staff of the African Development Bank Group exclusively for the use of the readers of the report to which it is attached. The names used and the borders shown do not imply on the part of the Bank Group or its members any judgment concerning the legal status of a territory nor any approval or acceptance of those borders.