

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore**CONSTRUCTION OF 132 kV GRID STATION AND
TRANSMISSION LINE DHA PHASE-VIII LAHORE****NAME:** Mr. M. Muhtasham Khalid**ENROLLMENT:** 03-298162-017**NAME:** Mr. Ahsan Nawaz**ENROLLMENT:** 03-298162-049**SEMISTER:** SPRING 2017, MSPM-II**PROGRAM:** MS (PROJECT MANAGEMENT)**BAHRIA UNIVERSITY LAHORE CAMPUS****SUBMITTED TO:** Mr. Ahsan Maqbool**SUBMISSION DATE:** 20 JUNE 2017

Preface:

It is certified that MS project report Titled “132 KV GRID STATION & TRANSMISSION LINE DHA PHASE-8” by Student named **Mr. Ahsan Nawaz & Mr. Muhammad Muhtasham Khalid** has been examined by us. We undertake the followings:

- a. The project report has significant new work / knowledge as is already published or is pending for publication elsewhere. No equation, diagram, table, paragraph or section has been copied literally from previous work, unless it is kept under quotation marks and is duly referred to.
- b. The work presented is the origin of the authors and the work of own (i.e. no plagiarism). The words of any thoughts, procedures, results or others have not been presented as authors own works.
- c. No fabricated data or results have been produced, which have been compiled / analyzed.
- d. **There is no adulteration by controlling Research materials, equipment’s or forms, or Changing or overlooking data or results with the end goal that the research is not precisely spoken to in the research record.**

Mr. Ahsan Maqbool

Acknowledgement

To accomplish any objective, direction and support is elementary, without the effective accomplishment/Success is unrealistic. Subsequent to expressing gratitude toward Allah SWT, we might want to ascribe this accomplishment to our Parents & family. Also, we are very obligated to “Mr. Ahsan Maqbool” Bahria University Lahore Campus for this direction and supervision all through from begin to finish of this report.

We truly appreciate the participation of Project Manager Mr. Abdul Latif in EnMasse pvt. Ltd.

It would not have been conceivable without the kind support of Bahria University administration and our class colleagues. We extend our true thanks to them.

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1. Introduction



Engineering and Management Consultancy Services is a consulting company which was created in June 2007 by a group of engineers and IT specialists who had made tremendous participation in their own fields.

The organization key specialists are exceptionally experienced and professionally skilled in the fields of Grid Station and Transmission System particularly the EHV System and have contributed a great deal in the development of Transmission System up to 500 kV in Pakistan.

EnMasse is additionally supported by a board of advisors whose ability and experience has added style to stand up. EnMasse key specialists and guides have worked in numerous WAPDA developments projects in Power Sector particularly in the field of Transmission System up to 500kv from start to end spread over a period beginning from formation of WAPDA in 1985. Their contribution for the development of the country in energy sector is momentous and breakthrough.

EnMasse work force has a decent foundation for ecological and social defend prerequisites which are essential part of Power Project before its execution.

EnMasse is ISO 9001: 2008 Certified

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1.1 Vision:

To become the most coveted consultants for Engineering projects in which meeting the challenges of execution, safety, and schedule make us different from our competition. Our focus will always be on strategy, quality, and client satisfaction. As business folks first and engineering consultants second, create value for our customers. Build long-term relationships with both our customers and employees.

1.2 Mission:

Our determination is to provide exceptional and value added proficient services in the Engineering industry. Furthermore, do so with a very high level of client facility and safety and with our clients best interest in attention at all times. In the progression of doing this, educate our Clients and create interaction between our business units. Through education, strategy, client Delivery, outstanding work, and fair reimbursement, creates client loyalty.

1.3 Summary of Projects:

1. System Augmentation Program (SAP-ELR/DOP) Rural Electrification:

EnMasse has been providing Consultancy Services to LESCO, FESCO, HESCO, MEPCO, IESCO and SEPCO (Distribution Companies) for System Augmentation Program (SAP-ELR/DOP) Deposit Works, Rural Electrification Works & B-3 Service

2. Rehabilitation of Existing Power Distribution System, Walled City, Lahore:

Consultancy Services for Rehabilitation of Existing Power Distribution System in Walled City, Lahore which includes Installation of 630/ 400/ 200KVA Transformers, HT/LT Structures, HT/LT Cables/ Insulated Conductors (Mains & Services), Line Hardware, Insulated Hardware, Accessories; Replacement of Electro-mechanical (Single/Three Phase) Meters and Defective meters with the new Static Energy Meters; Re-fixing of existing

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(Single/Three Phase) Meters at appropriate places; Dismantlement of outlived/ worn out existing network; Testing & Commissioning ON 300 Nos. of Job Orders of Walled City Lahore.

3. Replacement of LT Bare Overhead Conductor with Aerial Bundled Cable:

In a Joint Venture with PES Karachi, EnMasse has provided the Consultancy Services to HESCO for Asian Development Bank/ World Bank funded project which included: Commissioning of HT/ LT feeders for the Replacement of LT Bare Conductor with Aerial Bundled Cables (ABC) on 3000 nos. of Job Orders in LT Distribution Networks of HESCO/ SEPCO and for the Rehabilitation of 11 kV selected feeders of HESCO.

4. Electrification of Housing Societies:

- Canal View Housing Society, Lahore
- Prime Homes Housing Society, Lahore
- UNZE Housing Society, Lahore
- KEMC (King Edward Medical College) Housing Society, Lahore

5. License holder of ETAP Power System Simulation (PSS) Software:

EnMasse has provided Advisory Services on ELR Projects on load management to various private utilities having equipped with ETAP Software Version 11.0.0 for the load flow studies & area planning of 11kV feeders.

6. 765kV / 500kV Projects:

- EnMasse is providing its Consultancy Services to NTDC for Designing, Construction Supervision and testing and commissioning of 765kV D/C DASU Transmission Lines from DASU HPP to Islamabad (290Kms) as Sub Consultant of KEPCO (Korean Electric Power Corporation).
- Providing Consultancy Services to M.R Electric Concern (Pvt) Ltd for Contract Management for Construction of 500kV Double Circuit Quad Bundle Transmission Line from 95th km to 145th km (Near Domeli) “Contract No. NPP-02-2013”

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7. 220kV, 132kv Projects:

- 220kv,132 kV Grid station
- 220kv,132 kV transmission line

8. Wind Power Project:

EnMasse has also been engaged for providing Consultancy Services for the testing and commissioning of Pakistan's first Wind Power Project of 50MW at Jhampir in Sindh, Pakistan

9. Environmental Studies:

EnMasse has carried out various Environmental Studies (EIA/ESA) of 500/220 kV Transmission Lines and Substations Projects of Pakistan, which include EIA / ESA Studies of HIC-I (Lot-II) 220 kV Transmission Lines, 220 kV Ghazi Road Grid Station & feeding Transmission Lines, 220 kV Grid Station Dera Murad Jamali, 220 kV UCH- SIBBI T/line and 500/220 kV Shikarpur Grid Station and feeding Transmission Lines.

10. Evaluation of Proposals:

EnMasse is fully equipped with highly trained and experienced Professionals in its Contract Department to carryout National/ International tendering/ Bidding/ Evaluation of Financial, Commercial, Legal and Technical Proposals for the Procurement of Services and Material and Sponsors. Our firm has carried out evaluations as per the guidelines of Pakistan Engineering Council (PEC) and under the guidelines of Donor Banks.

1.4 Field of Activities of EnMasse Pvt. Ltd:

There are following fields in which EnMasse deals:

<p>Power System Studies</p>	<ul style="list-style-type: none"> ✓ Load Flow Studies ✓ Power System Stability Studies ✓ System Fault Level Studies ✓ Assets Evaluation ✓ Power Tariff Studies
<p>Investigations</p>	<ul style="list-style-type: none"> ✓ Survey & Mapping ✓ Geo-technical Investigations ✓ Hydrological, Hydro geological, Soil & other Service
<p>Design</p>	<ul style="list-style-type: none"> ✓ Preliminary Design & Cost ✓ Model Tests ✓ Computer Simulations ✓ Detailed Design & Specifications ✓ Detailed Drawings
<p>Tender & Contract Documents</p>	<ul style="list-style-type: none"> ✓ Bills of Quantities, Cost Estimates & Schedules ✓ Preparation of Tender Documents ✓ Evaluation of Tender & Recommendations ✓ Contract Documents
<p>Construction Supervision & Contract Management</p>	<ul style="list-style-type: none"> ✓ Contract Coordination ✓ Construction Supervision & Quality Assurance & Monitoring ✓ Certification of Periodic Payments to Contractors, Equipment Inspection & Commissioning

1.5 Offices:

1.5.1 Head Office:

EnMasse Pvt. Ltd.

131-H Model Town Lahore, Pakistan

Tel No: +92-42-35441981 / 35441982 / 35441984

Fax: +92-42-35441983

Email: enmasse@enmassepakistan.com

Web: www.enmassepakistan.com



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2. **Telephone No** +92-42-35441981
+92-42-35441982
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4. **E-mail** enmasse@enmassepakistan.com
5. **Website** www.enmassepakistan.com
6. **PEC Registration Number** Consult / 1253
7. **Chief Executive Officer** Mr. Noor- ul- Huda
Cell No: +92-300-8408576

1.5.2 EnMasse Pvt. Ltd. other offices:



- **LAHORE SITE OFFICE:**

Mr. Shakel Ahmed (Team Leader)

Project Director Construction

132kV Township Grid Station, LESCO Lahore.

Tel: +92-333-4376049

Email: enmasse.lesco@enmassepakistan.com

- **ISLAMABAD OFFICE:**

Mr. Malik Ijaz (Project Manager)

Flat # 2 Block # 1 St: 31 Pervaiz Market, G-8/4 Islamabad.

Tel: +92-321-7774880 Email: enmasse.iesco@enmassepakistan.com

- **MULTAN OFFICE:**

Mr. Asghar Ali Shah (Project Manager)

Ground floor Wapda Complex, Farooq Pura, Multan.

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Tel: +92-321-7774880

- **SUKKUR OFFICE:**

Mr. Bhoj Raj (Project Manager)

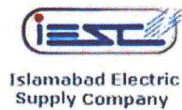
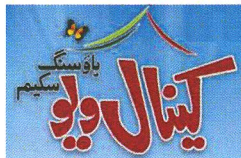
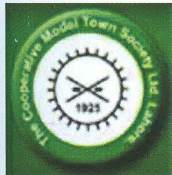
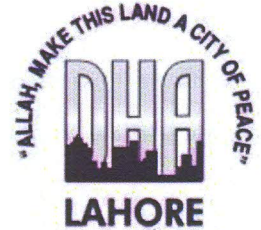
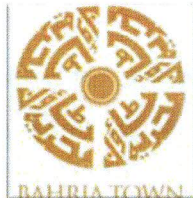
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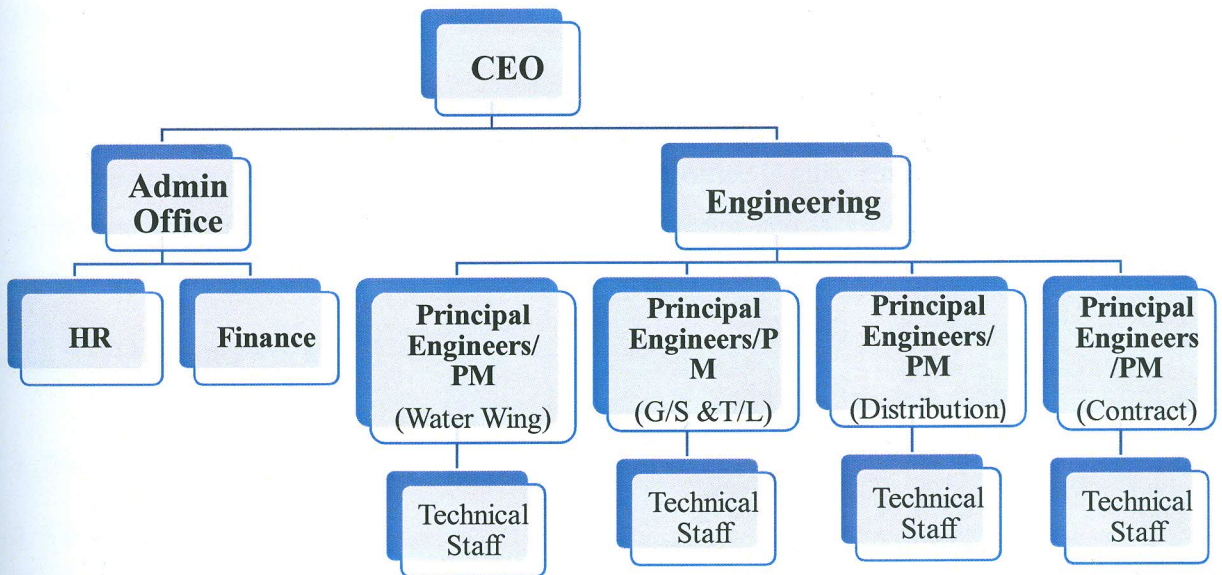
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1.6 EnMasse Pvt. Ltd. Clients:



1.7 Organizational Structure of EnMasse:



2. Introduction to project management office:

A Project Management Office (PMO) is a center in an organization where standards are described and policies for their implementation. PMO is an attempt to standardize and implement economies of repetition. Performance of projects, PMO is the source of documentation, guidance and matrix in the organization for project management and execution exercises.

2.1 Main Objective:

The Core objective of any (PMO) project management office is quite simple, to provide an established structure/Framework that helps all project teams and stakeholders improve the chances of successful delivery.

2.2 PMO Framework:

1. Process
2. Governance
3. Organization
4. Resources

An organizational body or unit has appointed several responsibilities related to Central and Integrated Supervision of those projects under PMO's domain, such as PMO, Finance PMO, Agile PMO and a company including Hybrid PMO can have a separate PMO. The PMO may be different from helping with project management support roles to be responsible for direct supervision of many projects.

2.3 Roles of PMO:

Based on the organization's need and structure, PMO structures have different roles in any organization. The role of the PMO varies depending on the degree of power and influence given to each.

There are three main types of roles of PMO generally speaking:

- Supportive
- Controlling
- Directive

2.3.1 Supportive:

This part of PMO works in an organization where projects are done effectively in an indefinitely controlled way and where there is no need of additional control.

