



RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF
NOOR SOLAR POWER PROJECT

APPROVED ON SEPTEMBER 30, 2014

TO

THE MOROCCAN AGENCY FOR SUSTAINABLE ENERGY (MASEN)
WITH GUARANTEE FROM THE KINGDOM OF MOROCCO

ENERGY & EXTRACTIVES

MIDDLE EAST AND NORTH AFRICA

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ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
CSP	Concentrated Solar Power
CTF	Clean Technology Fund
DFI	Development Finance Institutions
DDO	Deferred Drawdown Option
EA	Environmental Assessment
EDF	Electricité de France
FM	Financial Management
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
IP	Implementation Progress
MASEN	Moroccan Agency for Sustainable Development
OPCS	Operations Policy and Country Services
PDO	Project Development Objective
PV	Photovoltaic
RVP	Regional Vice President
TF	Trust Fund
US\$	United States Dollars



BASIC DATA

Product Information

Project ID P131256	Financing Instrument Investment Project Financing
Original EA Category Full Assessment (A)	Current EA Category Full Assessment (A)
Approval Date 30-Sep-2014	Current Closing Date 31-Dec-2022

Organizations

Borrower MASEN	Responsible Agency MASEN
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Project Development Objective (PDO)

Original PDO

The PDO is to increase (a) installed capacity (megawatt) and (b) electricity output (megawatt-hour), especially during peak hours, of the Noor-Ouarzazate Solar Complex.

Current PDO

The PDO is to increase innovative solar power generation in Morocco.

Summary Status of Financing

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net		
					Commitment	Disbursed	Undisbursed
IBRD-88470	08-Jun-2018			31-Dec-2022	100.00	0	100.00
IBRD-84400	30-Sep-2014	19-Dec-2014	05-May-2015	30-Jun-2020	400.00	166.39	207.89
TF-17509	30-Sep-2014	19-Dec-2014	05-May-2015	30-Jun-2020	119.00	119.00	0



Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. PROJECT STATUS

- Overall status.** The Morocco Noor Solar Power Project was approved on September 30, 2014 for a total amount of US\$519 million: US\$400 million from the International Bank for Reconstruction and Development (IBRD) and US\$119 million from the Clean Technology Fund (CTF). The project was initially named “Noor-Ouarzazate Concentrated Solar Power Project” from 2014 to 2018.
- Additional Financing.** An Additional Financing (AF) to scale up the project was approved by the Board on June 8, 2018 with the closing date of December 31, 2022, in order to add a third project component to fund the two Noor-Midelt solar power plants through an additional financing of US\$100 million and a US\$25 million from the CTF. A project restructuring was also approved by the World Bank management in May 2018 to: (i) reallocate US\$100 million from Component 2 (Cost Mitigation Mechanism) to Component 3 (Noor-Midelt Power Plants and Associated Infrastructure Facilities), (ii) extend the closing date of the original IBRD and CTF loans from June 30, 2020 to December 31, 2022, and (iii) change the project name from “Noor-Ouarzazate Concentrated Solar Power Project” to “Noor Solar Power Project”, given the project scale-up to the whole Noor solar program. However, no amendment to the original IBRD and CTF loans has been signed to date by the Borrower and the World Bank to reflect these changes. The proposed restructuring envisages further changes to the original IBRD and CTF loans (see the Section II below). All above changes will be reflected in the amendment that will be signed after this restructuring. The IBRD and CTF loan agreements for additional financing have not been signed yet due to the procurement delays for Noor Midelt plants. MASEN intends to sign the AF legal agreements, as soon as the proposed restructuring is approved.
- Progress towards PDO and IP.** Progress towards achievement of the Project Development Objective (PDO) and overall Implementation Progress (IP) are both rated Satisfactory. The project has disbursed US\$166.4 million (42 percent) of the original IBRD loan and 100 percent for the original CTF loan.
- Relevant legal, fiduciary, and safeguards aspects.** All legal covenants and safeguards requirements have been complied with, and there are no deviations from safeguards requirements during implementation thus far. The project is in compliance with social and environmental safeguards (current ratings in the Implementation Status and Results Report are Satisfactory). Regarding Financial Management (FM), the latest audit reports of the project are up-to-date and deemed satisfactory. The FM rating is Satisfactory.

