



RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF THE
ELECTRIC POWER PROJECT
APPROVED ON SEPTEMBER 24, 2013
TO THE
THE REPUBLIC OF THE UNION OF MYANMAR

ENERGY & EXTRACTIVES GLOBAL PRACTICE

EAST ASIA AND PACIFIC REGION

Regional Vice President:	Victoria Kwakwa
Country Director:	Ellen A. Goldstein
Senior Global Practice Director:	Riccardo Puliti
Practice Manager/Manager:	Julia M. Fraser
Task Team Leader:	Sunil Kumar Khosla



ABBREVIATIONS AND ACRONYMS

ARAP	Abbreviated Resettlement Action Plan
BP	Bank Procedure
EMP	Environmental Management Plan
EPGE	Electric Power Generation Enterprise
DSI	Design, Supply and Installation
GRM	Grievance Redress Mechanism
GWh	gigawatt-hour(s)
IDA	International Development Association
ISDS	Integrated Safeguards Data Sheet
ISR	Implementation Status and Results Report
km	kilometer(s)
MJ	megajoule(s)
MMK	Myanmar Kyats
MW	megawatt(s)
NEP	National Electrification Program
OP	Operational Policy
PDO	Project Development Objective
SDR	Special Drawing Right(s)
TA	Technical Assistance
USD	United States Dollar(s)

The symbol \$ denotes USD in this paper.



BASIC DATA

Product Information

Project ID P143988	Financing Instrument Investment Project Financing
Original EA Category Partial Assessment (B)	Current EA Category Partial Assessment (B)
Approval Date 24-Sep-2013	Current Closing Date 30-Apr-2018

Organizations

Borrower Ministry of Finance	Responsible Agency Ministry of Electricity and Energy, Electric Power Generation Enterprise
---------------------------------	------------------------------------------------------------------------------------------------

Project Development Objective (PDO)

Original PDO

Increase the capacity and efficiency of gas-fired power generation in Myanmar and strengthen the institutional capacity of relevant agencies.

Summary Status of Financing

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net Commitment	Disbursed	Undisbursed
IDA-53060	24-Sep-2013	12-Oct-2013	14-Jan-2014	30-Apr-2018	140.00	66.93	63.79

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

1. The Myanmar Government's Electric Power Project (the Project) is financed by International Development Association (IDA) Credit 53060 for SDR 92.6 million, equivalent to US\$140 million at the time of IDA approval in September 2013. The Project has two components: (1) construction of a new combined-cycle gas-fired power plant to replace an old, inefficient plant in Thaton, Mon State; and (2) technical assistance (TA) and advisory services to build the capacity of relevant agencies for (a) policy making and regulation in the power sector, and (b) project implementation. At appraisal, the estimated cost was \$130 million for Component 1, and \$10 million for Component 2.

2. The Project objective and design remain highly relevant, as confirmed by the Project's mid-term review in October 2016. The new plant under Component 1, which is over 84 percent complete as of October 2017, will help meet Myanmar's acute energy shortages to benefit users of grid electricity in Mon State and nationally. Following successful international competitive bidding in 2015, the new plant is designed to generate over three times as much power as the existing plant for the same allocation of gas, and at a cost for design, supply and installation (DSI) that is 15 percent lower than estimated at appraisal.¹ In this way, the Project has already set a new benchmark for cost savings and technical efficiency improvements, and contributes to the affordable and sustainable development of Myanmar's power sector. This is especially important at a time when demand is growing fast and the grid is being extended to new users as part of the Government's ambitious national electrification program. Component 2 has successfully delivered plans for national electrification and for power sector financial viability (both of which are now being implemented by the Government), and an economic analysis of natural gas supply to inform strategic decisions on Myanmar's energy future. In addition, Component 2 is building the capacity of the Ministry of Electricity and Energy (MOEE) and Electric Power Generation Enterprise (EPGE) in areas of regulation and policy analysis, and project implementation.²

3. The last Implementation Status and Results Report (ISR), dated July 2017, rates progress towards achievement of the PDO as Moderately Satisfactory, and overall implementation progress as Moderately Unsatisfactory (Moderately Unsatisfactory for Component 1, and Moderately Satisfactory for Component 2). The main factor that negatively impacts these ratings is the fact that the PDO indicator target values for the new plant under Component 1 will be achieved in 2018, rather than 2017 as originally expected. This delay is due primarily to the time taken for the client to procure the DSI contractor.³ Commissioning is due to begin in January 2018 and continue through to June 2018. This timeline, while consistent with the DSI contract, means that full commissioning will occur after the Project's current closing date of April 30, 2018. Despite the Moderately Unsatisfactory rating for Implementation Progress, project objectives remain achievable following the approval of this restructuring, as the major concern was related to the project not getting completed by the time of earlier project closing date. Extension of the closing date, and revision of the results framework

¹ Compared to the original plan of 106 megawatts (MW) new installed capacity for \$130 million, the contract provides for 119 MW at the price of \$110.6 million. The new plant may generate around 770 gigawatt-hours (GWh) per year. The existing plant has an installed capacity of 51 MW and has generated 140-220 GWh/year in recent years.