It provides consultative roles to project by applying.

- Templates
- Best practices
- Training
- Lesson learned
- Reporting
- Monitoring

The degree of control is low in Supportive.

2.3.2 Controlling:

This part influenced in the organization where there is a need of control over procedures, methods and documentations. This model offers controlling administrations, for example, project surveys, reviews and evaluations. It can likewise uphold standards execute processes and oversee total risk of projects.

The degree of control in controlling is moderate.

2.3.3 Directive:

This PMO is really in charge of running the entire project. It assembles all the project work inside an organization to one office

The degree of control is high in directive.

PMO CONTROL	PMO ROLE
Low	Supportive
Moderate	Controlling
High	Directive

2.4 Stages of PMO:

Following are the different stages of PMO according to the “Gerard Hill”.

LEVEL	TITLE	COMPETENCY
<i>Level 1</i>	PO (Project Office)	Project Oversight
<i>Level 2</i>	Basic PMO (Project Management office)	Process Control
<i>Level 3</i>	Standard PMO (Project Management office)	Process Support
<i>Level 4</i>	Advanced PMO (project Management office)	Business Maturity
<i>Level 5</i>	Centre of excellence	Strategic alignment

2.5 Types of PMO:

There are three basic types of project management offices. Organizations with varying degrees of control and impact on projects within the organization. To build an effective project management office, you need to determine what type of requirement you need.

1	Weather Station (Governance)
2	Control Tower (Centre of Excellence)
3	Resource Pool (Project Support)

Weather Station PMO:

The weather station's project management office reports what is going on but does not attempt to influence it. There is no problem with this type of PMO, it does not trouble Project Manager who is leading the projects.

Control tower PMO:

It gives organizations control over activities, processes, and documents. In other words, this control tower PMO supports organization. When a project manager is not paying attention to any particular situation or needs to pay attention to a specific situation, then the project manager will be alerted through the control tower PMO.

Resource Pool:

A resource pool is an arrangement of resources accessible for task to projects. A resource pool can be shared by a few projects or it can especially be allocated to a project or task. In the event that you are beginning another project, having a resource pool as of now, you can get the project manager or other related staff with specific ability and experience from your resource pool. As such, this PMO sort assists you how with getting things happen utilizing your resources.

2.6 Role of Project Manager Vs PMO

PMO MANAGER	VS	PROJECT MANAGER
1. Oversee real program Scope changes.		1. Manage individual project constraints
2. Upgrade shared organizational resources.		2. Control assigned resources
3. Offer help to project Managers.		3. Specific project objectives
4. Manage project interdependencies at enterprise level.		4. Communicator
5. Train PM Resources		5. Organizer
6. Strategic planning		6. Estimator
7. Facilitator		7. Controller
8. Adviser		8. Tracker
9. Helper		9. Planner
10. Reviewer		10. Initiator
11. QA/Auditor		11. Manager
12. Coach		12. Executer

2.7 PMO Goals:

- i. Gives the status of project report effectively.
- ii. Concentrate on particular project issues before they amplify
- iii. Collect, compose and coordinate project information for the whole organization.
- iv. Empowering a higher level of Project management
- v. Monitoring, controlling and Audits
- vi. Incorporated project report vault for project collaboration
- vii. Manages Multi projects in centralized way.
- viii. Improve quality and performance through standards.
- ix. During Evaluation of projects follow best practices.

2.8 Challenges of PMO:

- i. Collaboration Lack between PMO and Stakeholder
- ii. Business Analysis Skill, Trainings Lacking.
- iii. Reward, Recognition Lacking, when good things happened.
- iv. Not Active behavior of Stakeholder
- v. When Organization only wants Window dressing than Real quality change.
- vi. When PMO does not understand the stakeholder needs and expectations.
- vii. Lack of support from sponsor
- viii. Due to inexperienced staff resources.

2.9 Elements on effective PMO:

There are following essential elements for PMO to reach the project success.

- i. Strategic planning
- ii. Communication
- iii. Resources
- iv. People

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Strategic planning:

The principal thing of each project is planning i.e. to comprehend what it is attempting to accomplish. Specific, quantifiable, feasible, relevant and auspicious goals should be built up alongside measures of achievement and key milestones where advance progress can be reviewed.

Communication:

It is important that those who are affected by the outcome of the project get the most benefit from the results of these projects. In other words, talking to people about why the project is important and giving them a realistic picture can be useful in solving problems.

Resources:

Ensure that the resources that would be utilized as a part of the project like people, time and equipment ought to be set early. Inside it would include the Human resource department to enlist the opportune individuals for the correct employment, finance department to release the fund and the equipment of desired quality is essential.

People:

Project manager leads a team and through that he accomplishes the milestone of any project. It is unrealistic for him to work for it in solitude. As a part of, there is numerous sponsors/stakeholders will's identity basic for the project achievement like major stakeholder, Project director and project team members.

3. Implementations of PMO in EnMasse Pvt. Ltd:

According to the scope of our subject matter, we need to discuss the use of PMO in EnMasse Pakistan. There is no PMO in this organization till now. The number of projects is increasing every year similarly management is also happy about it, although the number of projects has increased the risk of failing to adjust the resources of the organization to utilize additional resources in various projects.

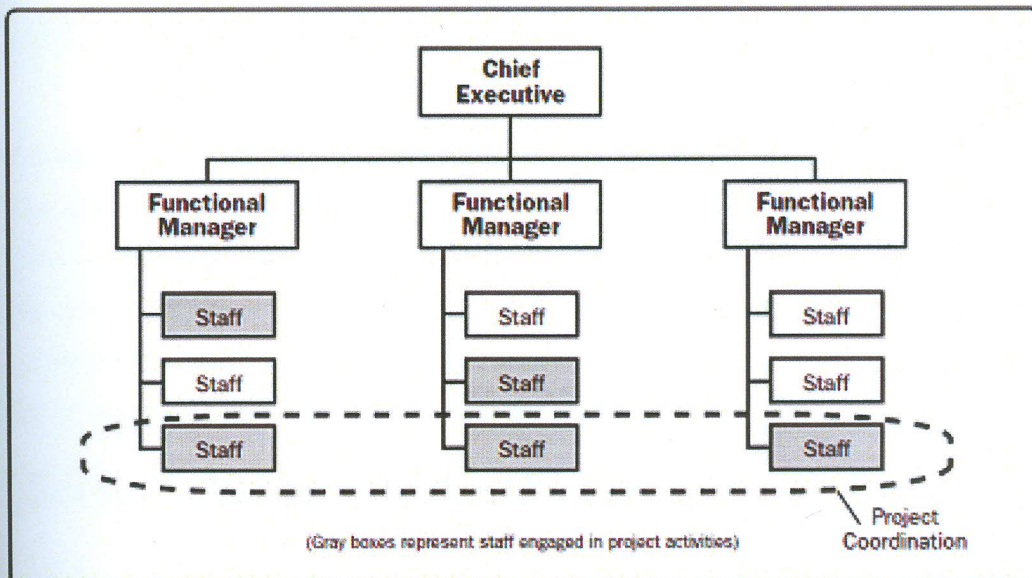
3.1 Current Structure in EnMasse Pvt. Ltd:

As mentioned above, the organizational structure of this company, there are mainly two departments i.e. Administration (Admin office) & Engineering, Admin office consist of two sub departments(HR,& Finance) & Admin office is directly report to CEO.

Engineering department has four wings (Water wing, G/S & T/L, Distribution, Contracts) and these wings are supervised by their respective principal Engineers whose are actually working as a project manager of that wing .The project managers are bound to report directly to CEO.

EnMasse has a weak matrix organization.

“According to PMBOK weak matrix organizations maintain many of the characteristics of a functional organization, and the role of the project manager is more of a coordinator or expediter. A project expediter works as staff assistant and communications coordinator. The expediter cannot personally make or enforce decisions. Project coordinators have power to make some decisions, have some authority, and report to a higher-level manager”.



3.2 Problem without PMO:

- i. Risk was not deal with any proactive approach in a project. ?
- ii. The customer's desires were unrealistic and set out of down to earth limits by marketing team to win the leads and later meeting customer desires were a huge challenge for being Engineering Consultant group. ?
- iii. Approach of decision making powers does not remain with project managers.
- iv. The technical groups were excessively bustling implementing new requirements and were not ready to add to product performance and versatility enhancements initiatives.
- v. There were no focal bodies to take responsibility for change management initiatives.
- vi. Quality was often bargained by development team because of high work load and newness to core quality standards.
- vii. Conflicts arise in tasks.
- viii. Most projects were done late and over budgeted.
- ix. The project managers submit their reports in different formats.
- x. Neither Lessons learned were recorded nor used for similar projects.
- xi. Documentation work was not done properly about projects.
- xii. Project objectives were not tracked by project managers.

3.3 Is PMO really required or not:

? Same in other report

PMOs are not really the best alternative for smaller organization that isn't probably going to require structured project management processes. It's constantly great to have some standard practices and strategies set up. However in EnMasse, there are number of departments, each taking care of various projects and more often than not more than one department is working at similar projects at a similar date. Subsequently it is important to have an incorporated unit PMO for improvements in execution and quality of various departments.

3.4 Proposed PMO type for EnMasse Pvt. Ltd:

Keeping in mind the problems due to the absence of the PMO, the proposed PMO type is control tower. Problems are not limited to knowing the status of projects or managing

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resources, but there is a problem in the overall view of the organization. Therefore, implementation of new policies in relation to the management of the project is required.

4. Establishing PMO for EnMasse Pvt. Ltd:

After setting up the proposed PMO and implementing key processes and reporting structures, EnMasse will understand a few changes in the working of their organization.

4.1 Mission:

The mission of the EnMasse Project Management Office (PMO) is to offer an enterprise wide approach to identify, prioritize, organize, and effectively execute projects that are lined up with EnMasse vital objectives and business vision. The PMO's essential duty is to oversee and control project goals by ensuring projects plans are executed on timetable, inside budget, and spending plan.

4.2 Vision:

- Apply PMBOK-based approach as well as support "best fit" approach for project Management at EnMasse Pvt. Ltd.
- Encourage best practice standards, excellence, and procedures into a project management discipline.
- PMO in EnMasse Pvt. Ltd. is a team of experienced and effective members who will identify and manage the problems so that every project is a success in terms of time, cost and quality.

4.3 Stakeholders:

There are following main stakeholders. Influence, interest and level of power of these stakeholders kept in mind while implementation of PMO.

- C.E.O
- Admin Department

- HR Department
- Engineering Department

4.4 Proposed PMO Objectives:

- To create templates.
- Distribution of resources in uniformed way.
- To make the processes standardized.
- To build up the quantity of projects that is simultaneous.
- To select and keep up project management tools.
- Working of projects that need tracking and auditing.

Need
to check

4.5 PMO Roles and Responsibilities:

1. Executive Sponsor:

- Authorizes funding.
- Executive sponsor authorize All projects and funding to proceed.
- Executive sponsor has power to suspend any project.

2. Project Sponsor:

- Project progress is overseased by project sponsor.
- Project sponsor sent Reports of progress and status to the Executive Sponsor.
- Project sponsor is Answerable to the Executive Sponsor.
- Provides guidance to project team to ensure planned benefits realized.

3. Program Manager:

- Delegate of the PMO in support of an Executive Sponsor. Oversees large-scale multi-divisional programs.
- Program Manager is Answerable to the PMO and Executive Sponsor.

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- iii. Program manager sent Reports progress and status to the Executive Sponsor and stakeholders.
- iv. From different departments Communicates is done with project stakeholders.

4. Project Manager:

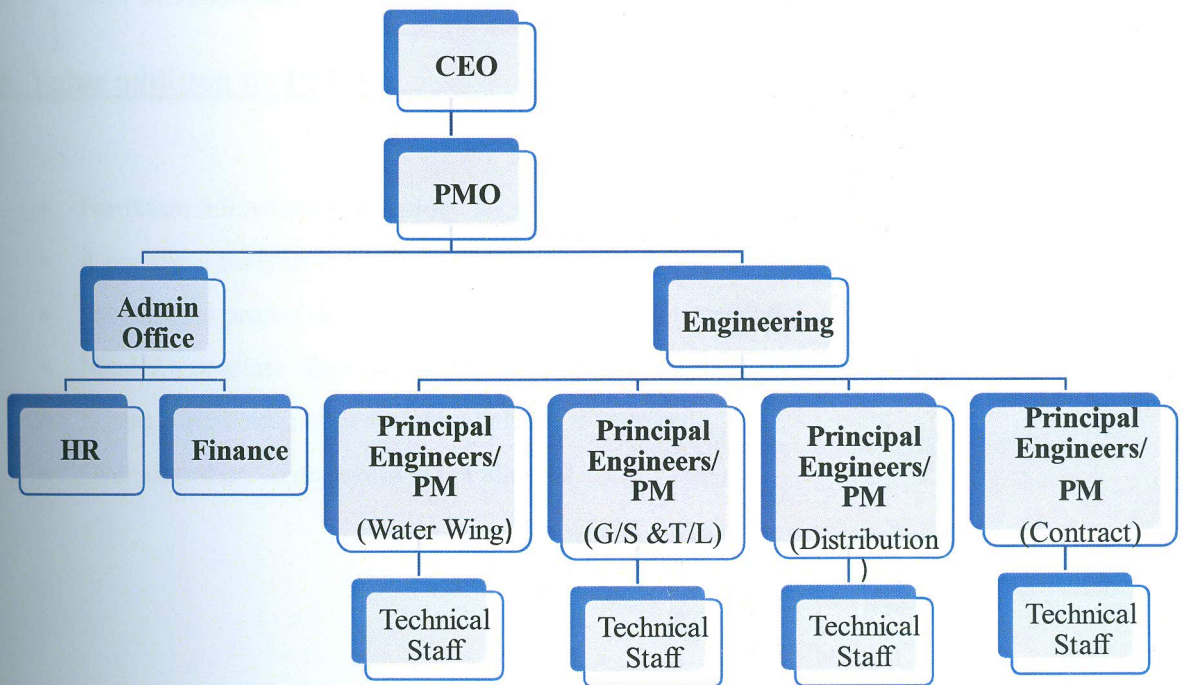
- i. Delegate of the Project Sponsor. Manages individual projects.
- ii. PMO will coordinate with heads of all the departments to gather the required information for consolidated reports generation.
- iii. All the project managers, will undergo training regarding the project management practices and processes.
- iv. Directs and leads functional project team.
- v. Accountable to the Project Sponsor.
- vi. Communicate with stakeholder.
- vii. Lead the project Team.

