ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

SCHOOL OF COMMERCE

ASSESSMENT OF PROJECT MONITORING & EVALUATION PRACTICES AT DIRE DAWA DIESEL POWER PLANT REHABILITATION PROJECT

By Muluken Tessema

A Research Project Submitted to Addis Ababa University, School of Commerce in Partial Fulfillment of the Requirements for the Award of the Degree of Masters of Arts in Project Management

October, 2017

LETTER OF DECLARATION

This Research Paper is my original work and has not been presented for academic award in this or any other University.

SIGNATURE:…….. DATE:……

Muluken Tessema

Reg. No. : GSD/0370/06

LETTER OF CERTIFICATION

This research paper has been submitted for examination as with my approval as the University Supervisor.

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Muluken Tessema,

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LIST OF ACRONYMS

BRM- Benefit Realization Management

CMMI-Capability Maturity Model Integration

DAC-Development Assistance Committee

DPP- Diesel Power Plant

EPC- Engineering, Procurement and Construction

ET- Evaluative Thinking

EVM- Earned Value Management

EEP- Ethiopia Electric Power

FIDIC-Fédération Internationale Des Ingénieurs-Conseils

IFRC- International Federations of Red Cross and Crescent

IPLA- International Project Leadership Academy

LF- Log Frame

METEC- Metals Engineering Corporation

M&E- Monitoring and Evaluation

MOV- Means Of Verification

MWIE- Ministry of Water, Irrigation and Energy

NGO- Non Governmental Organization

OECD- Organization for Economic Co-operation and Development

OGC- Office of Government Commerce

OPM3- Organizational Project Management Maturity Model

OVI- Objectively Verifiable Indicator

PM- Project Management

PMBOK- Project Management Body Of Knowledge

PMI- Project Management Institute

PMLC- Project Management Life Cycle

PMMEP- Project Management Monitoring and Evaluation Process

PMMM- Project Management Maturity Model

P3M3- Portfolio, Program and Project Management Maturity Model

RBM-Results Based Management

SEI- Software Engineering Institute

SMART-Specific, Measurable, Attainable, Relevant and Time bounded

SPICED- Subjective, Participatory, Interpretable, Cross-checked, Empowering and Disaggregated

STO- Strategic, Technical and Operational

UNDP- United Nations Development Program

USAID- United States Agency for International Development

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ABSTRACT

Project monitoring and evaluation process is critical for the success of a project, since it is the most integrated process of all. Besides its own intended activities, the process measures the performance of other process groups. However, the results in previous studies at various projects show low rating practices of monitoring and evaluation. The challenges of project monitoring and evaluation process observed in most projects may generate from internal or external factors. The internal factors could be: perception (implementer's altitude & commitment), M&E planning quality, selection of M&E tools, M&E expert level and budgeting; whereas, the external challenges may arise from: organization policy, stakeholder communication or politics.

This research paper has examined the monitoring and evaluation practices of Dire Dawa DPP Project through the assessment of four specific objectives: utilization of M&E mechanisms, level of M&E system performance, challenges of M&E process and M&E mechanisms to curb the existing project problems. The research study had conducted a census survey through questionnaires on a targeted population size of 30 individuals. The response rate formed was 90%. The collected data from the respondents was analyzed with the quantitative tools of frequency, mean and percentage. The result of the survey indicated low level practices of Project monitoring and evaluation process at the underlined project. The paper had also identified M&E system challenges of the project and the M&E mechanisms that could curb the current distressed status of the project.

CHAPTER ONE

1. INTRODUCTION

The research paper presents an assessment of Monitoring and Evaluation Process practices which was conducted in Ethiopia at Dire Dawa Diesel Power Plant Project. Monitoring & evaluation process is one of the standard project management process groups in the handling of projects. The paper presents the credibility of 'Project Management Monitoring and Evaluation Process (PMMEP)' in the capturing efforts of the value of project management. Even if Project Management starts from a long time back in the 19th century along with the development of Planning & Control by Henry Gant (1861- 1919; the father of planning and control), pursuing the profession is still ongoing. The low performance ratings of projects have insisted the academicians and practitioners of the field for a better principles, standards and guidance. Previous studies had pointed out different opinions for the root causes of project failures. Some focused on the theoretical foundations of the field as a source of failure. Many others described 'organization's low rate project management practices' as a cause' and are working on 'the organizational maturity of project management knowledge and standards'. This paper supports the approach of improving the current level of success through project management best practices and points out the necessity of embedding "Evaluative Thinking" in the standards of project management processes. Hence, its intention is to assess the practices of monitoring & evaluation process in the management of a distressed project, Dire DaWa DPP. The examined project is owned by Ethiopian Electric Power (EEP).

1.1. Background

In these days, many organizations consider projects as solutions for dealing the business problems they face and boosters of their performances. A project is launched to deliver a

new product (and/or process), improve the existing system/product or even to innovate a new technology through a research and development. The ultimate objectives of conducting projects in an organization are to maximize the effectiveness, efficiencies, sustainability and reliabilities of their business outcomes. As a result, the number of project oriented organization is increasing very rapidly in the globe. On the contrary, there are complaints from both the practitioners and researchers on the maturity of project management as a discipline due to reports of low project performances in a considerable rate. Accordingly, some authors have been questioning the effectiveness of the underlined theory of project management which was described by PMI in the PMBOK. On the other hand, many researchers in the field are working on the project management processes capability improvements of organizations to enhance the current low success rate. The objective of this paper is to examine a distressed project's monitoring and evaluation practices and recommend M&E mechanisms that would curb the situation.

PMBOK describes the role of 'Monitoring & Controlling Process as "The integrative nature of project management requires the Monitoring and Controlling Process Group to interact with the other Process Groups. Monitoring and Controlling processes occur at the same time as processes contained within other Process Groups. Thus, the Monitoring and Controlling Process is pictured as a 'background' Process Group for the other four Process Groups" (PMBOK, 2013). In this explanation, PMI insists 'the dependency of the performance level of all project management processes on the quality of Monitoring & Controlling process applied in the project'. However, PMBOK did not mention the contribution of evaluation process in the management of projects. The role of 'Monitoring and Controlling Process' could be elevated, if it had included "Evaluation process" in it.

Although monitoring and evaluation processes are interdependent, their objectives are quite different. Monitoring (as defined by PMBOK) is 'the Collection of project performance data with respect to a plan, production of performance measures, and reporting and disseminating performance information. On the other hand, the role of "Evaluation process" is far from the measurement of project performances against a pre-determined metrics. As it was clearly indicated in the 'Project Monitoring & Evaluation guidance of IFRC (International Federation of Red Cross & Red Crescent Societies)', Evaluation looks at the relevance, effectiveness, efficiency and sustainability of an intervention. It measures the worthiness of processes (inputs and activity) & outputs and provides evidences of why targets and outcomes are or are not being achieved and addresses issues of causality (IFRC, 2011). PMMEP addresses the existing challenges of Project management; Innovation, Globalization & Sustainability. It should be noticed that Monitoring and Evaluation are usually considered as one process since they are integrally linked.

The paper proposes the necessity of 'Evaluation Process' in the existing project monitoring and control process group standard. It argues the establishment of 'Evaluative thinking culture in project environment' can lead to success. It seems a little change in existing process standard but has a big impact in changing the situation. The research proposal's case is 'the limitations of the underlined standard to handle the external environment threats that face projects. Waiting a long time for a strategic change to be made by the executives may be too late for projects to act in accordance to the ongoing surrounding changes. Accordingly, the paper proposes 'Project Management Monitoring and Evaluation Process (PMMEP) as a vital tool in achieving success. PMMEP enables a project to check the efficiency, effectiveness, relevancy, impact and sustainability of activities and goals on the ongoing basis. Benefit realization and strategic alignment problems can also be addressed in PMMEP.

The main advantage of PMMEP over BRM is its capacity of investigating the worthiness of the intended business goals/benefits to be achieved, since the situations (basis of the original assumptions) are continuously changing. It seems surprising that some firms might not celebrate on a project deliveries, even if the project delivered the intended products; because the products might be obsolete during the time of delivery. PMMEP is a vital tool to handle such problems.

As PMI pointed out in 2016, 'the costs of low performances in projects are high' (PMI, (pulse of the profession), 2016). This is because; organizations could lose hope in project management, if they are unsatisfied in project deliveries. The low performance report is a shock for academicians and practitioners in the project management community. So far, many reasons have been pointed out by researchers as the root causes of project failures; strategic alignment problem, low project management practice, globalization, changes in the market and benefit realization problem are the major reasons mentioned by previous researchers for the low performance rates of projects. This paper examines the contributions of 'avoiding a Monitoring and Evaluation process as a reason for the low performances by conducting a survey on the practices of the process in one of Ethiopian Electric Power (EEP) distressed project. Addressing the above mentioned reasons is quite convincing, however, adopting a good Project Monitoring and Evaluation Process (PMMEP) is more important, since it is the most integrated process among all the project management process groups

Establishing an appropriate 'Monitoring and Evaluation system' strategy is indispensable to organizations in order to earn their shares in today's highly competitive global market. If the company is project based, it makes the strategy more important. Organization's ignorance of Monitoring and Evaluation Policy for their projects leads them to the bitter outcomes of

Competitive Disadvantage. Since most projects owe a huge amount of dollar and intended as a problem solver tools by business firms, their efficiency, effectiveness, relevance, impact and sustainability should be closely monitored and evaluated. As Patrick Gudda expressed in his book, how could organizations understand whether they are doing the right projects or not, if their performances are not monitored and evaluated against the internal and external measuring indicators? Patrick's arguments were:

- If you do not measure results, you cannot tell success or failure;
- If you can't see success, you cannot reward it;
- If you cannot reward success, you are probably rewarding failure;
- If you cannot see success, you cannot learn from it;
- If you cannot recognize failure, you cannot correct it;
- If you can demonstrate result, you can win public; (Patrick G., 2011)

1.2. Problem Statement

Even though the Project Management Institute (PMI) and some other professional institutions have been working intensively to improve the performance rating levels of projects (based on the three merits: cost, quality & schedule), global project success rating survey findings that are conducted by different research groups could not produce positive results. The 2015 CHAOS report of the STANDISH GROUP COMPANY (an independent international IT advisory firm founded in 1985, which was based on the assessment made on the performances of '50,000 Global Information System projects) indicated the low success rate facts: only 29% of projects were successful (The CHAOS report, 2015). Similarly, the USA Government Accountability Office described in 2008, '49% government owned projects were either poorly planned or poorly performed or both among 840 federally funded technology based projects (IPLA, Global Facts & Figures, 2016). Organizations' poor project

management capability performances are mentioned as the root causes of low success ratings by the above worldwide researchers of the field. One of the enabling factors for the success of a project is the 'Project Management Monitoring & Evaluation Process (PMMEP)' capability of firms.