² The Project has undergone one restructuring to date, in December 2016, to reflect a change in relevant agencies. MOEE and EPGE were established in April 2016, replacing the former Ministry of Electric Power and Myanmar Electric Power Enterprise. ('Myanma' is a variant of 'Myanmar' used in formal institution names).

³ At appraisal in 2013, it was expected that bids for the DSI contract would be opened in December 2013, the contract would be signed in 2014, and the new plant would begin operating with open cycle gas turbines in 2015 followed by full combined-cycle gas and steam turbine operation in 2016. This timeline was reflected in annual targets for three PDO indicators (generation capacity, power generation, and thermal efficiency). In practice, bids were opened in 2015 and the contract was signed in January 2016. Procurement delays resulted from: the implementing agency's low institutional capacity, including a lack of dedicated procurement staff; lack of familiarity with World Bank procurement guidelines and procedures; complex internal approval process; and complaints from bidders, which were ultimately resolved.



targets to reflect the contractual timeline for plan construction and commissioning, would provide a basis for satisfactory progress ratings in this respect.

4. The July 2017 ISR rated environmental and social safeguards Moderately Unsatisfactory, due to delays in complying with safeguard requirements, which have since been complied, including public disclosure of safeguards instruments, as described further below and in the updated Integrated Safeguards Data Sheet (ISDS).

5. Procurement performance is rated Moderately Unsatisfactory due to organizational weaknesses and delays in procurement activities. In addition to delays in procuring the DSI contract (which took more than two years to complete, as noted above), procurement has also been slow for consulting services such as the Owner's Engineer (signed in late 2016), and there have been delays in finalizing other consultancies under the TA component. To address these issues, EPGE has assigned a procurement officer to support remaining procurement activities. The World Bank has also ensured that MOEE and senior management are fully aware of required actions and of the availability of the World Bank team to provide ongoing support as necessary.

6. As of November 2017, around 43 percent of the IDA credit has been disbursed. Around 90 percent of total IDA Credit proceeds is expected to be disbursed by the revised Project date. However, a share of IDA Credit proceeds is expected to remain unused at Project closing due to: (a) savings under Component 1, as noted above; and (b) mobilization of trust fund grants for TA and advisory services, which reduce the need to use IDA Credit proceeds for these activities under Component 2. Exchange rate fluctuations mean that the final amount of any unutilized proceeds will be known around the time of the actual closing date. The Government is considering proposing new activities, in addition to those already complete and underway, which could be completed within the extended closing date.

7. This Project's Audit Report for fiscal year ending March 2017, was due September 2017, but is overdue and expected by end December 2017. In accordance with Bank Policy and Procedures for Investment Project Finance, the Practice Manager, Financial Management, and WBG Financial Operations, have approved an exception to allow restructuring to extend the Project closing notwithstanding the overdue Audit Report, as a one-time exception to the legal audit requirements for financial year 2016-17. Financial management performance complies with Bank requirements.

B. Rationale for Restructuring

8. Restructuring is required to reflect a change in safeguard policies triggered by the Project, to extend the closing date, and to update the results framework, as outlined below.

9. *Safeguards.* While the Project remains classified as Category B for environmental and social safeguard purposes, Operational Policy (OP) 4.12, Involuntary Resettlement, has been triggered during implementation. OP 4.12 was not triggered at appraisal on the expectation that all investments and interventions under Component 1 of the Project would occur within the existing power station site, with no need for ancillary work such as for electricity transmission or distribution, water supply, or road works. After design for the new plant began, it became apparent that additional infrastructure would be required to supply water from a nearby river to the plant, and to workers' housing nearby the plant. These additional works use land, and resulted in the need to remove trees, with a limited economic impact on five households and one military establishment. The implementing agency has established and disclosed an Abbreviated Resettlement Action Plan (ARAP) and Environmental Management Plan (EMP) to address these issues, in compliance with OP 4.12.⁴ This restructuring reflects the change that OP 4.12 is now triggered. The Environmental Analysis and Social

⁴ Disclosed by the implementing agency at <http://www.moep.gov.mm/sites/default/files/ARAP%20and%20EMP%20%2811.10.2017%29.pdf> on October 11, 2017, and submitted for disclosure by the Bank on October 24, 2017.