4.6 Success Factors:

For proposed PMO there are following important factors

- Needs Support from senior management.
- Cooperation of all departments.
- Management of stakeholder and effective communication.
- Compliance with project management policies.

4.7 Suggested organizational Structure:



5. Challenges faced while establishing PMO:

- i. The role of PMO in senior management was not coming clear.
- ii. Requirements of funds for establishing PMO.
- iii. Compliance with the new process resistance made by project manager and his team.
- iv. The Values that can be achieved by implementing PMO were lacked.
- v. Staff was considers as auditor instead of facilitator

not clear.

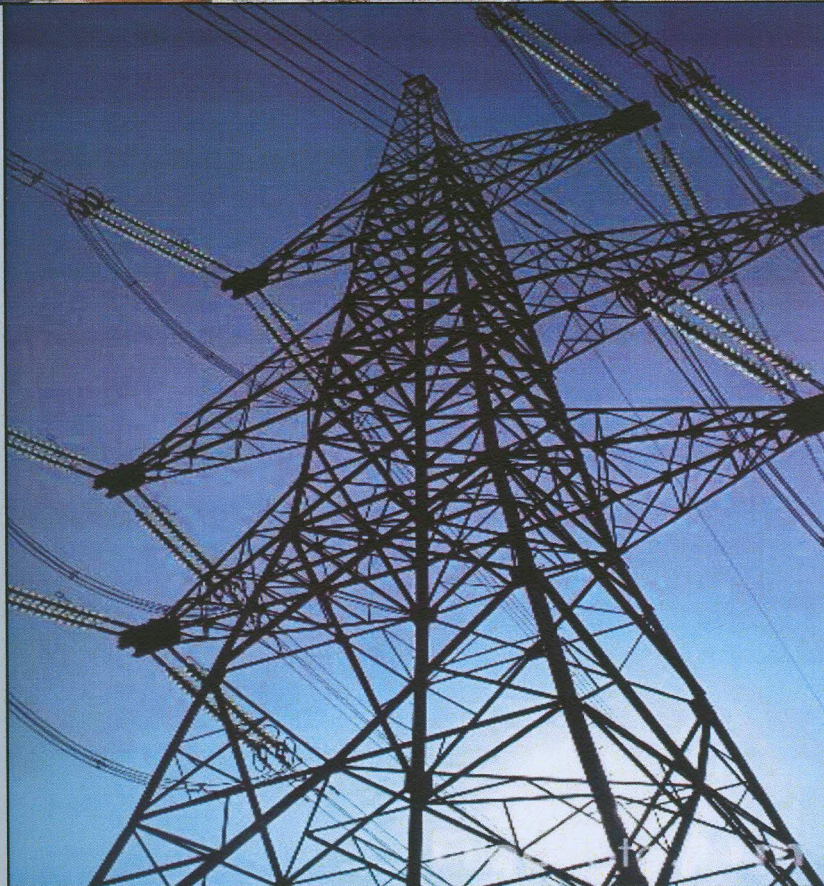
6. Value addition by PMO:

- For future references a repository for lesson learnt will be created by PMO.
- A complete analysis is needed to determine which project to track.
- For ongoing project documentation of higher level is needed.
- Needed a constant Approach across the project for project managements.
- During distribution of resources a balance is required.
- Over allocation of resources is not allowed.

7. Project Documents:

1. Project Charter.
2. Project Scope Statement.
5. Project Schedule
6. Network Diagram.
7. Snapshots'/View from Microsoft Project.
8. Reports from Microsoft Project

8. Project Charter



Version History:

Version	Issue Date	Approved By	Approval Date	Changes	Completed By

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

Project Title	132 kV Grid Station & Transmission Line DHA Phase-8 Lahore.
Project Description	132 kV Grid Station & Transmission Line, being constructed to supply the electricity for the residence of DHA Phase-8.
Project Objectives	Main Objective this project is Convert 132 kV voltage into 11kV voltage and serve the electricity for DHA Phase-8
Acceptance Criteria	<ul style="list-style-type: none"> • The Grid Station shall provide electricity for 200 houses, commercial markets, schools, parks and mosque etc. • The grid station will be property of LESCO after completion.
Assumptions	<ul style="list-style-type: none"> • The approval from NTDC/LESCO shall be sought by DHA timely. • The procurement of all equipment and materials Contractor shall be delivery at time.
Project Duration	365 days
Start and completion Date	<u>Start Date:</u> 06 February 2017 <u>End Date:</u> 06 February 2018
Milestones List	<p>Following are the major milestones:</p> <ul style="list-style-type: none"> • Contract signing. • Approval of drawings and materials. • Civil work completed. • Electrical works. • Handing over project.
Project Budget	335 Million PKR
High level Risks	<ul style="list-style-type: none"> • Non-availability of previous feasibility studies. • Non-availability of Materials like Steel, Cement and Sand etc. • Previous route alignment may not up to the mark/ or need complete realignment. • There may be security threat for local key experts in Pakistan especially at project site. • There may be some conflict arises between consultant and

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

	client regarding selection of Contractor/Subcontractor.
Main Stakeholders	<p>Main Stakeholders are:</p> <ul style="list-style-type: none"> • Client (DHA) • Consultant (EnMasse Pvt. Ltd) • Contractor (DESCON) • Project Manager (Ch. Abdul Latif) • Project team • External
Project Manager	Mr. Ch. Abdul Latif
Roles and Responsibilities	<p>Project Sponsor (DHA)</p> <ul style="list-style-type: none"> • Approving any major changes in scope of project • Defining the vision and high level objectives for the project. • Approving the requirements, timetable, resources and budget. • Authorizing the provision of funds / resources. • Approving the project management plan. • Resolving issues with the Project Manager or project team. <p>Project Manager (Ch. Abdul Latif)</p> <ul style="list-style-type: none"> • Produce and maintain a detailed project plan. • Managing assigned resources according to the defined scope of the project. • Monitoring and reporting on project performance. • Ensuring compliance with the processes and standards. • Reporting and escalating project risks and issues. • Prepare monthly status reports. <p>Project Team</p> <ul style="list-style-type: none"> • Undertaking all tasks allocated by the Project Manager. • Reporting progress of the execution of tasks to the Project Manager on a frequent basis. • Maintaining all documentation relating to the execution of allocated tasks.

Approval Signatures:

Name:

Designation:

Signature:

Date:

Name:

Designation:

Signature:

Date:

9. Project Scope Statement:



9.1 Introduction:

As per PMBOK fifth edition, the project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope, including project and product scope. It describes, in detail, the project's deliverables and the work required to create those deliverables.

9.2 Project Objectives:

To construct 132 kV Grid Station and Transmission line as per the WAPDA/NTDC approved specifications and design, within a budget of PKR 335 Million and 365 Days.

9.3 Major Deliverables:

Major Deliverables are:

- Civil Work Completed.
- Electrical Work Completed.
- Completion of 132 kV Grid Station and transmission line

9.4 Milestones:

Following are the major milestones:

- Contract signing.
- Approval of drawings.
- Approval of Materials
- Procurement done.
- Civil work completed.
- Electrical works.
- Handing over project.

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

9.5 Assumptions:

- 132 kV Grid Station and Transmission line to be constructed according to Standard /Specification of WPADA/NTDC.
- Additional labor will be available in case of urgent work requirement.
- Project team will have full support from the organization, project sponsor/owner.
- Contingency reserves for expected risks have been considered.

9.6 Constraints:

Several constraints for this project have been identified. Considerations would make regarding these constraints to avoid issues during project lifecycle.

1. Project must be completed within approved budget.
2. Project must be completed within the approved time.
3. Weather will be highly unfavorable on execution day due to winter season.
4. Project execution team will be highly dependent on the resources provided by DESCON Pakistan.

9.7 Limits and Exclusions:

1. The 132 kV Grid Station and Transmission line will be built according to WAPDA/NTDC Standards/ Specification.
2. DESCON Pakistan will be responsible for Plantation in Grid Station.
3. DESCON Pakistan reserves the right to contract out services.
4. DESCON Pakistan is responsible for subcontracted work.
5. Concreting work limited to commence after 10 pm at night.

9.8 Technical Requirements and Specifications:

Earth work:

Clearing, grubbing dressing and levelling of the complete site area for bushes, vegetation trees, roots and weed etc. as per Drawings and Specifications and as directed by the Site Engineer.

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

Back Filling:

Filling, leveling and compaction of the fill material in layers of 150mm thickness (max) 95% modified Proctor Density to raise the site area as per Drawings and Specifications.

Concrete Work:

Reinforced cement concrete work using crush stone Aggregate and Lawrence pur sand and including all labor, material, lifting shuttering, curing rendering and finishing the exposed surface (including screening and washing of shingle). R.C work in roof slabs, beams, columns rafts, lintels and other structural member laid in situ or pre-cast laid in position complete in all respects:

- Ratio 1:2:4.
- Ratio 1:1:5:3. (Precast)

Providing reinforced cement concrete work in roof slabs, beams, columns rafts, lintels and other structural member, having 28 days, minimum cylinder strength of 210 kg / cm² and grouting in surplus earth from site etc. complete, Reinforcement inclusive of excavation, removal of block outs (if any) and steel.

Providing plain cement concrete as blinding minimum cylinder strength of 140 kg / cm² including placing, compacting, finishing and curing complete as per drawings & specification

Steel Work:

Supplying and fabrication of Intermediate grade 40 deformed reinforcement of 40000 psi (276M pa) yield for R.C.C.in roof slabs, beams, columns rafts, lintels and other structural member, including cutting, bending laying in position including cost of binding wire and removal of rust Providing chairs, binding wire, spacer block, etc. complete in all respects as per drawings and specifications.

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132kV Switchyard Cable Trenches:

Providing R.C.C work in construction of cable trenches having 28 days minimum cylinder strength of 210 kg / cm² including excavation, removal of surplus earth from site area, dewatering if any, side back filling, civil works for installation of steel brackets, bitumen coat on exterior surface, expansion Joints, slopes and all type of crossings etc.as per Drawings and Specifications, strength of RCC Concrete 210kg/cm² Steel reinforcement (as per drawings & specification). Trenches types are below:

- H type
- H1 type
- K type

S/erection in position Precast / pre stressed RCC trench covers from Izhar Concrete Pvt. Ltd. Sheikhpura Road Lahore to site, rate vetted by Manager Civil NTDC, Lahore.

Brick Masonry:

Providing and laying 1st class bricks (Strength up to 1800 psi) in foundation in 1:5 cement sand mortar 1 part of cement and 5 parts of sand including joints finishing and curing etc. Complete in all respects as per drawing, specifications and as directed by the consultant Engineer.

Providing and laying of masonry using 1st class bricks (Strength up to 1800 psi) in super structure in 1:4 sand mortar using 1 part of cement and 4 part of clean local sand including scaffolding, curing, joint finishing etc. complete with all respects. (For 9" thick wall and 4.5" thick wall).

Wood Work:

Hollow/ Solid Flush door shall be produced from one of the reputed manufacturers which shall conform to the specifications contained in the MES schedule 2014 amended up to date and shall be got approved from the Engineer in charge before incorporation. In case the

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

specifications do not corresponds to these provided in MES schedule of rates but are accepted by the controlling officer, payment for the same shall be made on star price.

Malaysian ply for shutters etc. of solid flush doors shall be 3mm thick ply Glazing shall be shown on the drawings.

Framed/paneled doors shall be first class DEODAR and shall be got approved from Engr. in charge before incorporation in the work. Wooden doors/windows shall be manufactured to the sizes of the members and thickness strictly in accordance with the drawings. Thickness shall be dead and no tolerance plus or minus shall be allowed in this respect.

Back of doors and windows and windows frames or chowkats shall be treated with on coat of Tar before fixing.

Aluminum Doors/ Windows

All aluminum doors and windows used shall be extruded with aluminum alloy confirming to the International Standard for alloy quality and extraction and shall be the product of reputable manufacturer and of best quality. All doors and windows shall be DELUXE model which shall conform to the specifications of MES Schedule of rates 2014 amended to date. All the doors and windows shall be approved by the Engineer in charge before fixing. Glazing shall be shown in drawings.

Water Supply Works:

This work comprises of all inside/ outside piping works, provision of fittings/fixtures all water connections from existing water supply main.

Water supply work shall be considered complete after necessary tests are carried out as specified in MES Schedule of rates 2014 amended up to date.

GI pipe used in the work will be approved make as per E-in-C Br approved list and as approved be Engineer in charge.

Sanitary Works and Sewage Disposal:

The work of internal sewage/sludge disposal includes all fittings/fixtures, accessories manholes around the building required for sewage/ sludge disposal including their internal connection. The scheme shall be so finished that it is readily available for ultimate disposal through external sewage.

Cast iron spun/ sand cast/ UPVC soil waste and ventilating pipes including fittings of required diameter should be used.

Electrification Works:

The work comprises of all electrical works inside/outside building, provision of fittings/fixtures and connections of mains to buildings. All the material/fittings shall be of the best quality and shall conform to the relevant BS Specification as laid down in MES Schedule of rates 2014 amended up to date.

Cable shall be of approved makes Tech cable/ Newage shall be bought in rolls and got approved from the Engr. in charge before incorporating in the work. A certificate that genuine cable have been procured from the approved dealers/agents of the manufacturers shall be also supplied by contractor.

Wiring inside the building shall be carried out with PVC conduit concealed. PVC conduit shall be approved make.

Transformer /LT panels shall be following approved make as approved by Engineer in Charge, PEL, Power link, Siemens and MK Engineering.

Plaster:

Providing and applying 13 mm thick cement plaster (1:4) using 1-part of cement and 4-parts of approved clean sand to internal & external walls.

Paint Works:

Providing and applying 3-coats of paint (Berger /approved equivalent) to Internal plastered walls, partitions, structural, false ceiling i/c cleaning, rubbing, sanding, filling and preparation of base with primer coat, all to be done according to the manufacturers, specifications complete in all respects..