Even if Monitoring and Evaluation processes are effective Project Management tools for achieving Project success, findings from the previous studies prevail their utilizations by many organizations are not satisfactory. It is quite true that International organizations like: IFRC, World Bank and UNDP have adopted their own PMMEP standards. However, the intension of these organizations is mostly to control the compliance of the programs against their standards. It is good to know that the importance of PMMEP is wider than accountability (control); it has a learning aspect which is too important for organizations' project management maturity. The existing problems of PMMEP functionality can be one of the following reasons:

- **Defining the process**

  Many project management institutions (like PMBOK) have clearly defined the role of Monitoring and controlling process. However, in their definitions the role of 'Evaluation' is not mentioned at all. This has an impact on the effectiveness of the process, since it limits the role of the process in measuring and controlling against the planned activities only. If 'Evaluation' were added in the process, strategic metrics like: effectiveness, relevance. Impact and sustainability could have been assessed and had increased the ratings of project management performance (BERNARD PHIRI, 2015). On the other hand, some organizations unknowingly misuse the role of Monitoring with 'Evaluation. (JENNY HUGHS & LOCK NIEWENHUIS, 2005).

Institutionalizing;

Previous studies indicated that many organizations lack a comprehensive Monitoring & Evaluation policy and guidelines that could be utilized in the management of their projects (GLADYS LAPEZ ACEVEDO & OTHERS, 2010).

- **Confidentiality**;

The quality (accuracy & precession) of PMMEP's result is affected by the factors like; level of expertise involvement, extent of participants (especially beneficial) and level of communication. However, the M&E quality is a problem in many projects (R M MTHETHWA & R N JILLI ,2016).

- **Ethics**;

Monitoring & Evaluation findings are credible, if the process is performed through impartiality, independently and accountably. However, the process is mostly affected by political interferences (both internal & external) and corruptions in many projects studied (IFRC, 2011& GLADYS LAPEZ ACEVEDO & OTHERS, JUNE, 2010).

- **Contract types**

The conditions of contracts in many project procurement agreements may also limit the performance of M&E process. For instance; in the introductory part of FIDIC (general condition for EPC contracts), it was mentioned that "

> "Thereafter the Contractor should be given freedom to carry out the work in his chosen manner, provided the end result meets the performance criteria specified by the Employer. Consequently,

the Employer should only exercise limited control over and should in general not interfere with the Contractor's work" (FIDIC, 1999).

- **Perception**

  It has been observed that many project offices have a negative perception for PMMEP. Some view the process from 'an increment of project cost' and some others say 'it is someone's job (externalizing)'. The perception of many organizations is that 'it is a form of control' and miss its learning part. (Patrick Gudda, 2011).

Preliminary investigation results on the practices of M&E process at Dire Dawa DPP project noticed similar problems. The project was launched to support the macro level strategic goal of the government (building the capacity of local construction companies) and the micro level strategic goal of EEP to avail a buffer/safety power generating station during pick hours. However, the underlined project's performance has already exceeded the metric values of all the three constraints (time, scope and cost) and is at risk. Hence, continuing the rehabilitation activities without an intervention strategy would not yield the desired objectives targeted at all levels. The three main problems associated with EEP's project management handling at Dire Dawa diesel power plant are:

- **Schedule slippage**

  'Completion date' is one of the key elements in the conditions of an EPC contract agreement. In case of Dire Dawa DPP project, the contract has already exceeded the metric value of the schedule by three years so far. The worst condition is that 'nobody

knows when the project will be closed; i.e. uncertainty is conceived by all project stakeholders on the completion date'.

- **Scope creep**

  Scope creep is the term that has come to mean any change in the project that was not in the original plan. In case of the underlined project, there exist a huge amount of scope changes. The contractor had already expressed that 'is capable to rehabilitate only two units out four and to minimize the capacity of each unit to 7.5 MWs from its installed output of 10 MWs without a change to the existing project amount'.

- **Cost overrun**

  According to the scope triangle theory, "the three project parameters are an interdependent set; i.e. a change in one can cause a change in another to restore the equilibrium of the project'. Even if the overall contract price is fixed in an EPC contract, EEP is suffering from a project cost overrun due to the scope and schedule changes existing. As the schedule slips, it is clear that the total sum of project overhead costs (employee salary, overtime, office expenses, e.t.c.) increase. In addition, when the project duration is extended and fewer deliveries are expected from the original promise, the client (EEP) suffers from the opportunity cost incurring; since the amount could have been used for the other company purposes.

As it was discussed with the Power Plant manager, the root causes for the existing project performance problems in Dire Dawa DPP are the difficulties of the contractor in spare part supply, expert's technical knowledge and special erecting tools availability. It is quite true that these project management performance constraints could have been addressed before it was too late and the project progress status could have been different, if the project had

implemented an appropriate Monitoring & Evaluating system. Unsurprisingly, the preliminary interviews made with the experts at the head office and the project site has indicated the avoidance of Monitoring and Evaluation mechanisms in the management of Dire Dawa DPP Rehabilitation Project. In the findings of the preliminary survey made through discussions with the above mentioned personnel and project document reviews, many of the necessary monitoring & evaluation process activities have been avoided during the accomplishment of each project stage:

Accordingly, the basic research questions to be answered in this research paper are:

- What kinds of monitoring & evaluation mechanisms have been applied at Dire Dawa DPP Rehabilitation Project?
- To what extent does Dire Dawa DPP Rehabilitation Project applied monitoring & evaluation process tools?
- What are the challenges of project monitoring & evaluation process in the handling of Dire Dawa DPP Rehabilitation Project?
- How does the implementation of an appropriate Project Monitoring & Evaluation Process (PMMEP) could prevent the current situations of Scope-creep and Schedule-slip at Dire Dawa DPP Rehabilitation Project?

1.3. Objectives

The general objective of this research paper is to examine the practices of Monitoring and Evaluation Process at Dire Dawa DPP Rehabilitation Project which is located in the eastern parts of Ethiopia. The specific objectives of this study are:

- To assess the kinds of monitoring & evaluation mechanisms which have been applied at Dire Dawa DPP Rehabilitation Project

- To describe the level of Project Monitoring & Evaluation Process performance at Dire Dawa DPP Rehabilitation Project.
- To examine the challenges of Project Monitoring & Evaluation Process (PMMEP) implementation at Dire Dawa DPP Rehabilitation Project. And
- To suggest the appropriate Monitoring & Evaluation mechanisms that could curb the current performance problems of Dire Dawa DPP Rehabilitation Project.

1.4. Significance

The paper intends to examine the practices of Monitoring & Evaluation mechanisms at a distressed government owned project. The findings of this paper would benefit:

- **Project office (Dire Dawa DPP)**; at the project level, the paper alarms the management to perform a 'Real Time Evaluation (RTE)' to determine the current situations of the project.
- **Organization (EEP)**; at the organization level, the paper provides the lessons learnt to EEP from the observed problems at Dire Dawa DPP Rehabilitation Project management; since EEP is on the way to negotiate similar contracts with the same contractor for other power plants' rehabilitations.
- **Ethiopian Government**- at the national level, the paper indirectly supports the government's effort for the accomplishment of its capacity building strategy on local companies by indicating the weaknesses observed on the practices of Monitoring & Evaluation process at Dire Dawa DPP Rehabilitation Project.
- **Project Management Field**; for the researchers in the project management field, the paper illustrates the need of 'Evaluation process' on the current PMBOK's project management process standards in order to achieve the best project management practices.
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1.5. Limitation

The research isn't able to describe more facts and information on the general Monitoring and Evaluation practices of Ethiopian Electric Power (EEP) as a firm, since it faced the lack of final evaluation report documents of other closed projects.

CHAPTER TWO

2. REVIEW OF THE LITERATURE

The practice of Monitoring and Evaluation in project handlings is relatively new. Monitoring and evaluation system was developed by International Organizations and NGOs for the compliances of their development programs (especially in developing countries). These organizations have been utilized monitoring and evaluation systems through an independent party to maintain the accountabilities of project implementing bodies. The results from M&E systems have also been consumed by the government policy makers of the third world countries (Bamberger M. and Hewitt E.; 1986).

2.1. **The Concept of Project Monitoring & Evaluation process**

The concept of Project Monitoring & Evaluation Process is the result of the theory of change management (Joseylee S.Kasule, 2016). The process provides the necessary information to the executives whether the intended change is possible through the executed projects. However, previous research works identified that there exists a misinterpretation by project implementers towards the concept of project monitoring & evaluation process. Some think 'the process is limited at the implementation phase only and ignore its role in all project activities' (SVETLANA CICMIL AUGUST 2006). On the other hand, many others think 'it is some bodies job (externally, usually Auditors) and don't include in their activity plans' (GLADYS LAPEZ ACEVEDO & OTHERS, 2010). Different concerned academicians & international organizations had defined M&E in their own terms. This paper considers the definitions of Patrck Gudda (2011) with minor changes.

- **Monitoring**; Project Monitoring is an internal and ongoing activity which focuses on the efficiency and effectiveness of project outputs, activity and inputs (resources) against the project plan.
- **Evaluation**; Project evaluation is a management tool which is used in the assessment of project performance, as systematic and objective as possible, of an ongoing or completed project, progran1me or policy, its design, in1plernentation and results.

Monitoring and Evaluation are usually mentioned as a single entity, since their applications are integrally linked. Even if Evaluation is depended on Monitoring results, it also consumes other data like: strategic requirements, external assumptions and research outputs. Their differences mostly lie on the time and focus of assessment. The following table elaborates their differences

Table 2.1: **Differences of Monitoring and Evaluation Activities**

	Monitoring	**Evaluation**
Why?	Check progress against project plan, Inform decisions and remedial action, Update project plans, Support accountability	Assess progress and worth, Identify lessons and recommendations for longer-term planning and organizational learning; Provide accountability
When?	Ongoing during project	Episodic before, during & after project
Who	Project implementers (internal)	Internal or external to projects
Links to Logical Hierarchy	Focus on inputs, activities, outputs and shorter-term outcomes	Focus on long-term outcomes, impacts and sustainability

❖ Adopted from: White, Graham and Wiles, Peter. 2008.

Project Management & Evaluation Process

There are a number of steps included in the process of monitoring and evaluation. The number of PMMEP steps and sequences applied in a project vary from organization to organizations. A project may apply the: four, six, seven or ten step models of project monitoring and evaluation process (Patrick Gudda, 2011). For instance, IFRC applies a Six-Step Module while the World Bank applies a Ten-Step Module (IFRC, 20111) and (World Bank, 2004). The Six-Steps Model is utilized by most projects. It should be noticed that each key step has contained other sub-steps under it. These steps are:

Step 1: Identify the purpose and scope of the M & E system.

Step 2: Plan for Data Collection and Management.

Step 3: Plan for Data Analysis.

Step 4: Plan for information reporting and utiliza**tion.**

Step 5: Plan for M&E human resources and capacity building.

Step 6: Prepare the M&E budget

Project Monitoring & Evaluation activities are performed along with the accomplishment of each PMLC stages. The following table summarizes the PMMEP activities in each Project Management stages (Patrick Gudda, 2011)..