Analysis (per the original Appraisal Summary of the Project Appraisal Document) are to be updated accordingly, as described in Section II below and in the updated Integrated Safeguards Data Sheet (ISDS).

10. *Closing date.* The Ministry of Planning and Finance has requested a twelve-month extension of the Project closing date to April 30, 2019.⁵ This would be the first extension of the closing date. In accordance with Bank Directives regarding a change in closing date, the team confirms that the PDO remains achievable, the implementing agency's performance is satisfactory, and the Bank and implementing agency have agreed actions that the implementing agency will undertake to complete the Project. The extended closing date will accommodate the time expected for full commissioning of the new power plant under Component 1 of the Project. The extended closing date will also facilitate completion of TA and advisory services under Component 2, including consulting assignments to support EPGE's responsibilities for a short period of operation after commissioning of the new plant. EPGE, its Owner's Engineer consultant, the DSI contractor, and the World Bank team, are closely monitoring the schedule of progress for construction of the new plant, and have agreed measures to ensure timely commissioning and implementation of associated TA.

11. *Results framework.* The results framework indicators associated with Component 1 are proposed to be updated to reflect the extended closing date, accounting for the contractual timeline of construction and commissioning of the plant. The results indicators are also proposed to be updated to reflect World Bank guidance on results indicators, which was issued since the Project was approved, including on citizen engagement and gender. Full details of proposed changes are provided in Section II below.

II. DESCRIPTION OF PROPOSED CHANGES

12. This restructuring includes the following changes.

- (i) **Triggering of OP 4.12** on Involuntary Resettlement (with the project remaining Category B for environmental and social safeguard purposes).
- (ii) **Loan closing date** extension by twelve months from April 30, 2018 to April 30, 2019.
- (iii) Revisions to the **Result Framework**:
 - a. For all indicators, update the end target date to reflect the new closing date of April 30, 2019.
 - b. Update or add relevant indicators to reflect World Bank guidance on results monitoring and evaluation:
 - For PDO Indicator "Generation capacity constructed or rehabilitated under the project" (custom type), change to corporate results indicator "Generation capacity of energy constructed or rehabilitated". No change in target value.
 - For the PDO Indicator "Projected lifetime fuel savings" (custom type), change to corporate results indicator "Projected energy or fuel savings". This indicator was added after mid-term review in

⁵ Letter October 23, 2017.



accordance with corporate guidance.⁶ At that time, the target value was calculated with inaccurate assumptions, so the target value is now updated from 9,300 megajoules (MJ) to 3,900 MJ, to reflect appropriate and conservative assumptions.⁷

- Add a new Intermediate Indicator on citizen engagement: “Feedback mechanism in place for citizens affected by the Project, and the relevant agency reports on if/how feedback has been used”. Baseline: Nil. Current value: Mechanism in place and first report published. Target value: Mechanism in place and reports published every six months.
- Add a new Intermediate Indicator on gender: “Public consultations are sensitive to gender: Percentage of women participants is more than 50% on average”. Baseline: No. Current value: Yes.⁸ Target value: Yes.

- (iv) **Environmental Analyses** updated. For the existing text: “All investments and other project interventions will occur at the existing site within its perimeter and there are no association [sic] investments, such as for the transmission and distribution network, water supply and road works.” Replace with: “The plant requires installation of 4.3 kilometers (km) of pipeline, plus associated electricity distribution line, with a floating pump on Donthami river and onshore pump house to supply water from the river to the power plant, and 1.6 km of pipeline to supply water to workers’ housing located on land at a distance from the plant site. Before reaching the power plant side, the plant supply infrastructure follows an existing road through: (a) land used by the military; (b) betel, rubber tree and other plantations; and (c) a pasture, which is completely flooded during the rainy season. The client, with support from safeguards specialists, has determined that these works do not interfere with any area of specific ecological value. The works are designed to be resilient to flooding. To mitigate the risk of any negative impact from the water supply infrastructure, an Environmental Management Plan (EMP), which meets World Bank requirements, has been prepared and publicly disclosed by the implementing agency.”
- (v) **Social Analysis** updated as follows. For Involuntary Resettlement (OP 4.12), replace the existing text with: “Installation of water supply infrastructure, as described above, triggers OP 4.12. The client, with support from safeguards specialists, has determined that these works affect five households and one military establishment. Economic impacts include land use and removal of or damage to farm trees. There is no need for physical resettlement of houses or other assets. An Abbreviated Resettlement Action Plan (ARAP), which meets World Bank requirements, has been prepared and publicly disclosed in country by the implementing agency on October 11, 2017, and by the Bank. With the facilitation of the local township administration, a total of six affected persons have been identified and provided ‘preliminary’ guarantee compensation packages with a total value of 7,485,000 Myanmar Kyats (MMK) (equivalent to around \$5,500 as of 2017).