Providing and applying Weather shield paint to exterior surfaces of plastered walls (ICI /equivalent) complete in all respects.

10. Microsoft Project Sheets:

The schedule for the selected project has been prepared in Microsoft Project. This section contains views and reports generated from Microsoft Project for our project. The project is in progress. Some Tasks have been completed while rest is in progress.

The below mentioned are present in the following section:

1. Project Schedule
2. Gantt Chart
3. Network Diagram
4. Earned Value
5. S- Curve

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

10.1 Project Schedule:

ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
1		132kV Grid Station DHA Phase 8	282 days	Mon 2/6/17	Mon 4/30/18
2		Pre Construction Activities	48 days	Mon 2/6/17	Tue 4/18/17
3		Contract Signing	48 days	Mon 2/6/17	Tue 4/18/17
4	✓	Award of LOA	0 days	Mon 2/6/17	Mon 2/6/17
5	✓	Signing of Contract	0 days	Mon 2/6/17	Mon 2/6/17
6	✓	Site Possession	0 days	Mon 2/6/17	Mon 2/6/17
7	✓	Commencement	0 days	Mon 2/6/17	Mon 2/6/17
8	✓	Submission of Performance Guarantee	0 days	Mon 2/6/17	Mon 2/6/17
9	✓	Submission of Advance Guarantee	0 days	Mon 2/6/17	Mon 2/6/17
10		Engineering	115 days	Mon 2/6/17	Fri 8/11/17
11	✓	General	40 days	Mon 2/6/17	Wed 4/5/17
12	✓	Soil Investigation (Client Provided)	30 days	Mon 2/6/17	Wed 3/22/17
13	✓	Project Single Line Diagram(SLD)	3 days	Mon 2/6/17	Wed 2/8/17
14	✓	Basic Design Data Including Zero Level, Layout etc.	10 days	Wed 3/22/17	Wed 4/5/17
15		Civil Works	75 days	Thu 4/6/17	Fri 8/11/17
16		Switch yard and Building drawings	75 days	Thu 4/6/17	Fri 8/11/17
17	✓	SLD+GLO+S/Y Foundation Plan + S/Y Equipment Layout (Including any design Modification if required)	30 days	Thu 4/6/17	Tue 5/23/17
18		CHB Structural/Architectural Design (Including any design Modification if required)	25 days	Tue 5/23/17	Wed 7/12/17
19		Foundation of Power Transformer Design (Including any design Modification if required)	23 days	Tue 5/23/17	Mon 7/10/17
20		Foundation of Gantries (Including any design Modification if required)	23 days	Tue 5/23/17	Mon 7/10/17
21		Foundation of Earth Mast (Including any design Modification if required)	22 days	Tue 5/23/17	Fri 7/7/17
22		Foundation of 132kV DS (Including any design Modification if required)	23 days	Tue 5/23/17	Mon 7/10/17
23		Foundation of CTs and VTs (Including any design Modification if required)	25 days	Tue 5/23/17	Wed 7/12/17
24		Foundation of 132kV Surge Arresters (Including any design Modification if required)	22 days	Tue 5/23/17	Fri 7/7/17
25		Foundation of 132kV CBs (Including any design Modification if required)	23 days	Tue 5/23/17	Mon 7/10/17
26		S/Y Trenches	10 days	Wed 7/12/17	Thu 7/27/17

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ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
27		Trench Under Transformer Way	10 days	Thu 7/27/17	Fri 8/11/17
28		Switch yard Fence	25 days	Tue 5/23/17	Wed 7/12/17
29		Main entry Gate of Grid Station	15 days	Tue 5/23/17	Tue 6/20/17
30		Switch yard Gate	20 days	Tue 5/23/17	Wed 7/5/17
31		Foundation of Capacitor Bank (Including any design Modification if required)	20 days	Tue 5/23/17	Wed 7/5/17
32		PMT Foundation	20 days	Tue 5/23/17	Wed 7/5/17
33		Standard Design of Doors and Windows	20 days	Tue 5/23/17	Wed 7/5/17
34		Trench for Control and Relay Room in CHB	10 days	Wed 7/12/17	Thu 7/27/17
35		11kV Cable Trench Detail in 11kV Switch Room	10 days	Wed 7/12/17	Thu 7/27/17
36		Security Guard Cabin	20 days	Tue 5/23/17	Wed 7/5/17
37		Bitumen Carpet Road 4.5 m	20 days	Tue 5/23/17	Wed 7/5/17
38		Fence wall	20 days	Tue 5/23/17	Wed 7/5/17
39		Power Transformer way	20 days	Tue 5/23/17	Wed 7/5/17

40		Draw Pit	20 days	Tue 5/23/17	Wed 7/5/17
41	✓	Transmission Towers Foundations	30 days	Thu 4/6/17	Tue 5/23/17
42		Electromechanical	30 days	Tue 5/23/17	Wed 7/19/17
43		Switchyard and Building	30 days	Tue 5/23/17	Wed 7/19/17
44		Engineering of HV/MV Schemes and Interconnections b/w HV/MV	10 days	Tue 5/23/17	Fri 6/9/17
45	✓	Submission of HV/MV Schemes and Interconnections	0 days	Tue 5/23/17	Tue 5/23/17
46		Approval of HV/MV Schemes and Interconnections	30 days	Tue 5/23/17	Wed 7/19/17
47		Relays Plug Setting	20 days	Tue 5/23/17	Wed 7/5/17
48	✓	Submission of Relays Plug Setting	0 days	Tue 5/23/17	Tue 5/23/17
49		Approval of Relays Plug Setting	20 days	Tue 5/23/17	Wed 7/5/17
50		Procurement	167 days	Mon 2/6/17	Fri 11/3/17
51		On shore	141 days	Mon 2/6/17	Tue 9/26/17
52		LDI Issuance of Disconnectors	2 days	Mon 2/6/17	Tue 2/7/17

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ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
53	✓	LOI Issuance of Surge Arrestor	2 days	Mon 2/6/17	Tue 2/7/17
54	✓	LOI Issuance of Gantries, Beams, Earth Masts and 11kV Structure	2 days	Mon 2/6/17	Tue 2/7/17
55	✓	LOI Issuance of Power and Control Cables	2 days	Mon 2/6/17	Tue 2/7/17
56	✓	LOI Issuance of Pad Mounted Transformer	2 days	Mon 2/6/17	Tue 2/7/17
57	✓	LOI Issuance of MV Switchgear	2 days	Mon 2/6/17	Tue 2/7/17
58	✓	LOI Issuance of AC/DC Auxiliary Panels	1 day	Mon 2/6/17	Mon 2/6/17
59	✓	LOI Issuance of RPs and CPs	1 day	Mon 2/6/17	Mon 2/6/17
60	✓	LOI Issuance of DC Battery Charger	1 day	Mon 2/6/17	Mon 2/6/17
61	✓	LOI Issuance of Earthing Material	1 day	Mon 2/6/17	Mon 2/6/17
62	✓	LOI Issuance of Termination Kits	1 day	Mon 2/6/17	Mon 2/6/17
63	✓	LOI Issuance of Cables Trays, Cable Ties, GI Conduits etc.	1 day	Mon 2/6/17	Mon 2/6/17
64	✓	LOI Issuance of Erection and Testing Equipment	1 day	Mon 2/6/17	Mon 2/6/17
65	✓	LOI Issuance of Miscall. Material	1 day	Mon 2/6/17	Mon 2/6/17

66		PD along With Design Data Submission and Approval of Disconnectors	29 days	Wed 2/8/17	Thu 3/23/17
67		PD along With Design Data Submission and Approval of Surge Arrestor	25 days	Wed 2/8/17	Thu 3/16/17
68		PD along With Design Data Submission and Approval of Gantries, Beams, Earth Masts and 11kV Structure	25 days	Wed 2/8/17	Thu 3/16/17
69	✓	PD along With Design Data Submission and Approval of Power and Control Cables	25 days	Wed 2/8/17	Thu 3/16/17
70		PD along With Design Data Submission and Approval of Pad Mounted Transformer	26 days	Wed 2/8/17	Mon 3/20/17
71	✓	PD along With Design Data Submission and Approval of MV Switchgear + AC/DC Panels	26 days	Wed 2/8/17	Mon 3/20/17
72	✓	PD along With Design Data Submission and Approval of RPs and CPs	30 days	Tue 2/7/17	Thu 3/23/17
73	✓	PD along With Design Data Submission and Approval of DC Battery Charger	35 days	Tue 2/7/17	Thu 3/30/17
74	✓	PD along With Design Data Submission and Approval of Earthing Material	30 days	Tue 2/7/17	Thu 3/23/17
75	✓	PD along With Design Data Submission and Approval of Termination Kits	35 days	Tue 2/7/17	Thu 3/30/17
76	✓	PD along With Design Data Submission and Approval of Cables Trays, Cable Ties, GI Conduits etc.	36 days	Tue 2/7/17	Tue 4/4/17
77	✓	PD along With Design Data Submission and Approval of Erection, Testing Equipment	15 days	Tue 2/7/17	Wed 3/1/17
78	✓	PD along With Design Data Submission and Approval of Erection, Testing Equipment	10 days	Tue 2/7/17	Tue 2/21/17

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ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
79		Fat and Shipment of Disconnectors	110 days	Thu 3/23/17	Tue 9/26/17
80		Fat and Shipment of Surge Arrestors	110 days	Thu 3/16/17	Wed 9/20/17
81		Fat and Shipment of Gantries, Beams, earth masts and 11kv Structure	80 days	Thu 3/16/17	Mon 7/31/17
82		Fat and Shipment of Power and Control Cables	109 days	Thu 3/16/17	Tue 9/19/17
83		Fat and Shipment of Pad Mounted Transformer	90 days	Mon 3/20/17	Thu 8/17/17
84		Fat and Shipment of MV Switchgear + AC/DC Panels	90 days	Mon 3/20/17	Thu 8/17/17
85		Fat and Shipment of RPs and CPs	88 days	Thu 3/23/17	Fri 8/18/17
86		Fat and Shipment of 110 VDC Battery	85 days	Thu 3/30/17	Tue 8/22/17
87		Fat and Shipment of DC Battery Charger	100 days	Thu 3/30/17	Tue 9/19/17
88		Fat and Shipment of Earthing Material	95 days	Thu 3/23/17	Wed 8/30/17
89		Fat and Shipment of Termination Kits	50 days	Thu 3/30/17	Thu 6/22/17
90		Fat and Shipment of Cables Trays, Cable Ties and GI Conduits etc.	35 days	Wed 4/5/17	Tue 5/30/17
91		Fat and Shipment of Miscel. Materials	30 days	Wed 3/1/17	Fri 4/14/17

92		Fat and Shipment of Brection, Testing Equipment	90 days	Tue 2/21/17	Thu 7/20/17
93		Transmission Line	96 days	Mon 2/6/17	Thu 7/13/17
94	<input checked="" type="checkbox"/>	LOI Issuance of Transmission line Towers	1 day	Mon 2/6/17	Mon 2/6/17
95	<input checked="" type="checkbox"/>	PO along With Design Data Submission and Approval of Transmission line	30 days	Tue 2/7/17	Thu 3/23/17
96		Fat and Shipment of Transmission line	65 days	Thu 3/23/17	Thu 7/13/17
97		Offshore	167 days	Mon 2/6/17	Fri 11/3/17
98	<input checked="" type="checkbox"/>	LOI Issuance of Transmission of Power Transformers	2 days	Mon 2/6/17	Tue 2/7/17
99	<input checked="" type="checkbox"/>	LOI Issuance of HV CBs	2 days	Mon 2/6/17	Tue 2/7/17
100	<input checked="" type="checkbox"/>	LOI Issuance of CTs/ VTs	2 days	Mon 2/6/17	Tue 2/7/17
101	<input checked="" type="checkbox"/>	LOI Issuance of Capacitor Bank	1 day	Mon 2/6/17	Mon 2/6/17
102	<input checked="" type="checkbox"/>	LOI Issuance of Substation Connectors, Hardware and fittings etc.	1 day	Mon 2/6/17	Mon 2/6/17
103	<input checked="" type="checkbox"/>	LOI Issuance of DC Batteries	1 day	Mon 2/6/17	Mon 2/6/17
104		PO along With Design Data Submission and Approval of Power Transformer	30 days	Wed 2/8/17	Fri 3/24/17

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ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
105	☐	PO along With Design Data Submission and Approval of HV CBs	29 days	Wed 2/8/17	Thu 3/23/17
106	☐	PO along With Design Data Submission and Approval of CTs/ VTs	29 days	Wed 2/8/17	Thu 3/23/17
107	☑	PO along With Design Data Submission and Approval of Capacitor Bank	25 days	Tue 2/7/17	Wed 3/15/17
108	☑	PO along With Design Data Submission and Approval of Substation Connectors, Hardware and fittings etc.	26 days	Tue 2/7/17	Thu 3/16/17
109	☑	PO along With Design Data Submission and Approval of DC Batteries	30 days	Tue 2/7/17	Thu 3/23/17
110	☐	FAT and Shipment of Power Transformer	125 days	Fri 3/24/17	Thu 10/19/17
111	☐	FAT and Shipment of Power HV CBs	135 days	Thu 3/23/17	Thu 11/2/17
112	☐	FAT and Shipment of CTs/VTs	136 days	Thu 3/23/17	Fri 11/3/17
113	☐	FAT and Shipment of Capacitor Bank	136 days	Wed 3/15/17	Fri 10/27/17
114	☐	FAT and Shipment of Substation Connectors, Hardware and fittings etc.	129 days	Thu 3/16/17	Wed 10/18/17
115	☐	FAT and Shipment of DC Batteries	90 days	Thu 3/23/17	Tue 8/22/17
116	☐	Construction	205 days	Tue 5/23/17	Wed 4/18/18
117	☐	Civil Works (Switchyard and Buildings)	205 days	Tue 5/23/17	Wed 4/18/18