Table 2.2: **Summery of PMMEP activities in PMLC**

PMLC stages	**PMMEP activities**
Conception	Initial needs Assessment
Planning	LF design, M&E planning and Baseline Study
Execution	Midterm M&E activities
Closing	Final Evaluation (End line Study) & Dissemination of Lessons learnt

Project Monitoring & Evaluation Process Objectives

The underlined Project Management standard for Monitoring and Controlling Process by the PMBOK is based on "Monitoring thinking". Hence, it limits the process in tracking the performance of a project against the pre-set metric values in the planning process. The advantage of PMMEP over the PMBOK's process for project monitoring and controlling is that 'its inclusiveness of 'Evaluative thinking values' in Project Management. As Carlisle Levine described 'Evaluative thinking is ongoing, systematic inquiry and learning about quality and perceptions of what is important. It is about finding out effective strategies and posing thoughtful questions that challenge our assumptions and how we make judgments, and considering what is not evident and unintended effects at any given time" (Carlisle Levine, 2015). The essentiality of PMMEP can be perceived based on the following key merits:

- **Defining Project Success**; PMMEP measures the performance of a project based on the metrics of project performance Effectiveness, Relevance (capacity building), Impact and Sustainability. (Patrick Gudda, 2011)
- **Strategy Re-planning proposal (Bottom-Up)**; The M&E process elements in the LF are OVI and MOV. The project management assumptions (mostly external risks) in the LF are analyzed in the direction of 'Bottom-Up' (Input to Process to Output to Outcome to Impact). Hence, PMMEP gives Projects to propose a strategy change for Strategy Executives of an organization on time based on the changing conditions of business environment factors.
- **Stakeholder Involvement**; PMMEP has a feedback mechanism for the inclusiveness of all stakeholders' opinions (especially project beneficiaries and sponsors).

- **Promote risk management**; effective project monitoring & evaluation process helps to manage identified project by tracking the impacts of the assumptions considered to achieve the goals of a project.
- **Enhance organizational and individual learning;** As Patrick Gudda explained it 'most project implementers ignore the learning aspect of the process by perceiving it as a control process only'. PMMEP promotes organizational learning through 'Final evaluation & post- implementation impact assessment'.

As it has been mentioned in the above paragraphs the advantages of PMMEP in PM are best understood by their roles in providing valuable solutions for decision makers through the performance assessment of operational and strategic needs of projects (efficiency, effectiveness, relevance, impact and sustainability). On the other hand, the 2015 survey of PMI had indicated four 'Foundational (Best) Project Management Practices based on those organizations which became 'High Performers (Pulse of the Profession, 2015). The following table provides justifications of 'how PMMEP prevents projects from becoming distressed' and links 'the best PM practices of PMI and PMMEP mechanisms in achieving project success.

Table 2.3: **PMMEP & project success**

PMI's Best PM practices (2015 survey)	PMMEP's Mechanisms
Knowledge transfer effectiveness	**Through 'Impact & Outcome Assessment'**; • What changes did the project bring about? • Were there any unplanned or unintended changes?
Risk management	Baseline assessment of the '**Efficiency of Inputs**' and formulating of preconditions; • Were the resources available in the right quantity, on time and with the right quality?

	• Were the project risks identified properly? Evaluating the '**Effectiveness of Outputs'**; by analyzing the conditions of Original assumptions & Preconditions in the assumptions column of the LF • Were the original operation's objectives achieved? • Did the outputs lead to the outcomes?
Agile Project Management (APM) & Benefits Realization Management (RBM)	Through '**Sustainability and Relevance assessment**"; • Are the benefits likely to be maintained after the project would be closed? • Are the objectives of Operations consistent with the beneficiaries? • Are the activities (processes) worthy enough to deliver the intended objectives?

❖ Adopted from: Pulse of the Profession, 2015

Project Monitoring & Evaluation Approaches & Mechanisms

There are a number of M&E approaches adopted by different institutions. Each organization can develop its own PMMEP based on the grounding factors that exist in its business environment. Monitoring & Evaluation mechanisms can be framed based on the levels of the activities needed; which are:

- Results (Casual impact) chain; measures the project results and impact attributed throughout the impact chain; developed by GTZ.
- Results Based Management (RBM); an approach to project management which is applied to measure and achieve clearly defined results.

The most common M&E approach which is currently utilized by most institutions is "Results Based Management (RBM)".

- **The Results Based Management (RBM)**

RBM is originally developed by the U.S. Department of Defense and adopted by U.S. Agency for International Development (USAID) in the late 1960 (Bureau of Strategic Planning, 2015). Currently, most International Development Agencies have adopted either the Log Frame (LF) or Results Framework (RF) tools for measuring the results of their programs.

The Logical Framework (LF)

The LF is accepted by most institutions as an RBM tool in Planning, Monitoring and evaluating of project activities. It is named from the logical processes it applies for its format. Patrick Gudda (2011) defines LF as: "The Logical Framework (log frame) is a management tool used to improve the design of interventions, most often at project level. It involves identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention". The following table illustrates the main body of LF:

Table 2.4: **Main elements of the Log Frame**

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means Of Verification (MOV)	Assumptions
Impact			
Outcome (purpose)			
Output			
Activity (process)			
Input (resources)			

There are a number of proven tools and techniques which are applied in project monitoring & evaluation process across different project activities and time. Most project management cycle works require the following project M&E process mechanisms & tools (Patrick Gudda, 2011):

- **Initial Needs Assessment**; during project initiation process; through:
  - Situational Analysis
  - SWOT Analysis
- **Context monitoring & evaluation**; during project planning/procurement planning; through:
  - Technical/financial evaluation
  - Cost/Benefit Analysis
  - Positioning matrix Analysis
  - Baseline Assessment
- **Mid-term/process monitoring & evaluation;** during project implementation; through:
  - Project work breakdown structure (WBS)
  - Gantt chart
  - Milestone chart
  - Network diagrams (PERT, CPA)
  - Earned Value Management
- **Real Time Evaluation (RTEs)**; during emergency requirements mostly on distressed projects; through:
  - Sunk Cost Technique
  - Root Cause assessment
  - Meta Evaluation

- **Summative Evaluation**; at the final stage of a project; through:
  - Project work breakdown structure (WBS)
  - Earned Value Management
  - Impact Assessment

2.2. Project Monitoring & Evaluation Process Challenges

The performance of project monitoring and evaluation activity is influenced by several internal and external factors. There are many challenges in practice during the implementation of the process. Bernard Phiri pointed out three groups of project M&E process challenges (political, technical and bureaucratic). of the can be grouped in to three (Bernard Phiri, 2015). According to Mthethwa and Jili, the challenges of M&E process at the local government level of South Africa are: knowledge, skill and competency (R. M . Mthethwa and N. N. Jili, 2016). By summarizing the results of previous studies and practices, the challenges of Project Monitoring & Evaluation Process can be

- **Political (Contextual);** it is an internal/external political challenges that threat the monitoring & evaluation performance during the management of project. This includes:
  - Governmental interference
  - Management/implementer influence
  - Stakeholder (external power) influence
  - Diversity and inclusion
- **Technical (Methodological)**; these are the challenges which are linked to the quality of the monitoring & evaluation system implemented in the project. These include:
  - Choice of the appropriate M&E approach & tools

- Data availability
- M&E planning quality
- M&E process' reliability, inclusiveness, timeframe, validity and substantial
- M&E team skill and ability

- **Bureaucratic (psychological)**; these are the challenges which are linked to the project working culture and organizational assets. These are:
  - Company policy clarity
  - Higher management support
  - Budgetary allocation
  - M&E process transparency
  - Ethical issues; like corruption & compliance with company standards
  - Employees commitment and attitude

2.3. **Project Monitoring and Evaluation Process and Success Factors**

These days the perception of measuring project performance only with the traditional Iron Triangle Metrics (cost, quality and time) is changing. Benefits Realization Maturity Management (BRM) of projects to organizations like: project sustainability, attributions and relevancy should be taken when measuring the success rate of a project. Projects which met the iron triangle metrics targets may actually failed to bring the intended change to the company (SVETLANA CICMIL and DAMIAN HODGSON, 2006). For this reason, some authors define project success as 'it is a favorable result which is measured through efficiency, effectiveness, impact, sustainability and relevance (capacity building)' (Patrick Gudda, 2011)

Patrick Gudda had also mentioned on the same book the six critical factors of project monitoring & evaluation process performance which were identified by Coupal (2001) earlier. On the other hand, IFRC (2011) had clarified seven critical elements of PMMEP that would be carried out within a project life cycle. Wachaiyu (2016) had identified project monitoring & evaluation metrics of: Budgetary allocation, M&E planning and Strengths of M&E team for her study. Most of the critical factors mentioned in the previous studies & academic books are similar and can be grouped under the following main categories:

- **Buy-in & Commitment;** it includes indicators of:
  - Institutional M&E policy
  - Management's M&E commitment
  - Project's M&E Culture
  - M&E Training
  - M&E Budgetary allocation
- **PMMEP Team activity**; it includes indicators of:
  - M&E experts' quality
  - Team norm
  - Team transparency
  - Local participation
  - M&E cost
- **PMMEP Implementation**; it includes indicators of:
  - Initial Needs Assessment
  - Project Design (Log Frame)
  - M&E Planning
  - Base line Assessment
  - Mid-term M&E

- **Communication System**; it includes indicators of:
  - Stakeholder identification
  - Means of communication
  - Report - timing
  - Information credibility

CHAPTER THREE

3. METHODOLGY

In order to answer the research questions of this study, the required data related to the mechanisms and activities of monitoring & evaluation process practices of Dire Dawa DPP Rehabilitation Project would be collected, analyzed and interpreted. Project Monitoring & Evaluation activities that should be performed till the current progress status of the project are set as indicators. In addition, to illustrate the level of the problems in the project, its performance of the three success metrics (cost, scope & time) against the planned values as it exists at present would also be evaluated.

3.1. Research Design & Approach

As described earlier, the overall intent of this research is to examine the practices of Project Management Monitoring and Evaluation process (PMMEP) at Dire Dawa DPP Rehabilitation Project. It describes the state of monitoring and evaluation process at the mentioned project as it exists at present. Hence, the study adopts a descriptive research design type. Meanwhile, the variables of the study have been measured on instruments and numbered data would be analyzed through statistical procedures, so that it applies a quantitative research approach.

3.2.Data Types, Sources and Collection tools.

The performances of PMMEP success factors data has been collected in the form of numeric values for this research study. It depends on the primary data collected directly from the staffs of the power plant and some others who are linked to the project activities. The monthly progress report and contract documents of the project have been used as supporting elements to strengthen the analysis of the research.

The research study conducts a census survey through questionnaires for the primary data and document review for the secondary data.

3.3. Target Population & Survey Approach

The study targeted the technical staffs of EEP who are involved in the Project Monitoring & Evaluation process of Dire Dawa DPP Rehabilitation Project to collect the required data. The population size of the research is 30. It comprises: 24 staffs of Dire Dawa Power Plant at site and 6 project supporting personnel at the Generation Operation Central Office of EEP, Addis Ababa.

A complete enumeration of all personnel in the population is targeted. Hence, the research survey is conducted through a census inquiry. The results obtained from the analysis of the data collected from the targeted technical staffs are tolerably reliable.

Table 3: **Target Population**

Personnel	**Workplace**	**Target Population**
COO, Generation	Central Office	1
Technical Director	Central Office	2
M&E Expert, Engineer	Central Office	3
Power Plant Manager	Dire Dawa	1
M&E Expert, Engineer	Dire Dawa	3
M&E Expert, Technician	Dire Dawa	20
Total		**30**

3.4. Data Measurement Scale

Interval scale has been utilized for data measurement in this study. Each respondent is expected to rate project monitoring and evaluation activity practices on a scale of '0 –4.'

3.5. Data Analysis Tools and Presentation

The study utilizes a quantitative method for the analysis of the collected data. Descriptive analysis tools of frequency, percentage and mean are used for the analysis of project monitoring and evaluation process practices data. The results of the data analyzed would be presented through s

3.6. Organization of the study

The research paper contains five chapters in addition to the executive summary, reference and appendix parts.