B. RATIONALE FOR RESTRUCTURING

- The Moroccan Agency for Sustainable Energy (MASEN or the Borrower) received two bids from two investor consortia for the Noor-Midelt power plants in May 2019. Noor-Midelt I plant was awarded to a consortium led by *Electricité de France* (EDF) Energies Nouvelles based on a competitive tariff that is significantly lower than anticipated during



project preparation. The award of Noor-Midelt II plant was cancelled as the preferred bidder's proposed tariff was significantly higher than that of EDF-led consortium and MASEN had pre-established a rule ensuring that any bidder could only be awarded one plant. MASEN is now rebidding the Noor-Midelt II plant, while enlarging its technology choice to battery storage in addition to concentrated solar power (CSP) and photovoltaic (PV). Thus, MASEN expects to get bids that are at least as competitive as those of the EDF-led consortium for the 2nd plant.

6. As a result of the tariff for Noor-Midelt I plant being lower than anticipated, MASEN will need to raise less debt from Development Finance Institutions (DFIs) than estimated during appraisal. It has, therefore, asked the World Bank and other DFIs to reduce the loan amounts that had been previously approved for the project. Since Noor-Midelt II plant is delayed, the closing date of the original IBRD and CTF loans will need to be extended. The closing date of the additional IBRD and CTF loans will also need to be extended given the procurement delays incurred by Noor-Midelt I.

II. DESCRIPTION OF PROPOSED CHANGES

7. The proposed restructuring includes the following changes:
 - (a) Reduce the additional IBRD Loan No. 8847 (under the AF) from US\$100 million to US\$63 million and allocate all the amount (but excluding US\$157,500 for the capitalized Front-end Fee) to the Noor-Midelt I plant under Component 3.A;
 - (b) Allocate the portion of the original IBRD Loan No. 8440 (US\$100 million¹) that was approved to be reallocated² from Component 2 to both Noor-Midelt I (Component 3.A) and II (Component 3.B) entirely to Noor-Midelt II (Component 3.B);
 - (c) Change the estimated overall cost of Component 3 from US\$2.2 billion to US\$1.6 billion;
 - (d) Extend the closing date of the original and additional IBRD and CTF loans from December 31, 2022³ to June 28, 2024; and
 - (e) Change disbursement estimates.

¹ Equivalent cumulative amount of negotiated EUR and USD amounts under the original IBRD Loan No. 8440.

² Under the restructuring approved in May 2018, \$100m of the original IBRD loan was approved to be reallocated from Component 2 to Component 3. However, the amendment to include this change has not been signed to date as explained in the paragraph 2.

³ Under the restructuring approved in May 2018, the closing date of the original IBRD and CTF loans were approved to be extended from June 30, 2020 to December 31, 2022. However, the amendment to include this change has not been signed to date as explained in the paragraph 2.



8. **Reduction in the amount of additional IBRD Loan.** It is proposed to reduce the additional IBRD Loan No. 8847 (under the AF) from US\$100 million to US\$63 million and allocate all the amount to the Noor-Midelt I plant under Component 3. This is due to cost savings as a result of competitive selection of private developer. The reduction in the project cost has a positive impact on economic analysis (as the project is even more viable than anticipated), while expected results would remain unchanged.
9. **Reallocation between Disbursement Categories.** It is proposed to allocate the US\$100 million (from the original IBRD Loan No. 8440) that was previously approved to be reallocated from Component 2⁴ to Component 3 entirely to the Noor-Midelt II plant under Component 3.B, instead of being split equally between Noor-Midelt I and II plants as envisaged previously.
10. **Changes to Components and their Costs.** The overall cost of Component 3 is proposed to be reduced from US\$2.2 billion to US\$1.6 billion in light of the significantly lower competitive tariff obtained for Noor-Midelt I than anticipated during project preparation. As a result, MASEN will need to raise less debt from DFIs than estimated during appraisal, and all DFIs are expected to reduce their financing by approximately 30 percent of their respective amounts. Adjustments to the CTF Loan Agreement for the AF will also be incorporated as a result of the proposed restructuring (including change in clause -reference to IBRD revised loan amount- and retroactive financing date, due to delays in signing). Also, the component names have been adjusted to be in line with the loan agreements.
11. **Change in Loan Closing Date.** It is proposed to extend the closing dates of the original and additional IBRD and CTF loans from December 31, 2022 to June 28, 2024, as (a) the PDO remains achievable; (b) the performance of the Borrower remains satisfactory; (c) the World Bank and the Borrower agree on actions that will be undertaken to complete the project on time; and (d) the project is not subject to suspension of disbursements. Extending the CTF loan closing date would allow to produce a harmonized Implementation Completion and Results (ICR) Report for both funding sources in 2024.
12. **Change in Disbursement Estimates.** It is proposed to change disbursement estimates given closing date extension and reduction of amount of the additional IBRD loan No. 8847. Disbursement estimates of CTF loans have also been added.
13. **Results framework.** The indicator target end dates will be adjusted to reflect the proposed loan closing date.
14. The terms and conditions agreed upon in the IBRD Guarantee Agreement and the CTF Guarantee Agreement remain unchanged.