⁶ At that time, the corporate indicator type was unavailable in the portal, hence it is currently shown as custom type.

⁷ The lifetime fuel savings is estimated based on a conservative baseline scenario in which the existing plant would operate until 2021 without major overhaul or upgrading, producing 147 GWh per year (5 percent less than historic daily output from Jan 2015 to December 2016, to account for continuing deterioration of old plant equipment). Other key assumptions are that the new plant has a gas-to-power energy conversion efficiency of 48%, compared to 17.8% for the old plant, using gas with a net calorific value of 857.7 British Thermal Units per standard cubic foot.

⁸ Across four community meetings in May 2017, women as a share of total participants ranged from 59 to maximum 76 percent.



The ARAP requires that an audit is to be undertaken to document evidence of the finalization of compensation requirements, and any additional or unforeseen impacts and associated mitigation.”

- (vi) **Financing Agreement** will be amended to reflect the above changes. Whereas Annex 1 to Schedule 2 of the Financing Agreement provides the Results Framework, this will be deleted in accordance with current World Bank practice. The Results Framework is maintained outside the Financing Agreement in ISRs and implementing agency progress reports. The revised version will be shared with the implementing agency through a formal communication.
- (vii) **Disbursement Estimates.** Disbursement estimates will be updated in line with the proposed new closing date.

III. SUMMARY OF CHANGES

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



Change in Procurement		✓
Other Change(s)		✓
Change in Economic and Financial Analysis		✓
Change in Technical Analysis		✓

IV. DETAILED CHANGE(S)

RESULTS FRAMEWORK

Project Development Objective Indicators

Generation capacity of energy constructed or rehabilitated				
Unit of Measure: Megawatt				
Indicator Type: Corporate				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	106.00	New
Date	01-Nov-2013	20-Oct-2017	28-Sep-2018	

Thermal (conventional) power generation capacity constructed under the project				
Unit of Measure: Megawatt				
Indicator Type: Corporate Breakdown				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	106.00	New
Date	01-Nov-2013	20-Oct-2017	28-Sep-2018	

Generation capacity constructed or rehabilitated under the project (non-renewable)				
Unit of Measure: Gigawatt				
Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	0.11	Marked for Deletion
Date	01-Nov-2013	01-May-2017	31-Oct-2017	

Projected energy or fuel savings				
Unit of Measure: Mega Joules (MJ)				
Indicator Type: Corporate				
	Baseline	Actual (Current)	End Target	Action



Value	0.00	0.00	3900.00	New
Date	01-Nov-2013	20-Oct-2017	30-Apr-2019	
Projected lifetime fuel savings Unit of Measure: Mega Joules (MJ) Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	9300.00	Marked for Deletion
Date	31-Aug-2013	27-Oct-2016	30-Apr-2018	
Increase in electricity generation (annual) Unit of Measure: Gigawatt-hour (GWh) Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	260.00	163.26	770.00	Revised
Date	01-Nov-2013	02-Jan-2017	30-Apr-2019	
Increase of thermal efficiency of energy conversion Unit of Measure: Percentage Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	20.00	15.40	48.00	Revised
Date	01-Nov-2013	31-Jan-2017	30-Apr-2019	
National Electrification Plan Unit of Measure: Text Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	No plan	The Government has begun implementation of the National Electrification Plan, through the World Bank-supported National Electrification Project, since the financing agreement was signed in October 2015.	NEP under implementation	No Change



Date	01-Nov-2013	27-Oct-2016	31-Oct-2017	
Participants of training and capacity building activities from relevant agencies				
Unit of Measure: Number				
Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	175.00	40.00	Revised
Date	01-Nov-2013	27-Oct-2017	30-Apr-2019	

Intermediate Indicators

Construction Progress				
Unit of Measure: Percentage				
Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	84.31	100.00	Revised
Date	01-Nov-2013	31-Oct-2017	28-Sep-2018	