Executive Summary; the executive summary part is an informative abstract which gives the reader the chance to grasp the essentials of the research paper.

Chapter One; Background: the back ground part gives introductory view to the reader and contains four sub-parts under it; problem statement, objective, significance and limitations of the study.

Chapter Two; Literature Review: the literature review part describes the literatures which are relevant to Project Management Monitoring & Evaluation Process (PMMEP). It gives an overview of what has been said about monitoring and evaluation.

Chapter Three; Methodology: the methodology part clarifies how the research work is carried out and contains five sub- parts under it: the research design & approach; data types, source and collection tools; data measurement scale; data analysis tools & presentation and this organization of the paper.

Chapter Four; Results & Discussions: the data analysis part covers the assessment of monitoring and evaluation practices at Dire Dawa DPP Rehabilitation Project based on the collected data from the respondents and supported by review of the available documents. The findings part summarizes the results of the data analyzed. It gives Monitoring and Evaluation Practice factual statements of Dire Dawa DPP Rehabilitation Project.

Chapter Five; Summary, Conclusion & Recommendations: this chapter part is the last part of the research paper. It contains four sections: Summary, conclusion, recommendation & suggestions for further studies. The summary & conclusion parts describe the inferences drawn from the findings where as the recommendation & suggestion parts illustrate the prescriptions based on conclusions.

REFFERENCES; the references allow the reader to know the sources of the research paper information.

ANNEXES; the annexes contain four sets of questionnaires data sheets which would be provided to the respondents; the contract document; the stakeholder assessment data and the indicator identification data.

CHAPTER FOUR

4. RESULTS & DISCUSSIONS

This chapter presents the results of the primary data analyzed which was collected through the use of closed ended questionnaires and discusses the findings of the survey. Descriptive statistics tools were used to analyze the collected data on the practices of project Monitoring & evaluation at Dire Dawa DPP Rehabilitation project. The results were analyzed from the point of response rate & the demographic characteristics of the respondents. The findings of the study: Monitoring & evaluation mechanisms applied; Challenges of Monitoring & evaluation Process; Level of the performance of Monitoring & evaluation Process and the appropriate Monitoring & evaluation mechanisms to curb the existing situation of the project would be presented through Frequency distribution tables and Bar charts.

4.1. Response Rate

Even if 30 respondents were contacted through email, only 27 of them were able to fill and respond correctly. Three Dire Dawa DPP project site questionnaires were not returned. Thus, the response rate formed in this study was 90%. In his paper of 'A primer on Survey Response Rate', Saldivar had indicated that 'the acceptable response rate at U.S. Census Bureau on Mail Mode of Survey is 74%' (Saldivar, 2012). On the same paper, it was described that 'the 2007 research report of Texas University result for the very-good response rate on E-mail Mode of Survey was 70%'. Accordingly, the response rate of this research was at good stand and appropriate.

Table 4.1: **Survey Response Rate**

Respondent	Number	Percentage
Correctly filled and returned	27	90%
Not returned	3	10%
Total	30	100%

4.2. Demographic Information

The demographic characteristics considered in this study were: gender, age, highest level of education, work experience and Position in the organization.

4.2.1. Gender of the respondents

The study had assessed the gender of the respondents. Twenty one Male and six female employees of EEP had participated as respondents of the survey. Thus, majority of the respondents (78%) were Male. Accordingly, there was not equal representation in gender among those who took part in the assessment of project monitoring and evaluation practices at Dire Dawa DPP Rehabilitation project.

Table 4.2: **Gender of Respondents**

Gender	Frequency	Percentage
Male	21	78%
Female	6	22%
Total	27	100%

4.2.2. Age representation of the study

Thirty percent of the respondents were below thirty years old; 63% of the respondents were b/n 30and 50and the remaining were above 50. Thus, majority of the respondents (63%) were

b/n 30and 50 years old among those who took part in the assessment of project monitoring and evaluation practices at Dire Dawa DPP Rehabilitation project.

Table 4.3: **Age of Respondents**

Gender	Frequency	Percentage
Below 30 years	8	30%
30 – 50 years	17	63%
Above 50 years	2	7%
Total	27	100%

4.2.3. Educational back grounds of the respondents

The respondents were asked to indicate their academic background. Table 4.4 shows the study findings on the respondents‟ academic background. Thus, majority of the respondents (63%) were first degree or above holders among those who took part in the assessment of project monitoring and evaluation practices at Dire Dawa DPP Rehabilitation project.

Table 4.4: **Education level of Respondents**

Gender	Frequency	Percentage
Diploma	10	37%
Degree	14	52%
Masters	3	11%
Total	27	100%

4.2.4. Work experiences of the respondents

Regarding the work experience of the respondents, 30% had experiences of below 10 years and 63% had b/n 10 – 30 years whereas the remaining 7% had above 30 years experiences. This implies that there were heterogeneous skills in Dire Dawa DPP Rehabilitation project.

Table 4.5: **Work experience**

Gender	Frequency	Percentage
Below 10 years	8	30%
10 – 30 years	17	63%
Above 30 years	2	7%
Total	27	100%

4.2.5. Respondent's Position in the organization

The respondents were asked to indicate their positions in the organization. Table 4.6 shows the study findings on the respondents' position backgrounds. Accordingly, there were a considerable percentage of M&E experts (37%) in the respondents' group.

Table 4.6: **Job position of Respondents**

Gender	Frequency	Percentage
Technical Expert	13	48%
M&E Expert	10	37%
Power Plant Manager	1	4%
Senior Management	2	7%
Top Management	1	4%
Total	27	100%

4.3. Data Analysis of the Project M&E Practices

In this section, the analyzed data for respondents' thought of the practices of monitoring and evaluation at Dire Dawa DPP Project in terms of: M&E mechanisms utilized; level of M&E system practiced and the challenges of M&E process are presented. In addition, respondents' ratings to the types of M&E mechanisms in order to curb the low performance of the project in which they think are appropriate among the lists provided are described on part four of this section.

- The data collected of the survey were analyzed as follows:
  - Frequency (f) = Number of respondents who agreed on the corresponding rating point
  - Mean = Average rating given by respondents
  - Percentage (%) = Percentage of the average value to the highest rating (4); the percentage level of M&E practices by the project

4.3.1. The kinds of monitoring & evaluation mechanisms utilized

In view of assessing the kinds of monitoring & evaluation mechanisms which have been applied at Dire Dawa DPP Rehabilitation Project, the respondents were requested to indicate their levels of agreement on several parameters of the kinds of monitoring & evaluation mechanisms practiced. The responses were ranged from never, low, moderate and high. The Frequency, Mean, and percentage were used to analyze the study data as shown in Table 4.7.

Table 4.7: Monitoring & Evaluation mechanism types utilized results

S.N	Which of the following monitoring & evaluation mechanisms have been utilized at Dire Dawa DPP Rehabilitation project?	Frequency of respondents					Average Ratings	
		Never	Low	Moderate	High	Very High	Mean	Percentage (%)
		0	1	2	3	4		
1.1	Situational (context) analysis for the needs assessment process of the project	-	3	20	4	-	2.0	50 %
1.2	Positioning matrix analysis to determine the sourcing options during the pre-selection evaluation of the contractor's technical and financial capacity	24	3	-	-	-	0.11	2.77%
1.3	Cost – Benefit	3	21	3	-	-	1	25%

	analysis (CBA) to evaluate the Contractor's Offer during the procurement process							
1.4	Baseline Assessment for the measurement of initial conditions (appropriate indicators) before the start of the project	18	6	3	-	-	0.44	11%
1.5	Process (activity) monitoring (day to day supervision) to track the progress of the project during implementation	-	2	20	5	-	2	50%
1.6	Milestone trend charts and phase evaluation to determine the project performance or to validate semi-deliveries	-	1	10	16	-	2.55	63.75%
1.7	Results (Casual impact) chain approach or the Logical framework of RBM approach application to monitoring and evaluation process	27	-	-	-	-	0	0

Table 4.7 identified that among the monitoring & evaluation mechanisms listed 'milestone trend charts and phase evaluation' was rated relatively highest (63.75%), this was followed by situational analysis and process (activity) monitoring (50%) by the respondents. In the same vein, respondents rated: 25% for Cost – Benefit analysis (CBA), 11% for Baseline Assessment and 2.77% for positioning matrix analysis. On the other hand, all respondents agreed that the project has never utilized both result chain and logical framework M&E approaches at all.

The types of project monitoring and evaluation mechanisms utilized at Dire Dawa DPP Rehabilitation Project can be summarized in to four groups as follows:

- Milestone trend charts and phase evaluation (63.75%); Situational (context) analysis (50%) and Process (activity) monitoring (50%) have been utilized moderately (satisfactorily)
- Cost – Benefit analysis (25%) utilization has been rare (low)
- Baseline assessment (11%) and Positioning matrix analysis (2.77%) have been utilized very rarely (very low) and
- The project doesn't have any kind of M&E system approach; Result chain approach or Logical framework (RBM) approach have never been utilized

4.3.2. The level of Project Monitoring & Evaluation Process performance

In view of describing the level of Project Monitoring & Evaluation Process performance at Dire Dawa DPP Rehabilitation Project, the respondents were requested to indicate their levels of agreement on several parameters of the level of Project Monitoring & Evaluation Process performance. The responses were ranged from never, low, moderate and high. The Frequency, Mean, and percentage were used to analyze the study data shown in Table 4.8.

Table 4.8: Level of the performance of Project Monitoring & evaluation Process

S.N	How does the monitoring and evaluation process functions within the project?	Frequency of respondents					Average ratings	
		Never	Low	Moderate	High	Very High	Mean	Percentage (%)
		0	1	2	3	4		
2.1	The monitoring and evaluation system supports substantive accountability to the company	2	19	6	-	-	1.15	28.7%
2.2	The monitoring and evaluation system prompts	2	8	11	6	-	1.78	44%

	corrective action							
2,3	The monitoring and evaluation system ensures informed decision	14	10	3		-	0.6	15%
2.4	The monitoring and evaluation system promotes risk management	14	11	2	-	-	0.56	13.9%
2.5	The monitoring and evaluation system has buy – in from the senior management	10	14	3	-	-	0.74	18.5%
2.6	The monitoring and evaluation system enhances organizational and individual learning	10	15	2			0.7	17.6%
2.7	The monitoring and evaluation process upholds ethical considerations	8	11	7	1	-	1	25%
2.8	The monitoring and evaluation plan is specific, measurable, attainable, reliable and timely	19	7	1	-	-	0.33	8.3%
2.9	The monitoring and evaluation process aligns with the organizational system	18	3	4	2	-	0.63	15.7%
2.10	The organization monitoring and evaluation system is integrated with other organizational systems and processes.	20	4	2	1	-	0.4	10%

Table 4.8 identified that almost all the levels of the monitoring & evaluation process performances in the project were rated low or below by the respondents. Only M&E system performance for prompting corrective action (44%) and support of organizational accountability (28.7%) were rated above low. Respondents' opinions for the level of M&E performance ratings for the other indicators were: 15% for ensuring informed decision; 13.9% for promoting risk management; 18.5% for buy – in from the senior management; 17.6% for enhancing organizational & individual learning; 25% for ethical consideration;

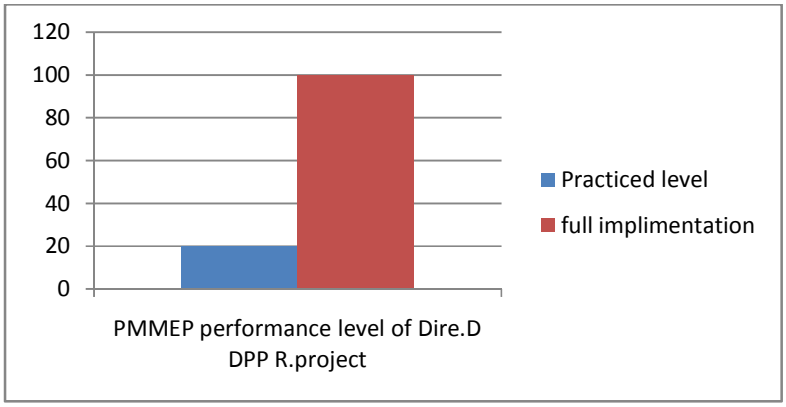
8.3% for M&E quality plan; 15.7% for alignment with the organizational system and finaly10% for an integration with other organizational systems and processes.