⁴ More precisely, expenditure categories No.3 “Purchase of electricity for Parts 2.A, 2.B and 2.C of the Project” and No.7 “Unallocated”.



III. SUMMARY OF CHANGES

	Changed	Not Changed
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Reallocation between Disbursement Categories	✓	
Disbursement Estimates	✓	
Other Change(s)	✓	
Implementing Agency		✓
DDO Status		✓
Project's Development Objectives		✓
Cancellations Proposed		✓
Disbursements Arrangements		✓
Overall Risk Rating		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Economic and Financial Analysis		✓
Technical Analysis		✓
Social Analysis		✓
Environmental Analysis		✓

IV. DETAILED CHANGE(S)



COMPONENTS

Current Component Name	Current Cost (US\$M)	Action	Proposed Component Name	Proposed Cost (US\$M)
Component 1 - Noor-Ouarzazate Project Investment	2377.00	Revised	Financing the Initial Investment	2377.00
Component 2- Noor-Ouarzazate Cost Mitigation Mechanism	199.00	Revised	Cost Mitigation Mechanism	199.00
Component 3- Noor-Midelt Project Investment	2200.00	Revised	Noor Midelt Power Plants and Associated Infrastructure Facilities	1600.00
TOTAL	4,776.00			4,176.00

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IBRD-84400	Effective	30-Jun-2020		28-Jun-2024	28-Oct-2024
IBRD-88470	Not Effective	31-Dec-2022		28-Jun-2024	28-Oct-2024
TF-17509	Effective	30-Jun-2020		28-Jun-2024	28-Oct-2024

REALLOCATION BETWEEN DISBURSEMENT CATEGORIES

Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
			Current	Proposed
IBRD-84400-001 Currency: EUR				
iLap Category Sequence No: 1	Current Expenditure Category: GD; WRK;NON CS; PART 1.A of project			
58,606,000.00	40,569,276.00	58,606,000.00	12.16	
iLap Category Sequence No: 2	Current Expenditure Category: GD; WRK;NON CS; PART 1.C of project			
0.00	0.00	0.00	0	



iLap Category Sequence No: 3	Current Expenditure Category: Purchase Electricity PARTS 2A 2B and 2C of the Project			
54,993,000.00	23,208,118.29	142,607,750.00	100.00	100.00
iLap Category Sequence No: 4	Current Expenditure Category: Intentionally left blank			
71,276,000.00	0.00	0.00	100.00	0
iLap Category Sequence No: 5	Current Expenditure Category: Intentionally left blank			
25,597,000.00	0.00	0.00	100.00	0
iLap Category Sequence No: 7	Current Expenditure Category: Unallocated			
23,441,750.00	0.00	0.00		0
iLap Category Sequence No: 8A	Current Expenditure Category: Goods, works and non-consulting services for Part 3.A of the Project			
0.00	0.00	0.00		0
iLap Category Sequence No: 8B	Current Expenditure Category: Goods, works and non-consulting services for Part 3.B of the Project			
0.00	0.00	32,700,000.00		4.94
Total	233,913,750.00	63,777,394.29	233,913,750.00	

IBRD-84400-002 | Currency: USD

iLap Category Sequence No: 1	Current Expenditure Category: GD; WRK;NON CS; PART 1.A of project			
20,000,000.00	18,832,408.41	20,000,000.00		3.04
iLap Category Sequence No: 2	Current Expenditure Category: GD; WRK;NON CS; PART 1.C of project			
0.00	0.00	0.00		0
iLap Category Sequence No: 3	Current Expenditure Category: Purchase Electricity PARTS 2A 2B and 2C of the Project			



	18,767,000.00	0.00	0.00	100.00	0
iLap Category Sequence No: 4		Current Expenditure Category: Intentionally left blank			
	24,324,000.00	0.00	0.00	100.00	0
iLap Category Sequence No: 5		Current Expenditure Category: Intentionally left blank			
	8,709,000.00	0.00	0.00	100.00	0
iLap Category Sequence No: 7		Current Expenditure Category: Unallocated			
	8,000,000.00	0.00	0.00		0
iLap Category Sequence No: 8A		Current Expenditure Category: Goods, works and non-consulting services for Part 3.A of the Project			
	0.00	0.00	0.00		0
iLap Category Sequence No: 8B		Current Expenditure Category: Goods, works and non-consulting services for Part 3.B of the Project			
	0.00	0.00	59,800,000.00		6.61
Total	79,800,000.00	18,832,408.41	79,800,000.00		