118	☐	Layout Demarcation	3 days	Tue 5/23/17	Fri 5/26/17
119	☐	Construction of Power Transformer Foundations	60 days	Thu 10/19/17	Mon 1/22/18
120	☐	Construction of Transformer Way	30 days	Mon 5/29/17	Tue 7/25/17
121	☐	Construction of Gantries Foundations	60 days	Mon 7/31/17	Fri 11/3/17
122	☐	Construction of CBs Foundation	30 days	Mon 7/10/17	Thu 8/24/17
123	☐	Construction of CTs/ VTs Foundations	35 days	Mon 11/6/17	Thu 12/28/17
124	☐	Construction of Disconnectors Foundation	30 days	Tue 9/26/17	Thu 11/9/17
125	☐	Construction of Surge Arrestor Foundations	30 days	Wed 9/20/17	Fri 11/3/17
126	☐	Construction of Earth Mast Foundation	25 days	Mon 7/31/17	Thu 9/7/17
127	☐	Construction of Capacitor Bank Foundations	30 days	Fri 10/27/17	Tue 12/12/17
128	☐	Construction of Control House Building	180 days	Wed 7/12/17	Wed 4/18/18
129	☐	Construction of PMT Foundation	30 days	Thu 8/17/17	Fri 10/6/17
130	☐	Construction of 11kV Structure Foundation	16 days	Thu 7/27/17	Tue 8/22/17

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
131		Construction of approach road	15 days	Wed 7/5/17	Thu 7/27/17
132		Construction of Switchyard Lighting Foundations	14 days	Tue 8/22/17	Mon 9/18/17
133		Construction of Cable Trenches	65 days	Fri 10/6/17	Mon 1/15/18
134		Gravel Spreading	22 days	Thu 7/27/17	Thu 8/31/17
135		Erection of S/Yard Fence and Gates	20 days	Thu 7/27/17	Tue 8/29/17
136		Transmission Line	98 days	Thu 7/13/17	Thu 12/14/17
137		Construction of Transmission Tower Foundations	98 days	Thu 7/13/17	Thu 12/14/17
138		Electromechanical	158 days	Tue 8/22/17	Tue 4/24/18
139		Switchyard and Buildings	158 days	Tue 8/22/17	Tue 4/24/18
140		Erection of Power Transformer	10 days	Mon 1/22/18	Mon 2/5/18
141		Erection of Gantry and Beams	15 days	Mon 11/6/17	Tue 11/28/17
142		Erection of HV Equipment Steel support structures	7 days	Tue 8/22/17	Fri 9/1/17
143		Erection of CBs	6 days	Thu 8/24/17	Mon 9/4/17

144		Erection of CTs	5 days	Thu 12/28/17	Thu 1/4/18
145		Erection of Disconnectors	5 days	Fri 11/10/17	Fri 11/17/17
146		In stallion of Capacitor bank	12 days	Tue 12/12/17	Mon 1/1/18
147		Installation of Disc Insulators	10 days	Tue 11/28/17	Tue 12/12/17
148		Cables Terminations	10 days	Tue 12/12/17	Thu 12/28/17
149		Erection of VTs	5 days	Thu 12/28/17	Thu 1/4/18
150		Erection of Lighting Arrestors	4 days	Mon 11/6/17	Thu 11/9/17
151		Erection of PMT	3 days	Fri 10/6/17	Wed 10/11/17
152		Installation of Misc. Materials	6 days	Tue 12/12/17	Thu 12/21/17
153		Installation of DC System	4 days	Wed 4/18/18	Tue 4/24/18
154		Installation of Bus Bar	5 days	Tue 11/28/17	Tue 12/5/17
155		Installation of Connectors and Hardware + jumpers and droppers	7 days	Tue 11/28/17	Thu 12/7/17
156		Laying of Earthing Mesh	21 days	Wed 10/11/17	Mon 11/13/17

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

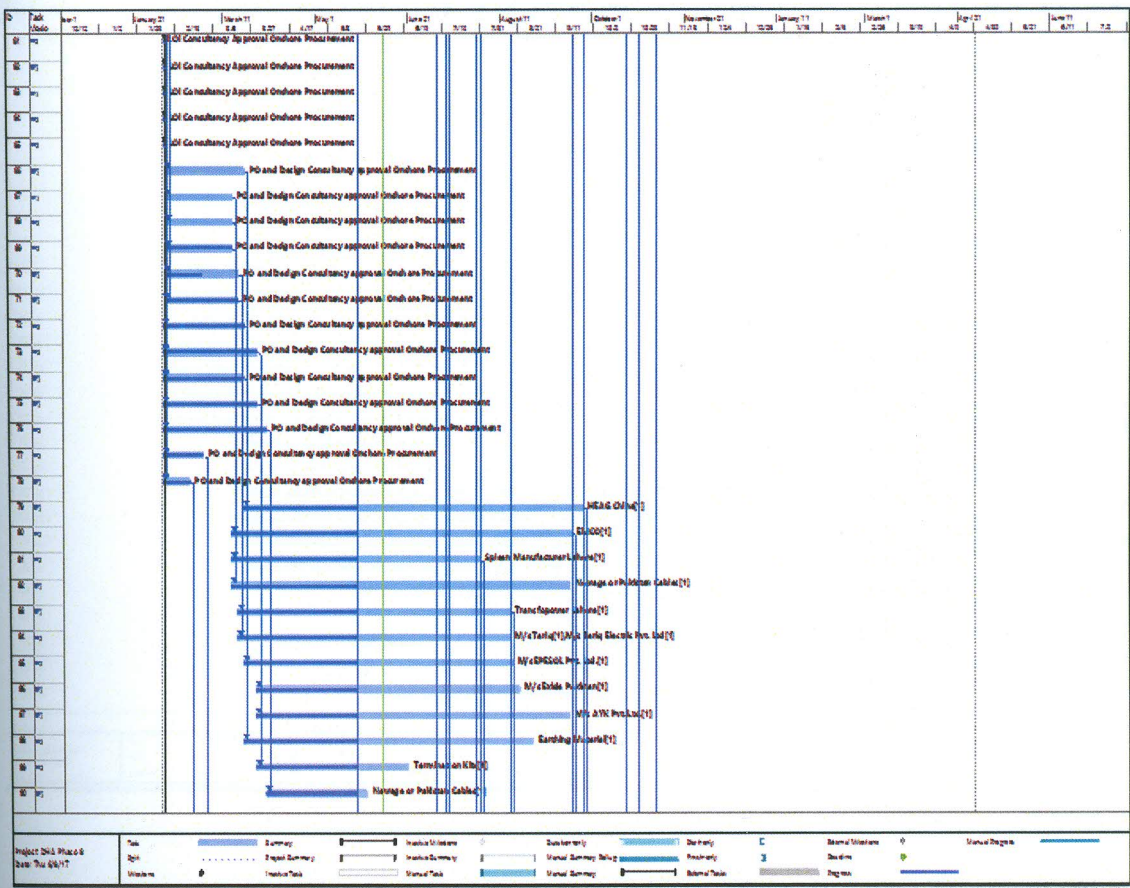
ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish
157		Laying of Power and Control Cables	22 days	Mon 2/5/18	Fri 3/9/18
158		Transformer Bay-1 testing	6 days	Fri 3/9/18	Tue 3/20/18
159		Transformer Bay-2 testing	6 days	Fri 3/9/18	Tue 3/20/18
160		Line Bay-1 testing	5 days	Thu 12/7/17	Thu 12/14/17
161		Line Bay-2 testing	5 days	Thu 12/7/17	Thu 12/14/17
162		PT Bay Testing	1 day	Thu 12/14/17	Mon 12/18/17
163		MV Switch gear Testing	6 days	Mon 12/18/17	Wed 12/27/17
164		DC System + PMT	6 days	Wed 10/11/17	Thu 10/19/17
165		CT Circuit Verification	3 days	Fri 1/5/18	Wed 1/10/18
166		VT Circuit Verification	3 days	Fri 1/5/18	Wed 1/10/18
167		Earthing Mesh Testing	2 days	Mon 11/13/17	Wed 11/15/17
168		Transmission Line	46 days	Thu 12/14/17	Fri 2/23/18
169		Erection of Towers	15 days	Thu 12/14/17	Tue 1/9/18

ID	Task Mode	Task Name	Baseline Duration	Baseline Start	Baseline Finish	January 10
170		Stringing of Transmission Line Conductor	10 days	Tue 1/9/18	Wed 1/24/18	
171		Stringing of Shield Wire	10 days	Wed 1/24/18	Wed 2/7/18	
172		Testing and Commissioning of Transmission Line	11 days	Wed 2/7/18	Fri 2/23/18	
173		Commissioning and TO Activities	27 days	Tue 3/20/18	Mon 4/30/18	
174		Preparation of Test Protocols	16 days	Tue 3/20/18	Thu 4/12/18	
175		Signing of Test Protocols	7 days	Thu 4/12/18	Mon 4/23/18	
176		Commissioning of Grid Station	4 days	Tue 4/24/18	Mon 4/30/18	
177		Energization/ Handing over Grid Station	0 days	Mon 4/30/18	Mon 4/30/18	
178		TOC Issuance	0 days	Mon 4/30/18	Mon 4/30/18	

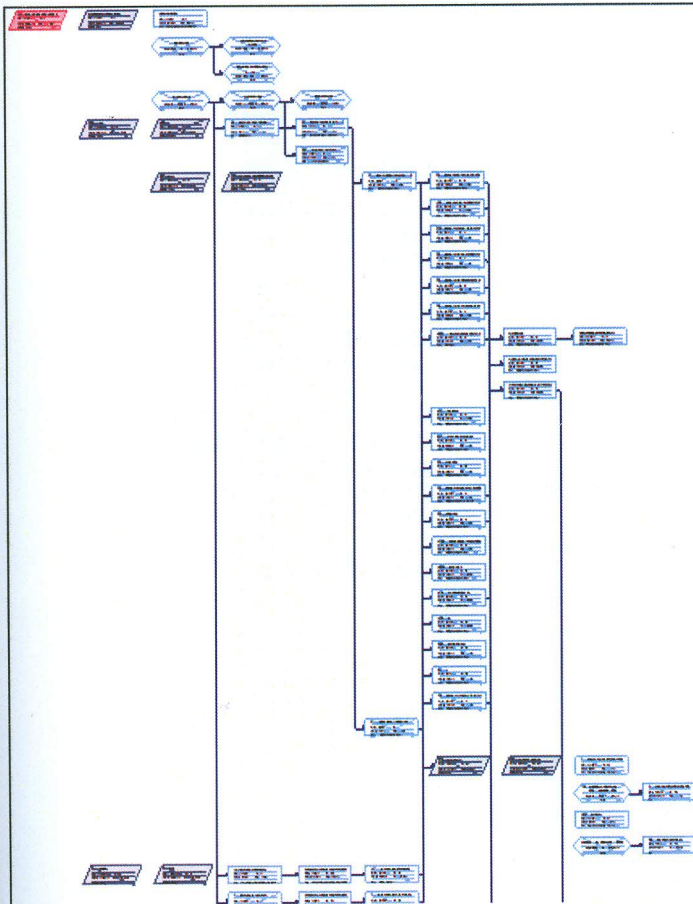
Project: DHA Phase 8
Date: Sat 6/3/17

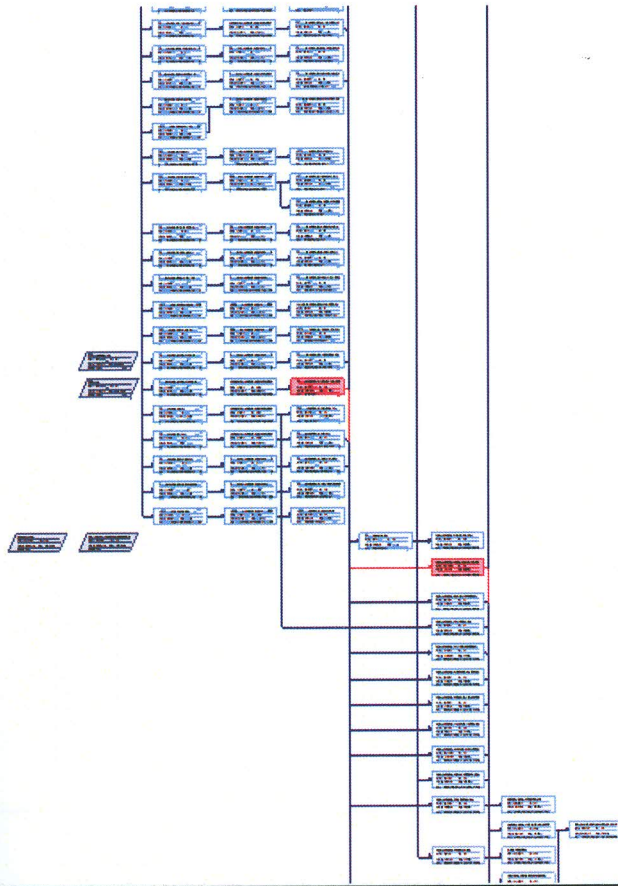
Task Split Milestone Summary Project Summary Inactive Task Inactive Milestone	Inactive Summary Manual Task Duration-only Manual Summary Rollup Manual Summary Start-only Finish-only	External Task External Milestone Deadline Progress Manual Progress	
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132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