The performance levels of project monitoring and evaluation system at Dire Dawa DPP Rehabilitation Project can be summarized in to two groups as follows:

- The practice of M&E system prompting to corrective actions (44%) and accountability to EEP (28.7%) above low level
- The practice level of all the remaining M&E objectives is too low (below 25%)

Since all of the M&E processes must be performed by the project, the overall performance rating of Project monitoring and evaluation system of Dire Dawa DPP can be calculated.

- Average rating = the summation of the mean values /10 = 0.79
  - ✓ Hence, the performance level of project monitoring & evaluation process at Dire Dawa DPP Rehabilitation Project is 19.7 %



Bar chart of Project M&E system performance level of the project

4.3.3. The challenges of Project Monitoring & Evaluation Process (PMMEP) implementation

In view of examining the challenges of Project Monitoring & Evaluation Process (PMMEP) implementation at Dire Dawa DPP Rehabilitation Project, the respondents were requested to indicate their levels of agreement on several parameters of the kinds of monitoring & evaluation challenges which have been observed. The responses were ranged from never, low, moderate, high and very high. The Frequency, Mean, and percentage were used to analyze the study data as shown in Table 4.9.

Table 4.9: The challenges of Project Monitoring & evaluation Process observed

S.N	Which of the following project monitoring & evaluation challenges affect the process at Dire Dawa DPP Rehabilitation Project?	Frequency of respondents					Average ratings	
		Never	Low	Moderate	High	Very High	Mean	Percentage (%)
		0	1	2	3	4		
3.1	The Monitoring & Evaluation Policy of the organization lacks clarity	-	2	4	12	8	2.89	72%
3.2	The skills and abilities of the Monitoring & Evaluation Team are low	-	6	17	4	-	1.92	48%
3.3	The Monitoring & Evaluation approaches & tools of the project are not appropriate	-	6	7	10	6	2.74	68.5%
3.4	The allocated Monitoring & Evaluation Budget is not enough	6	15	6	-	-	1	25%
3.5	There is a communication problem with the Stakeholders/contractor		1	7	11	8	2.96	74%
3.6	Existence of corruption in the	8	19	-	-	-	0.7	17.6%

	monitoring and evaluation process							
3.7	The attitude and commitment of employees towards monitoring & evaluation is not appropriate	-	3	19	5	-	2.1	52%
3.8	There is a political interference from the Government and/or the management	-	1	4	12	10	3.15	78.7%

Table 4.9 illustrated that among the identified monitoring & evaluation challenges of the project, political interference was rated highest (78.7%), this was followed by communication problem (74%); lack in organizational M&E policy (72%) clarity; inappropriateness of M&E approaches and tools(68.5%) and attitude & commitment by employees (52%) by the respondents.

In the same vein, respondents rated for the other challenges: 48% for M&E team skill, 25% for M&E budgeting and 17.6% for existence of corruption in M&E process.

Among the listed challenges which are most frequently observed in many projects, results of the study revealed that 'political interference from the Government and/or the management' is the highest. The M&E process challenges that impacted the project at Dire Dawa DPP can be summarized as follows:

- political interference (78.7%); communication problem (74%); lack of firm's policy clarity (72%) and Inappropriateness of M&E tools (68.5%) impacted the M&E process at high rate
- Attitude and commitment of employees (52%) and skills and abilities of the M&E team (48%) impacted the M&E process at average rate

- M&E budget allocated (25%) and Existence of corruption (17.6%)%) impacted the M&E process at low rate

4.3.4. Appropriate Monitoring & Evaluation mechanisms that could curb the current project performance problems

In view of suggesting the appropriate Monitoring & Evaluation mechanisms that could curb the current performance problems of Dire Dawa DPP Rehabilitation Project, the respondents were requested to suggest their levels of agreement on several parameters of the kinds of monitoring & evaluation mechanisms which should be applied. The responses were ranged from never, low, moderate, high and very high. The Frequency, Mean, and percentage were used to analyze the study data as shown in Table 4.10.

Table 4.10: Appropriate Monitoring & evaluation mechanisms to curb the project performance situation

S.N	Which of the following monitoring and evaluation mechanisms would you suggest to curb the excising poor performance problems at Dire Dawa DPP Rehabilitation Project?	Frequency of respondents					Average ratings	
		Never	Low	Moderate	High	Very High	Mean	Percentage (%)
		0	1	2	3	4		
4.1	An assessment for contractor's technical and financial capability	-	9	12	6	-	1.89	47%
4.2	The sunk cost approach to terminate the project at midterm phase	1	5	8	9	4	2.37	59%
4.3	Meta evaluation to assess the monitoring and evaluation process	-	3	13	8	3	2.41	60%

4.4	Joint evaluation in collaboration with the contractor to build consensus	-	13	10	4	-	1.67	42%
4.5	External evaluation to enhance independency and utilization of technical expertise	6	12	5	4	-	1.26	31%
4.6	Root causes analysis as part of intervention management for distressed projects to determine the causes for the project performance	-	-	3	10	14	3.41	85%

It can be seen from Table 4.10 that among the monitoring and evaluation mechanisms listed to curb the existing project performance problems, respondents rated root causes analysis at the highest (85%), this was followed by meta evaluation (60%); sunk cost approach (59%); assessment on contractor's capability (47%); joint evaluation(42%) and external evaluation (31%).

Among the selected six monitoring and evaluation process mechanisms which could cure a distressed project, the results of the study show that Root causes analysis (85%) is the highest. The M&E process challenges that impacted the project at Dire Dawa DPP can be summarized as follows:

- Root causes analysis (85%) is the best mechanism agreed by most responders
- Meta evaluation (60%) and the sunk cost approach (59%) have been agreed as above moderate tools
- Contractor's capability assessment (47%); Joint evaluation (42%) and External evaluation (31%) are agreed as below moderate tools

4.4. Discussions

This study has focused on the assessment of project Monitoring and evaluation practices at Dire Dawa DPP Rehabilitation Project. The objectives of implementing monitoring and evaluation process in a project management are: to support accountability; to enhance risk management, to inform decision makers the progress and what must be done and to prompt organizational learning (Hughes & Newenhuis, 2005).

Dire Dawa DPP rehabilitation Project has already been distressed. Preliminary survey results through discussions with EEP staffs and review of the project contract document have indicated the sickness of the project. The project was awarded to Metals Engineering & Technology Company (METEC, government owned) directly without any competition by the direction of EEP's Board of Directors. The project was launched in April, 2012 with a total price of birr 55,038,458.00. The current status of the project based on the three metrics (cost, time & quality) is:

- **Schedule slippage**; the original project duration was three months according to the contract document (schedule of work, contract).The contract was signed in April, 2012. However, the project has not been completed till this day.
- **Scope creep**; the original scope of the project work has been changed by the contractor almost by three-fourth.
- **Cost overrun**; the project has incurred additional direct costs to EEP due to the schedule slippage. If the opportunity cost from the intended power production from the plant were calculated, the cost could increase.

In similar manner (in 2014), EEP's Board of directors had also awarded 'Melkasedi Bioe-mass Fired Thermal Power Plant Project contract' with direct negotiation to the same company (METEC) with a price of 3.8 billion birr. The project duration was for two years. However, after an extended time of one year duration (July, 2017 report), the total performance of the project is nearly 28%.

Unsurprisingly, the findings of this study emphasized that the practice of monitoring and evaluation system at the underlined project is at low level. This section therefore focuses on the detailed discussions of the major findings of the study which also entails comparing the study findings to the literature in order to come up with a comprehensive conclusion.

4.4.1 Utilization of project monitoring & evaluation mechanisms

There are many types of mechanisms and tools identified by the concerned previous professionals so far which could be utilized in the management of a project M&E process. The selection of each mechanism type differs from project to project. Any project may choose the suitable tool based on its landscape constraints and the stage of the project activity within the project management life cycle (Patrick Gudda, 2011). The study has selected seven types of M&E mechanisms for the study that must be utilized at the Dire Dawa project to measure the utilization level of the appropriate M&E mechanism. The type of mechanism utilized matters in the practice of effective M&E system (Wachaiyu, 2016). The selected mechanisms for this study were based on:

- The project landscape constraint needs; since the project was outsourced to a sub-contractor. And
- The requirement of the tool at each project phase.

As Wachaiyu (2016) found out from her study, the utilization level of project M&E tool and mechanism influences its success. Hence, measuring the utilization level of the instruments is quite important in order to understand the M&E process practices of the project. The findings of the study found out that the utilization level of most M&E mechanisms was low. The majority of the respondents agreed that only three of the seven listed M&E mechanisms were utilized above or at a satisfactory level: milestone trend charts and phase evaluation, Situational (context) analysis and Process (activity) monitoring.

Even if it is not entertaining performance (none of the tools were utilized at high rate), the result found on the utilization of the three M&E mechanisms (which have positive ratings) seems reasonable. Since,

- Unless the senior management was satisfied on the situational analysis made, it wouldn't approve the project proposal at the project management initiation process stage
- Unless milestone checks (evaluation) were made, the interim payment can't be released by the finance department
- Process monitoring (checking the compliance of contractor's work against the agreed plan) is the major job of EEP staffs at project site.

Hence, the findings of the study on the other four M&E mechanisms (very low practice level) would imply:

- The technical and financial capacity of the contractor wasn't evaluated prior to inviting the contractor to bid (ITB); positioning matrix analysis was rated at 2.77%. The researcher also noticed from the unrecorded respondent's

opinion during site visit, many of EEP staffs agreed that 'contractor's capability difficulty as the main source of project low performance.'

- Contractor's offer evaluation wasn't in accordance to the firm's standard; Cost – Benefit analysis rating is at 25.
- The problem level of the power plant was not assessed in depth (diagnosis); baseline assessment rating is11%.
- EEP doesn't have any kind of standard M&E system methodology; Result chain approach or Logical framework (RBM) approach have never been utilized at the project.

4.4.2. The practice level of Project Monitoring & Evaluation system

The practice of project monitoring and evaluation system is instrumental for the general accomplishment of a project objective, if and only if it can meet its targets set at the early stage of the project; if it it is performed with quality and homogeneous with other systems of the firm (Hobson, Mayne & Hamilton, 2014). The basic objectives of implementing M&E system are: prompting accountability to the sponsors; supporting risk management; providing corrective actions; informing decision making and upholds organizational learning (Hughes & Newenhuis, 2005). The study had measured the practice level of M&E at Dire Dawa DPP Project based on ten selected factors. The choice of the indicators of the research is based on:

- The purpose of M&E implementation (described earlier) and
- Elements of standard M&E process; support from top management, ethical requirements, M&E planning quality and its integration with other firm systems.