Actual cost vs cost estimates (overruns if >100%)				
Unit of Measure: Percentage				
Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	85.00	100.00	Revised
Date	01-Nov-2013	31-Oct-2017	30-Apr-2019	

Reduction of CO2 emissions per output generated (gCO2eq/kWh)				
Unit of Measure: Number				
Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	0.00	0.00	400.00	Revised
Date	01-Nov-2013	27-Dec-2016	30-Apr-2019	

Feedback mechanism in place for citizens affected by the Project, and the relevant agency reports on if/how feedback has been used.				
Unit of Measure: Text				
Indicator Type: Custom				



	Baseline	Actual (Current)	End Target	Action
Value	Nil	Mechanism in place and first report published.	Mechanism in place and reports published every six months.	New
Date	01-Nov-2013	24-Oct-2017	30-Apr-2019	
Public consultations are sensitive to gender: Percentage of women participants is more than 50% on average. Unit of Measure: Yes/No Indicator Type: Custom				
	Baseline	Actual (Current)	End Target	Action
Value	No	Yes	Yes	New
Date	02-Nov-2013	24-Oct-2017	30-Apr-2019	

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-53060	Effective	30-Apr-2018		30-Apr-2019	30-Aug-2019

DISBURSEMENT ESTIMATES

Change in Disbursement Estimates
Yes

Year	Current	Proposed
2014	0.00	0.00
2015	0.00	370,485.83
2016	15,243,600.02	11,108,034.38
2017	92,985,960.04	22,880,000.00
2018	32,926,176.02	56,583,356.30
2019	0.00	40,000,000.00

COMPLIANCE



Safeguard Policies

Safeguard Policies Triggered	Current	Proposed
Environmental Assessment (OP) (BP 4.01)	Yes	Yes
Natural Habitats (OP) (BP 4.04)	No	No
Forests (OP) (BP 4.36)	No	No
Pest Management (OP 4.09)	No	No
Physical Cultural Resources (OP) (BP 4.11)	No	No
Indigenous Peoples (OP) (BP 4.10)	Yes	Yes
Involuntary Resettlement (OP) (BP 4.12)	No	Yes
Safety of Dams (OP) (BP 4.37)	No	No
Projects on International Waterways (OP) (BP 7.50)	No	No
Projects in Disputed Areas (OP) (BP 7.60)	No	No

LEGAL COVENANTS

Loan/Credit/TF	Description	Status	Action
IDA-53060	Finance Agreement :Schedule 2, Section I Description :Maintenance of EPGE with functions, composition and resources satisfactory to IDA Frequency :CONTINUOUS	Complied with	No Change
IDA-53060	Finance Agreement :Schedule 2, Section I, Part C, Environmental and Social Safeguards Description :Activities under the Project are to be carried out in accordance with the Environmental and Social Assessment and the Environmental and Social Management Plan. Prior and informed consultations with affected Indigenous People are carried out. Frequency :CONTINUOUS	Partially complied with	Revised
Proposed	Finance Agreement :Schedule 2, Section I, Part C, Environmental and Social Safeguards Description :Activities under the Project are to be carried out in	After delay complied with	



	accordance with the Safeguards Documents. Prior and informed consultations with affected Indigenous People are carried out. Frequency :CONTINUOUS		
IDA-53060	Finance Agreement :Schedule 2, Section II, Part B, Financial Management Arrangements Description: Appointment of independent auditors and implementation of the Project, in accordance with the FM manual. Frequency: Yearly	After delay complied with	No Change
IDA-53060	Finance Agreement :Schedule 2, Section V, Part A, para 1 Description :Prepare an action plan for the financial viability of EPGE Due Date :31-Mar-2015	After delay complied with	No Change
IDA-53060	Finance Agreement :Schedule 2, Section I, Part C, para 4 Description :Development and maintenance of: (i) an environment, health and safety management system for the existing and the new facilities at the Thaton plant, including health and safety measures and guidelines; and (ii) a grievance redressal mechanism for Indigenous Peoples in the Project area. Frequency: CONTINUOUS	Expected soon	No Change
IDA-53060	Finance Agreement :Schedule 2, Section II, Part A, Mid-Term Review Description :No later than March 31, 2016 carry out MTR and adopt measures for the efficient and effective implementation of the project Due Date :31-Mar-2016	After delay complied with	No Change
IDA-53060	Finance Agreement :Schedule 2, Section V, Part A, para 2 Description: Annually starting March 31, 2016, prepare and furnish to IDA an annual progress report on implementation of Financial Viability Action Plan Due Date :31-Mar-2016	After delay complied with	No Change