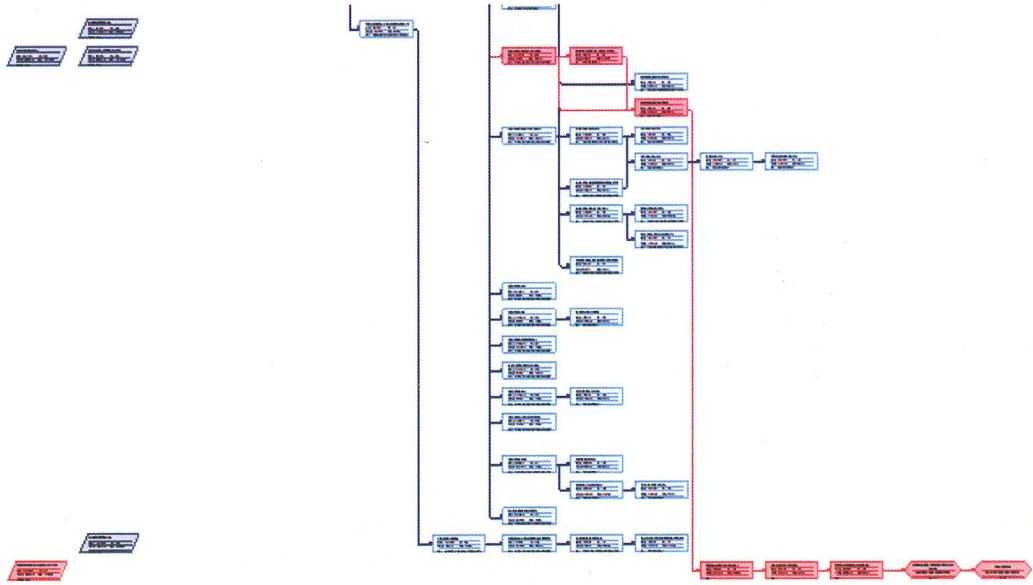


10.3 Network Diagram:





132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore



132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

10.4 Earned Value:

ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
1	132kV Grid Station DHA Phase 8	\$1,105,443.88	\$1,054,917.84	\$1,069,204.69	(\$50,526.04)	(\$14,286.85)	0.95	0.99	\$3,138,981.77
2	Pre Construction Activities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,000.00
3	Contract Signing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,000.00
4	Award of LOA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
5	Signing of Contract	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
6	Site Possession	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
7	Commencement	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
8	Submission of Performance Guarantee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
9	Submission of Advance Guarantee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
10	Engineering	\$17,025.00	\$17,025.00	\$17,025.00	\$0.00	\$0.00	1	1	\$70,680.00
11	General	\$6,360.00	\$6,360.00	\$6,360.00	\$0.00	\$0.00	1	1	\$6,360.00
12	Soil Investigation (Client Provided)	\$4,800.00	\$4,800.00	\$4,800.00	\$0.00	\$0.00	1	1	\$4,800.00
13	Project Single Line Diagram (SLD)	\$360.00	\$360.00	\$360.00	\$0.00	\$0.00	1	1	\$360.00
14	Basic Design Data Including Zero Level, Layout etc.	\$1,200.00	\$1,200.00	\$1,200.00	\$0.00	\$0.00	1	1	\$1,200.00
15	Civil Works	\$10,335.00	\$10,335.00	\$10,335.00	\$0.00	\$0.00	1	1	\$60,720.00

16	Switch yard and Building drawings	\$10,335.00	\$10,335.00	\$10,335.00	\$0.00	\$0.00	1	1	\$60,720.00
17	SLD+GLO+S/Y Foundation Plan + S/Y Equipment Layout (Including any design Modification if required)	\$3,600.00	\$3,600.00	\$3,600.00	\$0.00	\$0.00	1	1	\$3,600.00
18	CHB Structural/Architectural Design (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$3,000.00
19	Foundation of Power Transformer Design (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,760.00
20	Foundation of Gentries (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,760.00
21	Foundation of Earth Mast (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,640.00
22	Foundation of 132kV DS (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,760.00
23	Foundation of CTs and VTs (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$3,000.00
24	Foundation of 132kV Surge Arresters (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,640.00
25	Foundation of 132kV CBs (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,760.00
26	S/Y Trenches	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,200.00
27	Trench Under Transformer Way	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,200.00
28	Switch yard Fence	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$3,000.00

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
29	Main entry Gate of Grid Station	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$1,800.00
30	Switch yard Gate	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
31	Foundation of Capacitor Bank (Including any design Modification if required)	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
32	PMT Foundation	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
33	Standard Design of Doors and Windows	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
34	Trench for Control and Relay Room in CHB	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,200.00
35	11kV Cable Trench Detail in 11kV Switch Room	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,200.00
36	Security Guard Cabin	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
37	Bitumen Carpet Road 4.5 m	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
38	Fence wall	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
39	Power Transformer way	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
40	Draw Pit	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
41	Transmission Towers Foundations	\$3,600.00	\$3,600.00	\$3,600.00	\$0.00	\$0.00	1	1	\$3,600.00
42	Electromechanical	\$330.00	\$330.00	\$330.00	\$0.00	\$0.00	1	1	\$3,600.00

43	Switchyard and Building	\$330.00	\$330.00	\$330.00	\$0.00	\$0.00	1	1	\$3,600.00
44	Engineering of HV/MV Schemes and Interconnections b/w HV/MV	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$1,200.00
45	Submission of HV/MV Schemes and interconnections	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
46	Approval of HV/MV Schemes and interconnections	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
47	Relays Plug Setting	\$165.00	\$165.00	\$165.00	\$0.00	\$0.00	1	1	\$2,400.00
48	Submission of Relays Plug Setting	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
49	Approval of Relays Plug Setting	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
50	Procurement	\$1,088,275.88	\$1,037,749.84	\$1,052,036.69	(\$50,526.04)	(\$14,286.85)	0.95	0.99	\$2,537,261.05
51	On shore	\$595,416.11	\$579,426.43	\$576,472.11	(\$21,989.67)	(\$3,045.67)	0.96	0.99	\$1,022,346.35
52	LOI Issuance of Disconnectors	\$112.00	\$0.00	\$0.00	(\$112.00)	\$0.00	0	0	\$112.00
53	LOI Issuance of Surge Arrestor	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
54	LOI Issuance of Gantries, Beams, Earth Masts and 11kV Structure	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
55	LOI Issuance of Power and Control Cables	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
56	LOI Issuance of Pad Mounted Transformer	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
57	LOI Issuance of MV Switchgear	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00

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ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
58	LOI Issuance of AC/DC Auxiliary Panels	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
59	LOI Issuance of RPs and CPs	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
60	LOI Issuance of DC Battery Charger	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
61	LOI Issuance of Earthing Material	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
62	LOI Issuance of Termination Kits	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
63	LOI Issuance of Cables Trays, Cable Ties, GI Conduits etc.	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
64	LOI Issuance of Erection and Testing Equipment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
65	LOI Issuance of Miscall. Material	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
66	PO along With Design Data Submission and Approval of Disconnectors	\$2,784.00	\$0.00	\$0.00	(\$2,784.00)	\$0.00	0	0	\$2,784.00
67	PO along With Design Data Submission and Approval of Surge Arrestor	\$2,400.00	\$0.00	\$0.00	(\$2,400.00)	\$0.00	0	0	\$2,400.00
68	PO along With Design Data Submission and Approval of Gantries, Beams, Earth Masts and 11kV Structure	\$2,400.00	\$0.00	\$0.00	(\$2,400.00)	\$0.00	0	0	\$2,400.00
69	PO along With Design Data Submission and Approval of Power and Control Cables	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00	1	1	\$2,400.00
70	PO along With Design Data Submission and Approval of Pad Mounted Transformer	\$2,496.00	\$1,248.00	\$1,248.00	(\$1,248.00)	\$0.00	0.5	1	\$2,496.00

71	PO along With Design Data Submission and Approval of MV Switchgear + AC/DC Panels	\$2,496.00	\$2,496.00	\$2,496.00	\$0.00	\$0.00	1	1	\$2,496.00
72	PO along With Design Data Submission and Approval of RPs and CPs	\$2,880.00	\$2,880.00	\$2,880.00	\$0.00	\$0.00	1	1	\$2,880.00
73	PO along With Design Data Submission and Approval of DC Battery Charger	\$3,360.00	\$3,360.00	\$3,360.00	\$0.00	\$0.00	1	1	\$3,360.00
74	PO along With Design Data Submission and Approval of Earthing Material	\$2,880.00	\$2,880.00	\$2,880.00	\$0.00	\$0.00	1	1	\$2,880.00
75	PO along With Design Data Submission and Approval of Termination Kits	\$3,360.00	\$3,360.00	\$3,360.00	\$0.00	\$0.00	1	1	\$3,360.00
76	PO along With Design Data Submission and Approval of Cables Trays, Cable Ties, GI Conduits etc.	\$3,648.00	\$3,648.00	\$3,648.00	\$0.00	\$0.00	1	1	\$3,648.00
77	PO along With Design Data Submission and Approval of Erection, Testing Equipment	\$1,440.00	\$1,440.00	\$1,440.00	\$0.00	\$0.00	1	1	\$1,440.00
78	PO along With Design Data Submission and Approval of Erection, Testing Equipment	\$960.00	\$960.00	\$960.00	\$0.00	\$0.00	1	1	\$960.00
79	Fat and Shipment of Disconnectors	\$19,647.58	\$19,465.09	\$19,647.58	(\$182.49)	(\$182.49)	0.99	0.99	\$54,030.91
80	Fat and Shipment of Surge Arrestors	\$11,924.37	\$11,823.60	\$11,924.37	(\$100.77)	(\$100.77)	0.99	0.99	\$29,811.09
81	Fat and Shipment of Gantries, Beams, earth masts and 11kV Structure	\$15,531.25	\$15,400.00	\$15,531.25	(\$131.25)	(\$131.25)	0.99	0.99	\$28,238.76
82	Fat and Shipment of Power and Control Cables	\$81,422.02	\$80,733.94	\$81,422.02	(\$688.07)	(\$688.07)	0.99	0.99	\$201,705.67
83	Fat and Shipment of Pad Mounted Transformer	\$6,747.22	\$6,688.89	\$6,747.22	(\$58.33)	(\$58.33)	0.99	0.99	\$14,122.13

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ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
84	Fat and Shipment of MV Switchgear + AC/DC Panels	\$98,724.39	\$97,870.87	\$98,724.39	(\$853.53)	(\$853.53)	0.99	0.99	\$206,632.93
85	Fat and Shipment of RPs and CPs	\$44,146.39	\$43,736.36	\$44,146.39	(\$410.03)	(\$410.03)	0.99	0.99	\$97,122.17
86	Fat and Shipment of 110 VDC Battery	\$4,713.20	\$4,663.24	\$4,713.20	(\$49.96)	(\$49.96)	0.99	0.99	\$11,446.40
87	Fat and Shipment of DC Battery Charger	\$1,660.86	\$1,643.25	\$1,660.86	(\$17.61)	(\$17.61)	0.99	0.99	\$4,745.33
88	Fat and Shipment of Earthing Material	\$10,710.00	\$10,610.53	\$10,710.00	(\$99.47)	(\$99.47)	0.99	0.99	\$25,436.28
89	Fat and Shipment of Termination Kits	\$3,537.50	\$3,500.00	\$3,537.50	(\$37.50)	(\$37.50)	0.99	0.99	\$5,053.59
90	Fat and Shipment of Cables Trays, Cable Ties and GI Conduits etc.	\$185,000.00	\$185,000.00	\$185,000.00	\$0.00	\$0.00	1	1	\$200,000.00
91	Fat and Shipment of Miscel. Materials	\$10,000.00	\$0.00	\$0.00	(\$10,000.00)	\$0.00	0	0	\$10,000.00
92	Fat and Shipment of Erection, Testing Equipment	\$67,083.33	\$66,666.67	\$67,083.33	(\$416.67)	(\$416.67)	0.99	0.99	\$100,625.30
93	Transmission Line	\$20,328.31	\$20,166.77	\$20,328.31	(\$161.54)	(\$161.54)	0.99	0.99	\$31,183.84
94	LOI Issuance of Transmission line Towers	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
95	PO along With Design Data Submission and Approval of Transmission line	\$2,880.00	\$2,880.00	\$2,880.00	\$0.00	\$0.00	1	1	\$2,880.00
96	Fat and Shipment of Transmission line	\$17,392.31	\$17,230.77	\$17,392.31	(\$161.54)	(\$161.54)	0.99	0.99	\$28,262.52
97	Offshore	\$472,531.46	\$444,156.64	\$455,236.28	(\$28,374.83)	(\$11,079.64)	0.94	0.98	\$1,491,207.17
98	LOI Issuance of Transmission of Power Transformers	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
99	LOI Issuance of HV CBs	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
100	LOI Issuance of CTs/ VTs	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
101	LOI Issuance of Capacitor Bank	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
102	LOI Issuance of Substation Connectors, Hardware and fittings etc.	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
103	LOI Issuance of DC Batteries	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
104	PO along With Design Data Submission and Approval of Power Transformer	\$2,880.00	\$0.00	\$0.00	(\$2,880.00)	\$0.00	0	0	\$2,880.00
105	PO along With Design Data Submission and Approval of HV CBs	\$2,784.00	\$0.00	\$0.00	(\$2,784.00)	\$0.00	0	0	\$2,784.00
106	PO along With Design Data Submission and Approval of CTs/ VTs	\$2,784.00	\$0.00	\$0.00	(\$2,784.00)	\$0.00	0	0	\$2,784.00
107	PO along With Design Data Submission and Approval of Capacitor Bank	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00	1	1	\$2,400.00
108	PO along With Design Data Submission and Approval of Substation Connectors, Hardware and fittings etc.	\$2,496.00	\$2,496.00	\$2,496.00	\$0.00	\$0.00	1	1	\$2,496.00
109	PO along With Design Data Submission and Approval of DC Batteries	\$2,880.00	\$2,880.00	\$2,880.00	\$0.00	\$0.00	1	1	\$2,880.00
110	FAT and Shipment of Power Transformer	\$346,500.00	\$328,900.00	\$337,700.00	(\$17,600.00)	(\$8,600.00)	0.95	0.97	\$1,129,432.55
111	FAT and Shipment of Power HV CBs	\$32,017.08	\$31,224.08	\$32,017.08	(\$792.99)	(\$792.99)	0.98	0.98	\$109,773.01
112	FAT and Shipment of CTs/VTs	\$15,392.97	\$15,250.00	\$15,392.97	(\$142.97)	(\$142.97)	0.99	0.99	\$52,336.17