The findings of the study ruled out that the overall practice level of M&E system at the underlined project is low; 19.7%. The majority of the respondents had rated under the satisfactory level for all of the ten listed M&E system factors. The finding of M&E practice level supports the utilization level findings of M&E tools at the underlined project.

Effective Project Monitoring and Evaluation system questions the project's progress in terms of it's: efficiency, effectiveness, relevance, impact and sustainability (Patrick Gudda, 2011). Hence, the findings of the study on the practice level of M&E system (very low practice level) at Dire Dawa DPP R. project would imply:

- **Efficiency**; the project couldn't response to the efficiency requirements of:
  - Were stocks of items available on time with the right quality & quantities?
  - Were activities implemented within budget and on schedule?
  - Were outputs delivers economically?
- **Effectiveness**; the project couldn't response to the effectiveness requirements of:
  - Were the project's objectives achieved?
  - Did the project output lead to EEP's intent?
- **Relevance**; the project couldn't response to the relevancy requirement of:
  - Were project's objectives consistent with EEP's needs and Government's goal?
- **Impact**; the project couldn't response to the impact requirements of:
  - What changes did the project bring about?
  - Were there unplanned or unintended changes?
- **Sustainability**; the project can't response to the sustainability requirement of:

- Will the project deliveries be maintained during operational period after the project ends?

4.4.3 The challenges of Project Monitoring & Evaluation Process (PMMEP) implementation

There are some challenges found out by previous studies during the implementation of Project Monitoring and Evaluation system. The source of the challenges can be internal (project based) or external (firm or government). The Project M&E process emerged from the project itself are: skills and abilities of the M&E team; corruption; attitude and commitment of employees and M&E mechanisms/tools ineffectiveness (R M Mthethwa & R N Jilli, 2016). Previous researchers had also indicated external challenges like: political interference; communication problem; lack of firm's policy clarity and lack of firm's policy clarity (Acevedo &others, 2010). The external factors have the ability of weakening the M&E team capability strength (Wachaiyu, 2016).

The main objective of the third objective (investigating the challenges) is to understand the causes for the low practices of project M&E system & utilization of the tools/mechanisms. That means, the findings of the third objective of the study illustrates the root causes for the low level practices found on objective one & two.

The research study found out that most of the main causes for the ineffectiveness of Project M&E process at Dire Dawa DPP Rehabilitation are the external factors; political interference (78.7%); communication problem (74%); lack of firm's policy clarity (72%). The only internal factor that impacted the M&E system strength of the project at high rate is: Inappropriateness of M&E tools (68.5). Most of the internal factors impacted the system either at moderate or low levels; attitude and commitment of employees (52%); skills and

abilities of the M&E team (48%); M&E budget allocated (25%) and existence of corruption (17.6%)%).

Hence, the impacts of these implementation factors on the practices of project M&E process at the Dire Dawa DPP R. project are:

- **Political interference** (mostly from the government); since the government desired to award the contract to its own company:
  - The project couldn't evaluate the contractor's capacity at preliminary stage with positioning matrix analysis;
  - The project is reluctant to evaluate contractor's offer with CBA
  - The M&E team has been weakened by the government's direct involvement, hence, it has been difficult to practice the necessary M&E mechanisms and system

It should be noticed here that political interference is believed to be the biggest impact similarly at Melkasedi Biomass Power Plant Project poor performance

- **Communication problem**; since the project working environment is impacted by a communication gab b/n the stakeholders (the contractor has no interest, because of its political power), the project couldn't enforce corrections, ask the contractor either to terminate or reschedule the original schedule and to follow global quality standards.
- **Company policy clarity**; since EEP doesn't have a comprehensive M&E methodology & guidance at firm level (as a project based company), the

project couldn't adopt any of the M&E approaches; as a result the M&E system is inefficient.

- **M&E approaches & tools**; since the project hasn't adopted an approach and the tools were not utilized properly, the strength of M&E is weak.
- **M&E team strength**; strength of the M&E team has been weakened by other factors on an average level like; team skill and employee's commitment & attitude towards M&E system, hence, the output of the system isn't satisfactory.

Surprisingly, EEP had formed a Monitoring &Evaluation department (under the Portfolio office) before three years. However, the department hasn't been working its duties till this day. It simply disseminates performance reports through collecting from each project without cross checking.

4.4.4 The Appropriate Monitoring & Evaluation mechanisms that could curb the current project performance problems

Projects could be distressed due to a number of reasons: unclear requirements, lack of resources, poor planning or unidentified risks. Previous scholars have identified intervention mechanisms to rescue the distressed mechanisms. An intervention management system with a four step mechanism is recommended by most researchers for recovery (Robert K. Wysocki, 2014). The first step of the intervention process is to analyze the situation, a project M&E tool. This study has identified six mechanisms that could support the curing process: assessment on contractor's capacity, sunk – cost analysis, Meta evaluation, joint evaluation, external evaluation and root – causes analysis.

The research study found out that 'Root causes analysis' was selected by most of the respondents by a large margin (85%). Meta evaluation (60%) and the sunk cost approach (59%) have also been agreed as above moderate tools. However, Contractor's capability assessment (47%); Joint evaluation (42%) and External evaluation (31%) couldn't be the favorable tools for the respondents.

The interpretations of the selected recovery M&E tools/mechanisms by this study are:

- **Root causes Analysis**; the application of root causes analysis by projects in such crisis period is practical, since it helps intervention process: to understand the graveness of the current situation and contributions of the counterfactuals to the situation; evaluates different curing options and proposes best solutions.
- **Meta Evaluation;** the application of meta evaluation for Dire Dawa DPP R. Project is also instrumental, since it proposes corrections on the current difficulties of the M&E system practices by assessing the evaluation process itself. The major objectives of meta evaluation are: inventory on the current system; design future M&E system and how well M&E system can be integrated with other organization systems.
- **Sunk – Cost Approach;** is assess the extent to which the organization is willing to invest the additional time and cost required to complete the project. It seems that most respondents are fade up by the contractor's relevancy and need to terminate the project; since this approach is appropriate, if the firm thinks that the spent investment have been sunk into the effort and most likely it cannot get them back.

CHAPTER FIVE

5. SUMMARY, CONCLUSION & RECOMENDATIONS

The last chapter of the research paper is presented in four sections: Summary, Conclusion, Recommendation and Suggestions for Further Studies. The first section summarizes the results of the study based on the facts understood in the research findings and previous discussions. Next to the summary is conclusion, to conclude the results of the research study. As the last sections of the paper, the recommendation & suggestions for further studies parts suggest some opinions to the project owners and researchers that shall be done in the future.

5.1. Summary

This section is a straight forward narrative of the study results to pin point the facts that the research discovered on the assessment of project monitoring and evaluation practices at Dire Dawa DPP Rehabilitation Project. In other words, the interpretations of the tables and numbers in the above section will be presented here.

The results of the data analyzed as the respondents perceive for each of the particular objectives of the study at Dire Dawa DPP Rehabilitation Project can be summarized as follows:

- The project didn't follow any kind of M&E system approach; Result chain approach or Logical framework (RBM) approach have never been utilized
- The project hadn't almost utilized a positioning matrix assessment M&E mechanism. Hence, EEP couldn't confirm METEC's financial & technical capability before entering to contract negotiation step.
- Baseline assessments of the project were carried out very rarely before start of project implementation. Hence, the project didn't verified performance indicators for measuring project performance objectively at the beginning.

- Cost – Benefit analysis utilization was rare (low); the project office signed the agreement without evaluating METEC's offer.
- The overall level of monitoring and evaluation system practices of the project is low; that means, EEP isn't in the position to understand whether the project is successful or not.
- There exists a political interference from the government at the highest in the project management of Dire Dawa project which handicapped the controlling position of EEP.
- As the main stakeholders of the project, the relationship (communication) between EEP and METEC was not clearly defined. It is neither as a partner nor as a client-contractor oriented; has the project environment been simply dictated by the contractor. Hence, EEP (as an owner) is unable to enforce the contractor to accomplish its obligations in accordance to the contract terms.
- EEP, as a project oriented company doesn't have a clear M&E system policy and approach in which all project office would follow accordingly.

5.2. Conclusion

The essence of this paper is to assess the practice of Project Monitoring and Evaluation process at Dire Dawa DPP rehabilitation Project. The study has conducted a census survey through questioners to elaborate how Ethiopian Electric Power has been carrying out the process at the underlined project. The data was collected from 27 respondents working at project site and central office of EEP (Generation operation office) which have been linked with the project activity. Currently, EEP is carrying out more than 50 electrical power transmission & generation projects.

As a project oriented organization, EEP had supposed to have a well defined and functional monitoring & evaluation system. Especially when you noticed that the company's involvement in the project activities is as a client, you may think that the firm could implement an outstanding M&E approach and tools; since most of its project management process job is validating the deliveries and assuring the quality of processes. However, the result of this study indicated the opposite. PMMEP could be best as an 'early warning tool' in preventing the project before deemed to distress. Ignoring Project Monitoring and Evaluation activities has a large attribute for the existing low project performance ratings of organizations in the globe.

The research had identified four particular objectives in order to increase the depth of the assessment. Based on this research study findings and the above discussions through the literatures reviewed, conclusions have been made.

Dire Dawa DPP Rehabilitation Project has got a poor functionality in M&E system, which is rated at 19.7%. The project didn't utilize considerably the main M&E mechanisms which were indeed relevant for its good performance. Firstly, the capacity of the contractor was not checked prior to contract agreement engagement. Secondly, the scope of the project was not detailed at the level it required and baseline assessment was not performed. At last but not least, EEP hadn't followed any kind of M&E approaches known. Since the project didn't own a systematic M&E tool from the mother company, its level of M&E practice was too low. Hence, it couldn't address the efficiency, effectiveness, relevance, impact and sustainability of its activity as it needed to be.

The main reasons for Dire Dawa DPP project low practices of M&E activities were: lack of the establishment of a clear communication management between the contractor & the client; avoidance of companywide M&E policy and approach by EEP and weak strength of project M&E team. At the same time, the project has to consider M&E tools of root cause analysis, meta-evaluation and/or sunk-cost analysis in order to curb its current too-low performances.

5.3. Recommendations

The fourth objective of the research study was to identify the monitoring and evaluation mechanisms that could curb the existing performance problem at Dire Dawa DPP Rehabilitation Project. The aim of the survey isn't to discourage the bilateral relationships between the two companies (METEC & EEP). It is rather to point out the weaknesses of the project regarding the monitoring and evaluation process practices and finds solutions which can be utilized before it is too late. The results of the study can be utilized as learning mechanisms for the three concerned parties (project, firm and government).

From the findings and the conclusion, the study recommends the following points to the three main beneficiaries of Dire Dawa DPP Rehabilitation Project:

- **Project level**; as a frontier responsible body, the project office should order the contractor to stop the current activities and perform an intervention management through a 'Root causes Analysis' that includes:
    - Analyze the current situation (where are we?)
    - Revise the desired goals (how can we get there?)
    - Evaluate options (where can we go?)
    - Generate revised plan (how will we get there?)