DISBURSEMENT ESTIMATES

Change in Disbursement Estimates

Yes

Year	Current	Proposed
2015	0.00	0.00
2016	51,259,527.82	170,259,527.82
2017	17,565,049.93	17,565,049.93
2018	39,825,600.25	43,560,001.07
2019	59,039,200.00	53,158,405.93
2020	97,352,222.00	70,000,000.00



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2021	132,480,800.00	95,000,000.00
2022	77,477,600.00	70,000,000.00
2023	25,000,000.00	70,000,000.00
2024	0.00	17,457,015.25
2025	0.00	0.00



Results framework

COUNTRY: Morocco
Noor Solar Power Project

Project Development Objectives(s)

The PDO is to increase innovative solar power generation in Morocco.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	DLI	Baseline	End Target
Increase innovative solar power generation in Morocco			
Noor Solar Projects Electricity Sales (GWh) (Gigawatt-hour (GWh))		0.00	2,624.00
<i>Action: This indicator has been Revised</i>			
Noor Solar Projects Electricity Sales – Ouarzazate Complex (GWh) (Gigawatt-hour (GWh))		0.00	1,300.00
<i>Action: This indicator has been Revised</i>			
Noor Solar Projects Electricity Sales – Midelt Complex (GWh) (Gigawatt-hour (GWh))		0.00	1,324.00
<i>Action: This indicator has been Revised</i>			
Noor Solar Projects Electricity Sales during peak hours (GWh) (Gigawatt-hour (GWh))		0.00	870.00
<i>Action: This indicator has been Revised</i>			



Indicator Name	DLI	Baseline	End Target
Noor Solar Projects Electricity Sales during peak hours – Ouarzazate Complex (GWh) (Gigawatt-hour (GWh))		0.00	540.00
<i>Action: This indicator has been Revised</i>			
Noor Solar Projects Electricity Sales during peak hours – Midelt Complex (GWh) (Gigawatt-hour (GWh))		0.00	330.00
<i>Action: This indicator has been Revised</i>			
People provided with new or improved electricity service (Number)		0.00	2,200,000.00
<i>Action: This indicator has been Revised</i>			
Female beneficiaries (Percentage)		0.00	50.30
Avoided global GHG pollution (Tones/year)		0.00	1,270,000.00
<i>Action: This indicator has been Revised</i>			

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	End Target
Component 1- Financing for the Initial Investment			
Private Capital Mobilized (Amount(USD))		0.00	597,000,000.00
<i>Action: This indicator has been Revised</i>			
Generation capacity of energy constructed or rehabilitated (CRI, Megawatt)		0.00	1,310.00



Indicator Name	DLI	Baseline	End Target
Action: This indicator has been Revised			
Renewable energy generation capacity (other than hydropower) constructed under the project (CRI, Megawatt)	0.00		1,310.00
Action: This indicator has been Revised			
Noor Ouarzazate I Capacity constructed (Megawatt)	0.00		160.00
Action: This indicator has been Revised			
Noor Ouarzazate II and III Capacity constructed (Megawatt)	0.00		350.00
Action: This indicator has been Revised			
Noor Midelt Phase I Capacity constructed (Megawatt)	0.00		800.00
Action: This indicator has been Revised			
Grievances registered related to delivery of project benefits addressed (Percentage)	0.00		100.00
Action: This indicator has been Revised			
Share of female job-recruits receiving information on training and skilled work in the Noor Midelt Phase I project (Percentage)	0.00		75.00
Action: This indicator has been Revised			
Number of hired workers on the Noor Midelt site (Number)	0.00		1,200.00
Action: This indicator has been Revised			
of which female (Number)	0.00		120.00
Component 2- Cost Mitigation Mechanism			
Progress of Overall Construction - Noor Ouarzazate II (Percentage)	0.00		100.00



Indicator Name	DLI	Baseline	End Target
<i>Action: This indicator has been Revised</i>			
Progress of Overall Construction - Noor Ouarzazate III (Percentage)		0.00	100.00
<i>Action: This indicator has been Revised</i>			
Progress of Overall Construction - Noor Midelt Phase I (Percentage)		0.00	100.00
<i>Action: This indicator has been Revised</i>			



The World Bank

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