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

99	LOI Issuance of HV CBs	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
100	LOI Issuance of CTs/ VTs	\$112.00	\$112.00	\$112.00	\$0.00	\$0.00	1	1	\$112.00
101	LOI Issuance of Capacitor Bank	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
102	LOI Issuance of Substation Connectors, Hardware and fittings etc.	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
103	LOI Issuance of DC Batteries	\$56.00	\$56.00	\$56.00	\$0.00	\$0.00	1	1	\$56.00
104	PO along With Design Data Submission and Approval of Power Transformer	\$2,880.00	\$0.00	\$0.00	(\$2,880.00)	\$0.00	0	0	\$2,880.00
105	PO along With Design Data Submission and Approval of HV CBs	\$2,784.00	\$0.00	\$0.00	(\$2,784.00)	\$0.00	0	0	\$2,784.00
106	PO along With Design Data Submission and Approval of CTs/ VTs	\$2,784.00	\$0.00	\$0.00	(\$2,784.00)	\$0.00	0	0	\$2,784.00
107	PO along With Design Data Submission and Approval of Capacitor Bank	\$2,400.00	\$2,400.00	\$2,400.00	\$0.00	\$0.00	1	1	\$2,400.00
108	PO along With Design Data Submission and Approval of Substation Connectors, Hardware and fittings etc.	\$2,496.00	\$2,496.00	\$2,496.00	\$0.00	\$0.00	1	1	\$2,496.00
109	PO along With Design Data Submission and Approval of DC Batteries	\$2,880.00	\$2,880.00	\$2,880.00	\$0.00	\$0.00	1	1	\$2,880.00
110	FAT and Shipment of Power Transformer	\$346,500.00	\$328,900.00	\$337,700.00	(\$17,600.00)	(\$8,800.00)	0.95	0.97	\$1,129,482.55
111	FAT and Shipment of Power HV CBs	\$32,017.08	\$31,224.08	\$32,017.08	(\$792.99)	(\$792.99)	0.98	0.98	\$109,773.01
112	FAT and Shipment of CTs/VTs	\$15,392.97	\$15,250.00	\$15,392.97	(\$142.97)	(\$142.97)	0.99	0.99	\$52,336.17

128	Construction of Control House Building	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$227,360.00
129	Construction of PMT Foundation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$10,760.00
130	Construction of 11kV Structure Foundation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$8,072.00
131	Construction of approach road	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$7,880.00
132	Construction of Switchyard Lighting Foundations	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$7,688.00
133	Construction of Cable Trenches	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$17,480.00
134	Gravel Spreading	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$9,234.00
135	Erection of S/Yard Fence and Gates	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$3,200.00
136	Transmission Line	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$74,896.00
137	Construction of Transmission Tower Foundations	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$74,896.00
138	Electromechanical	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$53,080.00
139	Switchyard and Buildings	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$47,144.00
140	Erection of Power Transformer	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,520.00
141	Erection of Gantry and Beams	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$2,280.00
142	Erection of HV Equipment Steel support structures	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,064.00

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
143	Erection of CBs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$912.00
144	Erection of CTs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$760.00
145	Erection of Disconnectors	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$760.00
146	Installation of Capacitor bank	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,824.00
147	Installation of Disc Insulators	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,520.00
148	Cables Terminations	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,520.00
149	Erection of VTs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$760.00
150	Erection of Lighting Arrestors	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$608.00
151	Erection of PMT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$456.00
152	Installation of Misc. Materials	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$912.00
153	Installation of DC System	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$608.00
154	Installation of Bus Bar	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$760.00
155	Installation of Connectors and Hardware + jumpers and droppers	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,064.00
156	Laying of Earthing Mesh	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,176.00
157	Laying of Power and Control Cables	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,232.00

ID	Task Name	PV (BCWS)	EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
158	Transformer Bay-1 testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$25,336.00
159	Transformer Bay-2 testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$336.00
160	Line Bay-1 testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$280.00
161	Line Bay-2 testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$280.00
162	PT Bay Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$56.00
163	MV Switch gear Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$336.00
164	DC System + PMT	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$336.00
165	CT Circuit Verification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$168.00
166	VT Circuit Verification	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$168.00
167	Earthing Mesh Testing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$112.00
168	Transmission Line	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$5,936.00
169	Erection of Towers	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$2,280.00
170	Stringing of Transmission Line Conductor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,520.00
171	Stringing of Shield Wire	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$1,520.00
172	Testing and Commissioning of Transmission Line	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$616.00

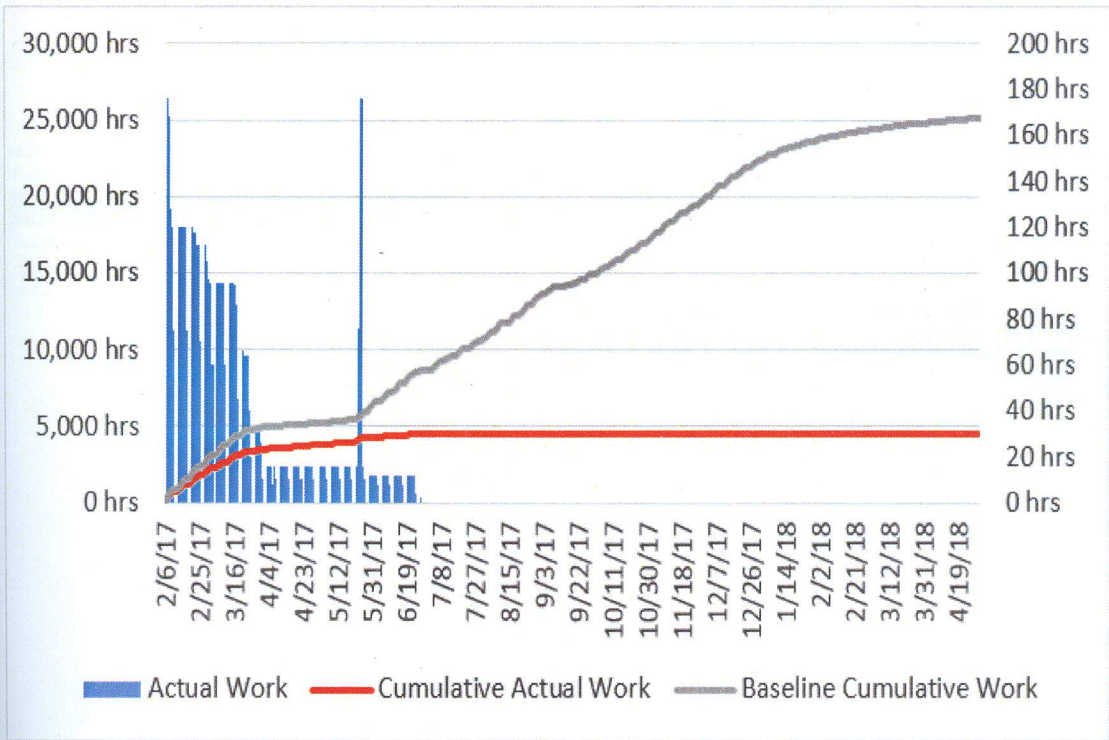
132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

ID	Task Name	Planned Value - PV (BCWS)	Earned Value - EV (BCWP)	AC (ACWP)	SV	CV	SPI	CPI	EAC
173	Commissioning and TD Activities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
174	Preparation of Test Protocols	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
175	Signing of Test Protocols	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
176	Commissioning of Grid Station	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
177	Energization/Handing over Grid Station	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00
178	TOC Issuance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0	0	\$0.00

Project: DHA Phase 8 Date: Sat 6/3/17	Task		Inactive Summary		External Task	
	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
Inactive Milestone		Finish-only				

10.5 S-Curve:

S-Curve



11. Projects Reports:

Different project reports generated using MS Project is shown below.

11.1 Project Overviews:

PROJECT OVERVIEW

MON 2/6/17 - MON 4/30/18



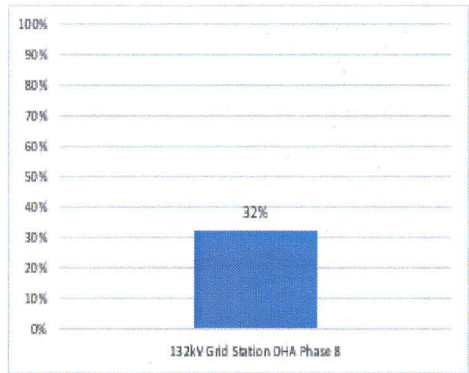
MILESTONES DUE

Milestones that are coming soon.

Name	Finish
Energization/ Handing over Grid Station	Mon 4/30/18
TOC Issuance	Mon 4/30/18

% COMPLETE

Status for all top-level tasks. To see the status for subtasks, click on the chart and update the outline level in the Field List.



LATE TASKS

Tasks that are past due.

Name	Start	Finish	Duration	% Complete	Resource Names
Contract Signing	Mon 2/6/17	Tue 4/18/17	48 days	0%	Contract Advisor(\$1,000.00)
LOI Issuance of Disconnectors	Mon 2/6/17	Tue 2/7/17	2 days	0%	LOI Consultancy Approval Onshore Procurement
PO along With Design Data Submission and Approval of Disconnectors	Wed 2/8/17	Thu 3/23/17	29 days	0%	PO and Design Consultancy approval Onshore Procurement
PO along With	Wed 2/8/17	Thu 3/23/17	29 days	0%	PO and Design

PO along With Design Data Submission and Approval of Surge Arrestor	Wed 2/8/17	Thu 3/16/17	25 days	0%	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Gantries, Beams, Earth Masts and 11kV Structure	Wed 2/8/17	Thu 3/16/17	25 days	0%	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Pad Mounted Transformer	Wed 2/8/17	Mon 3/20/17	26 days	50%	PO and Design Consultancy approval Onshore Procurement
Fat and Shipment of Miscel. Materials	Wed 3/1/17	Fri 4/14/17	30 days	0%	Misc. Material Nuts Bolts etc.[1]
PO along With Design Data Submission and Approval of Power Transformer	Wed 2/8/17	Fri 3/24/17	30 days	0%	PO and Design Consultancy approval Offshore Procurement
PO along With Design Data Submission and Approval of HV CBs	Wed 2/8/17	Thu 3/23/17	29 days	0%	PO and Design Consultancy approval Offshore Procurement
PO along With Design Data Submission and Approval of CTs/ VTs	Wed 2/8/17	Thu 3/23/17	29 days	0%	PO and Design Consultancy approval Offshore Procurement
FAT and Shipment of Power Transformer	Fri 3/24/17	Thu 10/19/17	125 days	30%	Chint China[1]

11.2 Cost Overview:

COST OVERVIEW

MON 2/6/17 - MON 4/30/18

COST

\$3,097,022.00

REMAINING COST

\$2,024,097.31

% COMPLETE

32%

COST STATUS

Cost status for top level tasks.

Name	Actual Cost	Remaining Cost	Baseline Cost	Cost	Cost Variance
132kV Grid Station DHA Phase 8	\$1,072,924.69	\$2,024,097.31	\$3,097,022.00	\$3,097,022.00	\$0.00

PROGRESS VERSUS COST

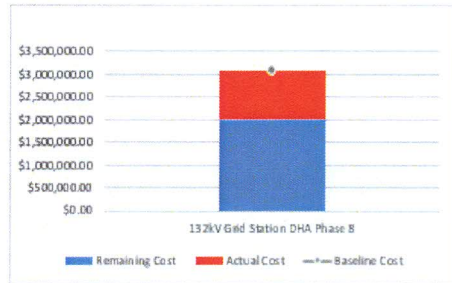
Progress made versus the cost spent over time. If % Complete line below the cumulative cost line, your project may be over budget.



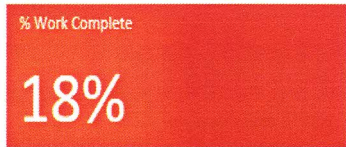
COST STATUS

Cost status for all top-level tasks. Is your baseline zero?

[Try setting as baseline](#)



11.3 Upcoming Tasks:

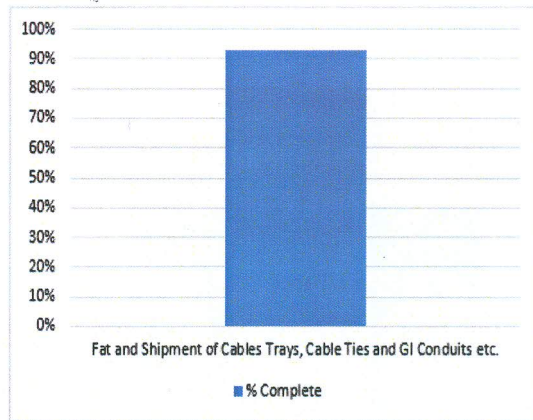


Mon 2/6/17 - Mon 4/30/18

UPCOMING TASKS

REMAINING TASKS

Status of remaining tasks that are due this week

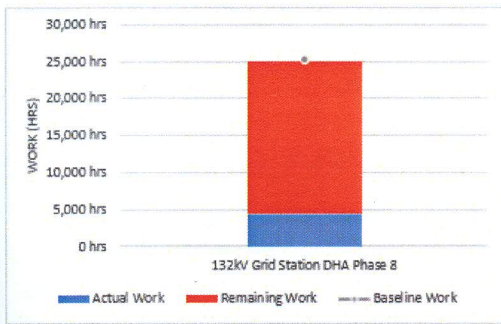
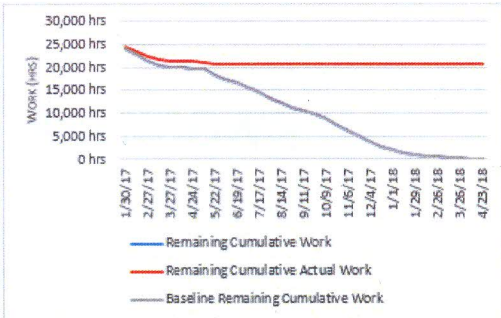


TASKS STARTING SOON

Status of tasks starting in the next week

Name	Resource Names	Start	Finish	Work
Construction of Transformer Way	Labor 1,Material like Steel Cement Sand [1],Site Engineer 1	Mon 5/29/17	Tue 7/25/17	480 hrs

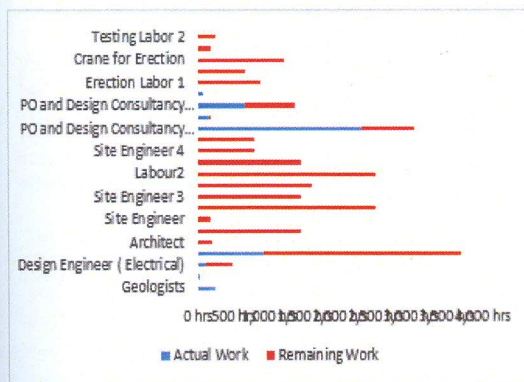
11.4 Work Overview:



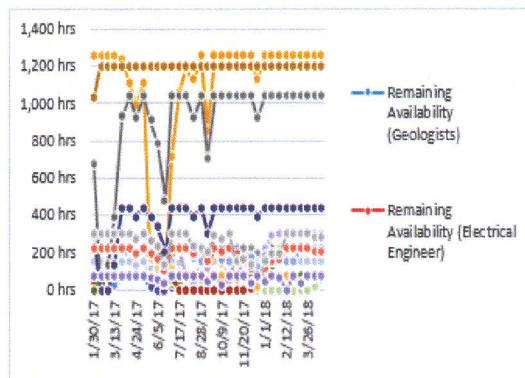
WORK OVERVIEW

Mon 2/6/17 - Mon 4/30/18

WORK STATS
Shows work stats for all top level tasks.