- **Ethiopian Electric Power (EEP)**; as the owner of the project, EEP should carry out a 'Meta Evaluation' on the current monitoring & evaluation process practices of its projects and support projects with:
    - Select a suitable M&E approach as per the grounding rules which can be implemented by the project
    - Establish and provide firm's M&E policy, guidance and templates
    - Protect the M&E team's mandate from external factors
    - Perform 'positioning matrix' especially over government owned contractors; even though it is METEC.

- **Ethiopian Government**; as the ultimate user of the project products, the government should stop the interferences observed in the project monitoring & evaluation process maters between its business firms. The status cue proceedings of the government on EEP & other project owners like: sugar industries are delivering 'loose-loose' results both to the project owner companies and METEC. That is: METEC hasn't been increasing its competency over international contractors and the business firms are not getting their intended products from METEC on time, on the right quality and at fair price.

5.4. Suggestions for Further Study

It is also the concern of this thesis to value the inclusion of 'Evaluation Process' in the existing standard of Project Management Monitoring & Controlling Process group in order to curb the current challenges of 'the high costs of low performances' in the Project Management Field. Hence, the research paper recommends for further studies of the following two substances of the PMMEP by the concerned researchers in the field:

- **Evaluative Thinking (ET)**; which promotes the values of 'thriving for change, individual creativity, inclusiveness, Bottom-Up feeding, challenging the worthiness of existing assumptions and activities in project management.
- **Redefining Success**; measuring the project success through the evaluation metrics: efficiency, effectiveness, relevancy, impact and sustainability.

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ANNEXES

1. QUESTIONNAIRE

Addis Ababa University

School of Commerce

Department of Project Management

Academic Research Questionnaire

Dear Respondent,

I am a postgraduate student pursuing a Masters Degree in Project Management at Addis Ababa University. As part of this course, I am carrying out a research on Project Monitoring and Evaluation Practices. This questionnaire is designed to collect data on "Project Monitoring and Evaluation Practices of Dire Dawa DPP Rehabilitation Project." You have been selected to take part in this study as a respondent. The data collected from this survey is used only for an academic purpose. Thus, the study upholds the principles of 'do no harm'; the data will be treated confidentially. Honesty is expected at most from the responders.

To contact the researcher, use the following addresses:

Phone: +251926687949

Email: muletse@gmail.com

Section A: General Information

Instruction: Please tick (√) in the appropriate answer-brackets to each of the questions in this section.

1. What is your Gender?

   Male ( ) Female ( )

2. What is your Age bracket?

   30yrs or below ( ) 30-50yrs ( ) 51yrs or above ( )

3. What is your Level of education?

   Certificate ( ) Diploma ( ) Degree ( ) Masters ( ) PHD ( )

4. What is your Work experience bracket?

   Less than 10 years ( ) 10-30 years ( ) Over 30 years ( )

5. What is your Position in the organization?

   Top Management ( ) Project Team Leader ( ) M&E Expert ( )

   Senior Management ( ) Power Plant Manager ( ) Technical Expert ( )

Section B: Assessment of Project Monitoring and Evaluation Practices at Dire Dawa DPP Rehabilitation Project

Instruction: Please thick (√) all as appropriate using a scale of '0-4' to each of the questions in this section.

1. Monitoring & evaluation mechanism types

S.N	Which of the following monitoring & evaluation mechanisms are utilized at Dire Dawa DPP Rehabilitation project?	Never	Low	Moderate	High	Very High
		0	1	2	3	4
1.1	Situational (context) analysis for the needs assessment process of the project					
1.2	Positioning matrix analysis to determine the sourcing options during the pre-selection evaluation of the contractor's technical and financial capacity					
1.3	Cost – Benefit analysis (CBA) to evaluate the Contractor's Offer during the procurement process					
1.4	Baseline Assessment for the measurement of initial conditions (appropriate indicators) before the start of the project					
1.5	Process (activity) monitoring (day to day supervision) to track the progress of the project during implementation					
1.6	Milestone trend charts and phase evaluation to determine the project performance or to validate semi-deliveries					
1.7	Results (Casual impact) chain approach or the Logical framework of RBM approach application to monitoring and evaluation process					

2. Level of the performance of Project Monitoring & evaluation Process

S.N	How does the monitoring and evaluation process functions within the project?	Never	Low	Moderate	High	Very High
		0	1	2	3	4
2.1	The monitoring and evaluation system supports substantive accountability to the company					
2.2	The monitoring and evaluation system prompts corrective action					
2,3	The monitoring and evaluation system ensures informed decision					
2.4	The monitoring and evaluation system promotes risk management					
2.5	The monitoring and evaluation system has buy – in from the senior management					
2.6	The monitoring and evaluation system enhances organizational and individual learning					
2.7	The monitoring and evaluation process upholds ethical considerations					
2.8	The monitoring and evaluation plan is specific, measurable, attainable, reliable and timely					
2.9	The monitoring and evaluation process aligns with the organizational system					
2.10	The organization monitoring and evaluation system is integrated with other organizational systems and processes.					

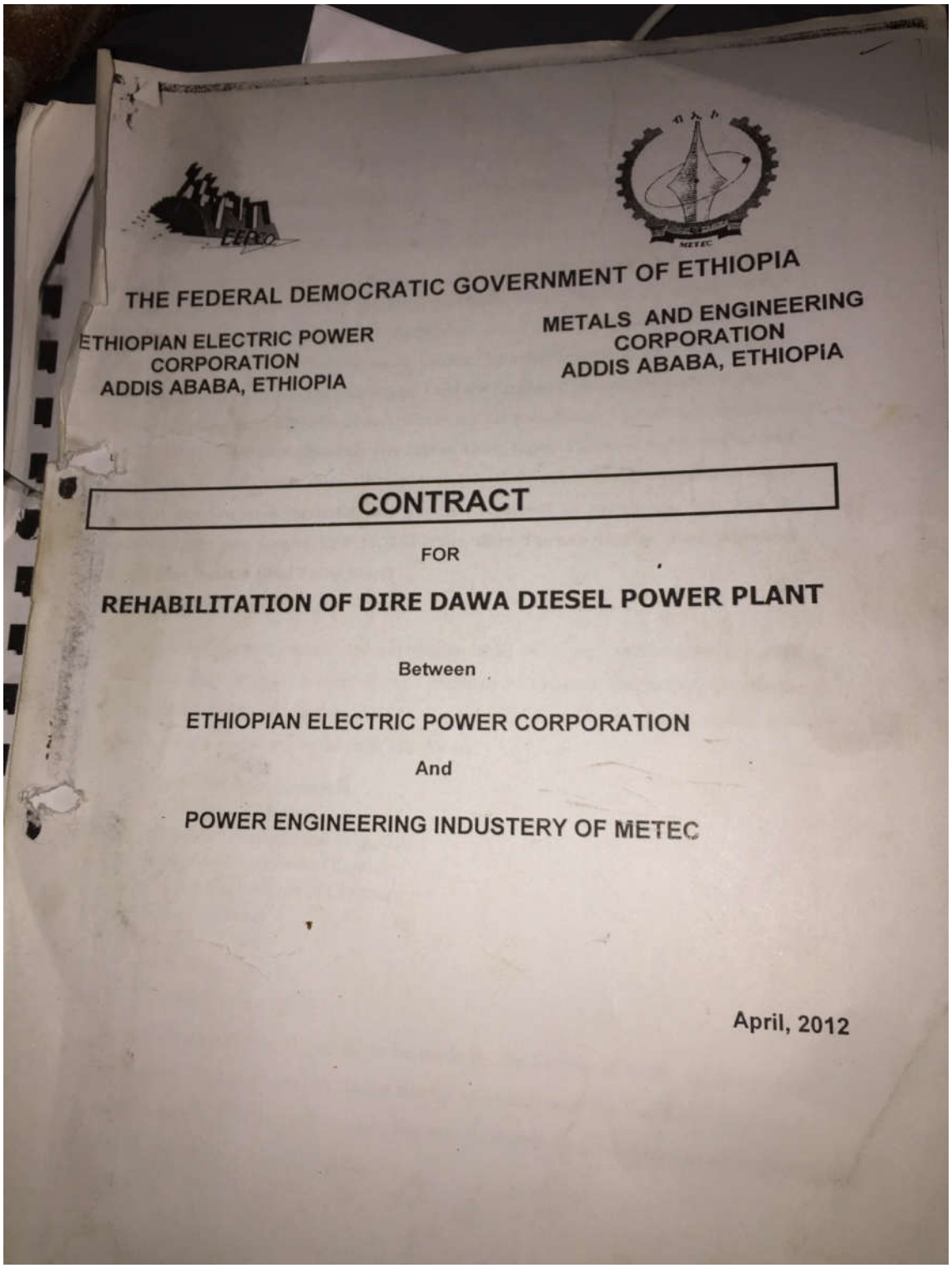
3. Challenges of Project Monitoring & evaluation Process

S.N	Which of the following project monitoring & evaluation challenges affect the process at Dire Dawa DPP Rehabilitation Project?	Never	Low	Moderate	High	Very High
		0	1	2	3	4
3.1	The Monitoring & Evaluation Policy of the organization lacks clarity					
3.2	The skills and abilities of the Monitoring & Evaluation Team are low					
3.3	The Monitoring & Evaluation approaches & tools of the project are not appropriate					
3.4	The allocated Monitoring & Evaluation Budget is not enough					
3.5	There is a communication problem with the Stakeholders/contractor					
3.6	Existence of corruption in the monitoring and evaluation process					
3.7	The attitude and commitment of employees towards monitoring & evaluation is not appropriate					
3.8	There is a political interference from the Government and/or the management					

4. Appropriate Monitoring & evaluation mechanisms to curb the project performance situation

S.N	Which of the following monitoring and evaluation mechanisms would you suggest to curb the excising poor performance problems at Dire Dawa DPP Rehabilitation Project?	Never	Low	Moderate	High	Very High
		0	1	2	3	4
4.1	An assessment for contractor's technical and financial capability					
4.2	The sunk cost approach to terminate the project at midterm phase					
4.3	Meta evaluation to assess the monitoring and evaluation process					
4.4	Joint evaluation in collaboration with the contractor to build consensus					
4.5	External evaluation to enhance independency and utilization of technical expertise					
4.6	Root causes analysis as part of intervention management for distressed projects to determine the causes for the project performance					

2. PARTS OF CONTRUCT TERMS



THE FEDERAL DEMOCRATIC GOVERNMENT OF ETHIOPIA

ETHIOPIAN ELECTRIC POWER CORPORATION
ADDIS ABABA, ETHIOPIA

METALS AND ENGINEERING CORPORATION
ADDIS ABABA, ETHIOPIA

CONTRACT

FOR

REHABILITATION OF DIRE DAWA DIESEL POWER PLANT

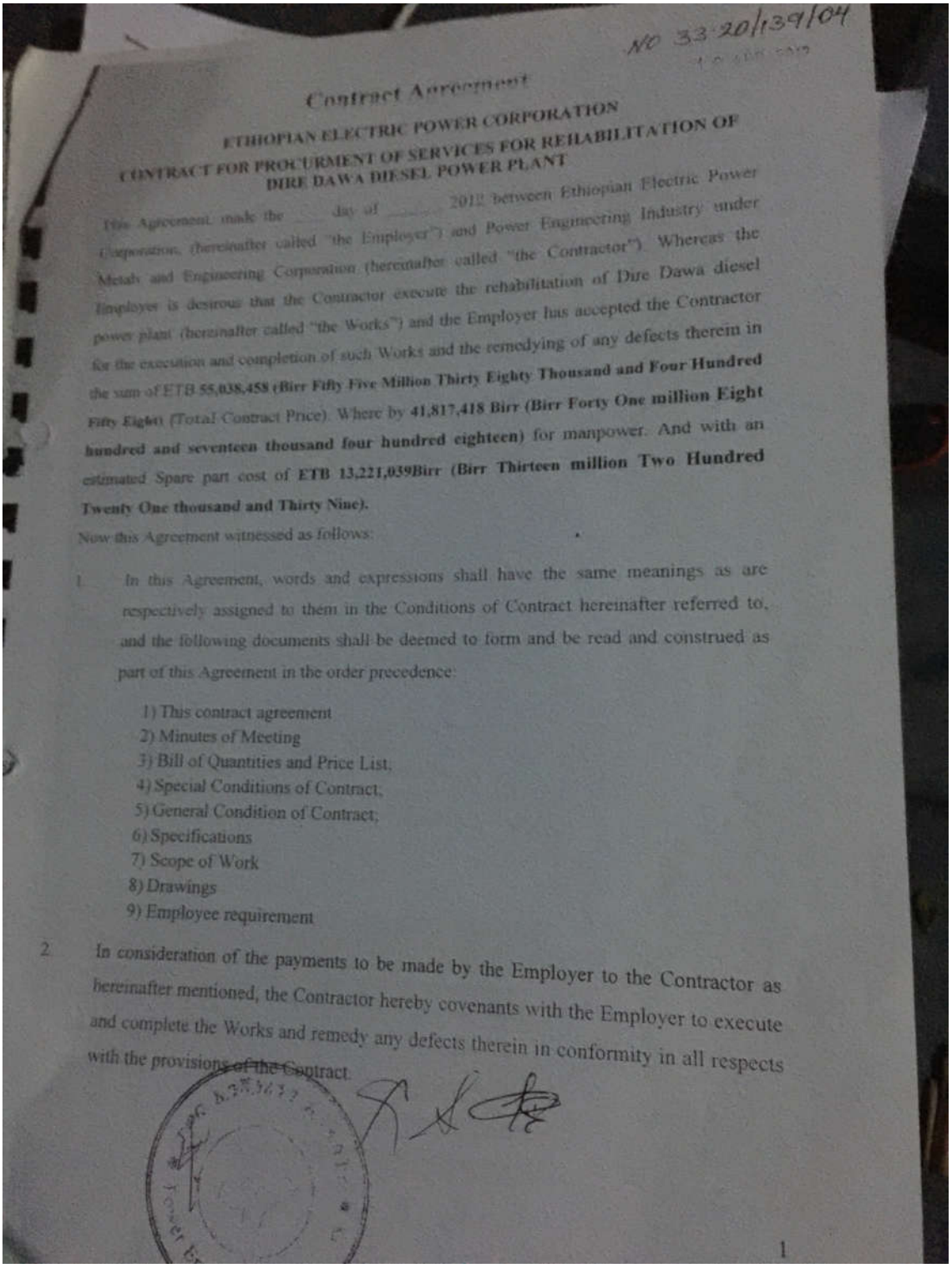
Between

ETHIOPIAN ELECTRIC POWER CORPORATION

And

POWER ENGINEERING INDUSTERY OF METEC

April, 2012



NO 33-20/139/04

Contract Agreement

ETHIOPIAN ELECTRIC POWER CORPORATION

CONTRACT FOR PROCURMENT OF SERVICES FOR REHABILITATION OF DIRE DAWA DIESEL POWER PLANT

This Agreement, made the ____ day of _____ 2012 between Ethiopian Electric Power Corporation, (hereinafter called "the Employer") and Power Engineering Industry under Metals and Engineering Corporation (hereinafter called "the Contractor"). Whereas the Employer is desirous that the Contractor execute the rehabilitation of Dire Dawa diesel power plant (hereinafter called "the Works") and the Employer has accepted the Contractor for the execution and completion of such Works and the remedying of any defects therein in the sum of ETB **55,038,458 (Birr Fifty Five Million Thirty Eighty Thousand and Four Hundred Fifty Eight)** (Total Contract Price). Where by **41,817,418 Birr (Birr Forty One million Eight hundred and seventeen thousand four hundred eighteen)** for manpower. And with an estimated Spare part cost of **ETB 13,221,039Birr (Birr Thirteen million Two Hundred Twenty One thousand and Thirty Nine).**

Now this Agreement witnessed as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and the following documents shall be deemed to form and be read and construed as part of this Agreement in the order precedence:

   1) This contract agreement
   2) Minutes of Meeting
   3) Bill of Quantities and Price List;
   4) Special Conditions of Contract;
   5) General Condition of Contract;
   6) Specifications
   7) Scope of Work
   8) Drawings
   9) Employee requirement

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

1

c. 60% of the contract price will be paid in progress payments. Upon taking over of part

EEPCo shall effect progressive payments within 20 days upon presentation of invoice describing the accomplished milestone including expenditure supporting documents.

Regarding the detail breakdown of cost EEPCo raised a question to obtain cost breakdown in previous submitted formats for the progressive payments.
METEC replies that such breakdowns will not be produced so far such experience is not adopted by METEC.
Hence, this issue will be settled by the higher managements of the two corporations in the future.

d. 7.5% of the contract price will be paid with the provisional acceptance and the remaining 2.5% up on issuance of Final taking over certificate by the Contract Administrator.

e. The spare part shall be paid as per the actual invoice with its related cost.

4. Final Reports

Final reports shall be prepared by Power Engineering Industry and submitted to the Contract Administrator (EEPCo) in four copies. The report shall be done on

- Generator set 1
- Generator set 2
- Generator set 3
- Generator set 4
- Auxiliary system
- Tests & commissioning

Reporting shall continue until Power Engineering Industry of METEC has completed all works which is known to be outstanding at the completion date stated until Taking-Over Certificate for the Works.

5. Test and Commissioning

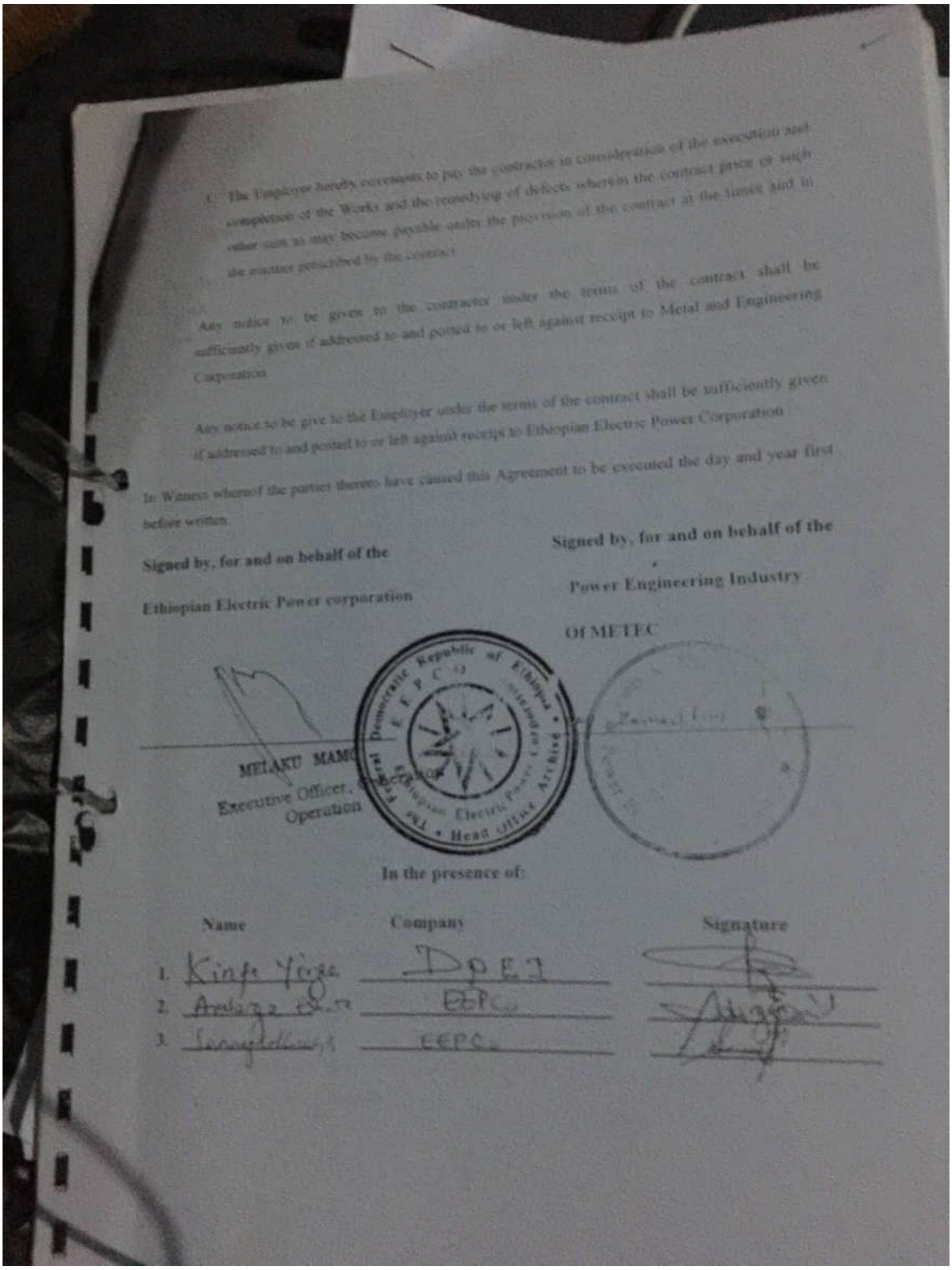
On the rehabilitation work routine tests shall be carried out in the presence of representatives of EEPCo. Routine tests will be recorded for final report. Before conducting the commissioning tests, Power Engineering Industry of METEC shall prepare the commissioning test procedures jointly with EEPCo representatives and inform in writing EEPCo to attend the tests. Fuel and lubricant supply for test and commissioning shall be done by EEPCo.

6. Schedule of Work

The agreed schedule for the remaining works is as shown below;

Unit	Month		
	1	2	3
Engine 1			
Engine 2			
Engine 3			
Engine 4			
Auxiliary system			
Test and commissioning			

3



4. The Employer hereby covenants to pay the contractor in consideration of the execution and completion of the Works and the remedying of defects wherein the contract price or such other sum as may become payable under the provision of the contract at the times and in the manner prescribed by the contract

Any notice to be given to the contractor under the terms of the contract shall be sufficiently given if addressed to and posted to or left against receipt to Metal and Engineering Corporation

Any notice to be give to the Employer under the terms of the contract shall be sufficiently given if addressed to and posted to or left against receipt to Ethiopian Electric Power Corporation

In Witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written

Signed by, for and on behalf of the Ethiopian Electric Power corporation

MELAKU MAMO
Executive Officer, Generation Operation

Signed by, for and on behalf of the Power Engineering Industry Of METEC

In the presence of:

Name	Company	Signature
1. Kinfe Yirga	DPEI	
2. Andarge	EEPCo	
3. [illegible]	EEPCo	