RESOURCE STATS
Shows work stats for all your resources.

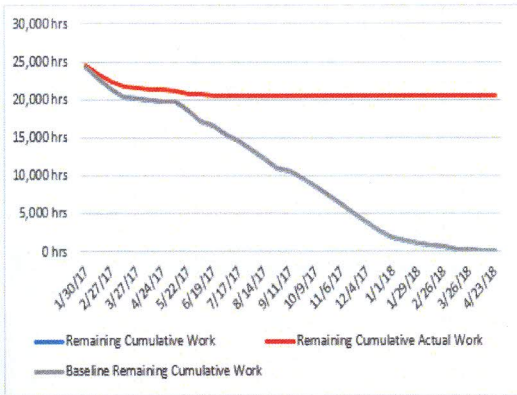


REMAINING AVAILABILITY
Shows remaining availability for all work resources.

11.5 Burndown:

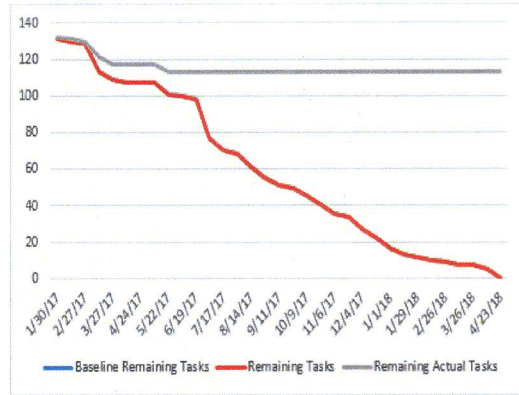
Mon 2/6/17 - Mon 4/30/18

BURNDOWN



WORK BURNDOWN

Shows how much work you have completed and how much you have left. If the remaining cumulative work line is steeper, then the project may be late. Is your baseline zero?



TASK BURNDOWN

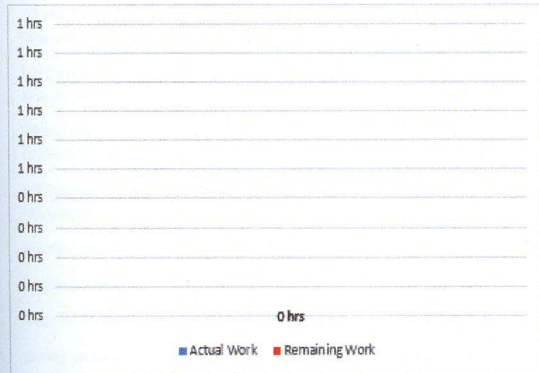
Shows how many tasks you have completed and how many you have left. If the remaining tasks line is steeper, then your project may be late.

11.6 Over allocated Resources:

OVERALLOCATED RESOURCES

WORK STATUS

Work status for overallocated resources.



OVERALLOCATION

Surplus work assigned to overallocated resources. To resolve overallocations use

[Team Planner View](#)

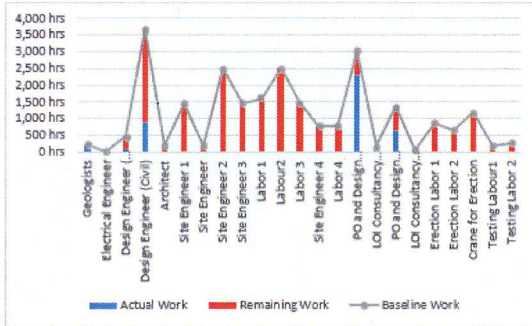


11.7 Resource Overview:

RESOURCE OVERVIEW

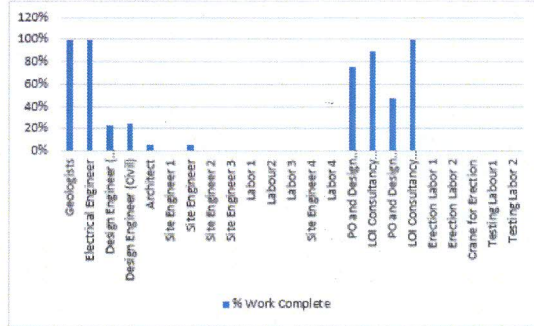
RESOURCE STATS

Work status for all work resources.



WORK STATUS

% work done by all the work resources.



RESOURCE STATUS

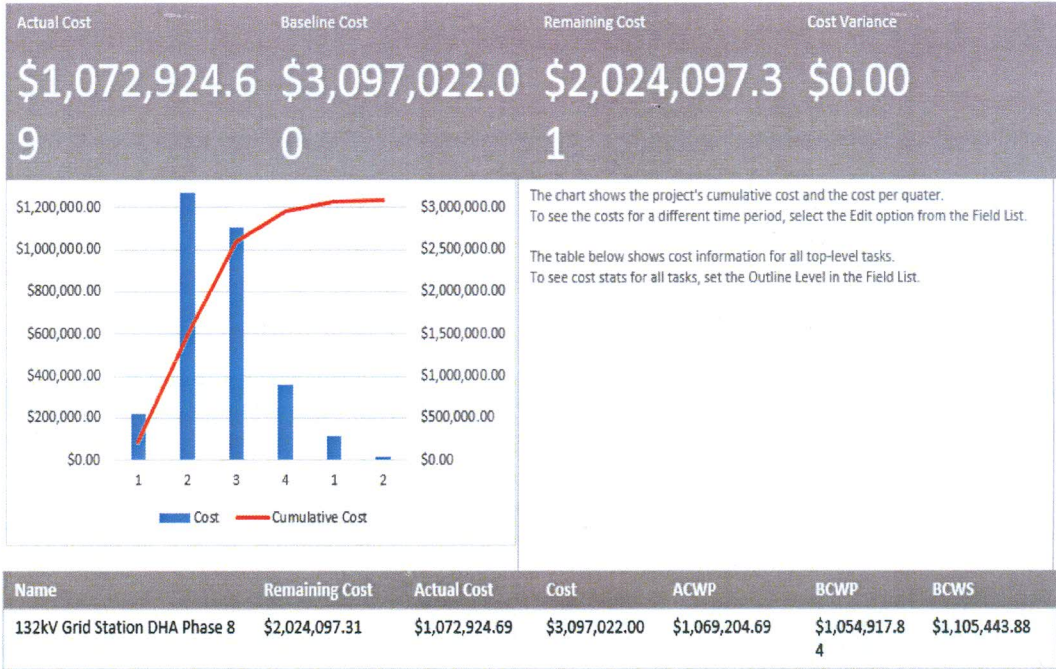
Remaining work for all work resources.

Name	Start	Finish	Remaining Work
Geologists	Mon 2/6/17	Wed 3/22/17	0 hrs
Electrical Engineer	Mon 2/6/17	Wed 2/8/17	0 hrs
Design Engineer (Electrical)	Wed 3/22/17	Wed 7/5/17	367 hrs
Design Engineer (Civil)	Thu 4/6/17	Fri 8/11/17	2,773 hrs
Architect	Tue 5/23/17	Wed 7/12/17	189 hrs
Site Engineer 1	Mon 5/29/17	Mon 1/22/18	1,440 hrs
Site Engineer	Tue 5/23/17	Tue 8/29/17	173 hrs
Site Engineer	Tue 5/23/17	Tue 8/29/17	173 hrs
Site Engineer 2	Wed 7/5/17	Mon 1/15/18	2,496 hrs
Site Engineer 3	Wed 7/12/17	Wed 4/18/18	1,440 hrs
Labor 1	Mon 5/29/17	Mon 1/22/18	1,600 hrs
Labour2	Wed 7/5/17	Mon 1/15/18	2,496 hrs
Labor 3	Wed 7/12/17	Wed 4/18/18	1,440 hrs
Site Engineer 4	Thu 7/13/17	Thu 12/14/17	784 hrs
Labor 4	Thu 7/13/17	Thu 12/14/17	784 hrs
PO and Design Consultancy approval Onshore Procurement	Tue 2/7/17	Tue 4/4/17	736 hrs
LOI Consultancy Approval Onshore Procurement	Mon 2/6/17	Tue 2/7/17	16 hrs
PO and Design Consultancy approval Offshore Procurement	Tue 2/7/17	Fri 3/24/17	704 hrs
LOI Consultancy Approval Offshore Procurement	Mon 2/6/17	Tue 2/7/17	0 hrs
Erection Labor 1	Tue 8/22/17	Fri 3/9/18	880 hrs
Erection Labor 2	Fri 10/6/17	Tue 4/24/18	656 hrs
Crane for Erection	Tue 8/22/17	Tue 4/24/18	1,192 hrs
Testing Labour1	Mon 11/13/17	Tue 3/20/18	184 hrs
Testing Labor 2	Wed 10/11/17	Tue 3/20/18	248 hrs

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

11.8 Cash flow:

CASH FLOW

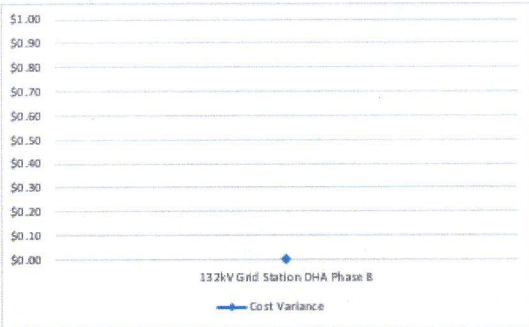


11.9 Cost overruns:

COST OVERRUNS

TASK COST VARIANCE

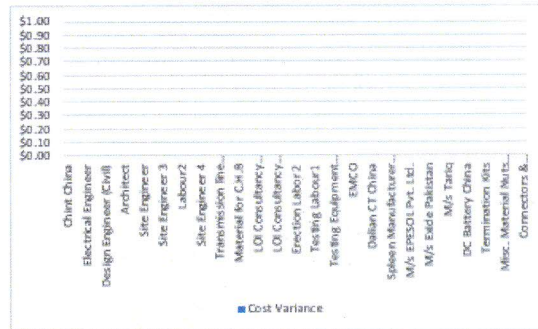
Cost variance for all top-level tasks in the project.



Name	% Complete	Cost	Baseline Cost	Cost Variance
132kV Grid Station DHA Phase B	32%	\$3,097,022.00	\$3,097,022.00	\$0.00

RESOURCE COST VARIANCE

Cost variance for all the work resources.



Name	Cost	Baseline Cost	Cost Variance
Geologists	\$4,800.00	\$4,800.00	\$0.00
Electrical Engineer	\$360.00	\$360.00	\$0.00
Design Engineer (Electrical)	\$7,200.00	\$7,200.00	\$0.00
Design Engineer (Civil)	\$55,320.00	\$55,320.00	\$0.00
Architect	\$3,000.00	\$3,000.00	\$0.00

Design Engineer (Electrical)	\$7,200.00	\$7,200.00	\$0.00
Design Engineer (Civil)	\$55,320.00	\$55,320.00	\$0.00
Architect	\$3,000.00	\$3,000.00	\$0.00
Site Engineer 1	\$18,720.00	\$18,720.00	\$0.00
Site Engineer	\$2,392.00	\$2,392.00	\$0.00
Site Engineer 2	\$29,952.00	\$29,952.00	\$0.00
Site Engineer 3	\$17,280.00	\$17,280.00	\$0.00
Labor 1	\$11,200.00	\$11,200.00	\$0.00
Labour2	\$29,952.00	\$29,952.00	\$0.00
Labor 3	\$10,080.00	\$10,080.00	\$0.00
Site Engineer 4	\$9,408.00	\$9,408.00	\$0.00
Labor 4	\$5,488.00	\$5,488.00	\$0.00
PO and Design Consultancy approval Onshore Procurement	\$36,384.00	\$36,384.00	\$0.00
LOI Consultancy Approval Onshore Procurement	\$1,120.00	\$1,120.00	\$0.00
PO and Design Consultancy approval Offshore Procurement	\$16,224.00	\$16,224.00	\$0.00
LOI Consultancy Approval Offshore Procurement	\$504.00	\$504.00	\$0.00
Erection Labor 1	\$6,160.00	\$6,160.00	\$0.00
Erection Labor 2	\$4,592.00	\$4,592.00	\$0.00
Crane for Erection	\$14,304.00	\$14,304.00	\$0.00
Testing Labour1	\$1,288.00	\$1,288.00	\$0.00
Testing Labor 2	\$1,736.00	\$1,736.00	\$0.00

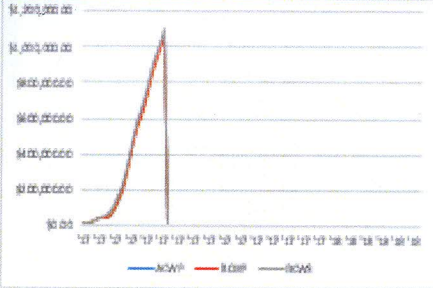
11.10 Earned Value Report:

EARNED VALUE

Earned value management helps you gauge the performance of a project. It compares cost and schedule to a baseline to determine if the project is on track.

If the chart doesn't look right, make sure you know all the baseline, assigned costs, tasks or resources, and selected projects.

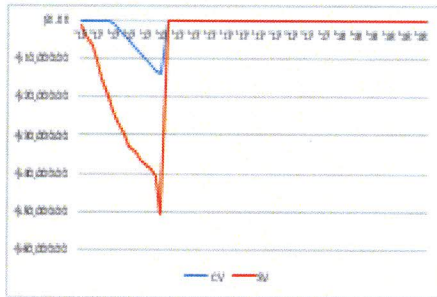
EAC	ACWP	BCWP
\$3,138,981.	\$1,069,204.	\$1,054,917.
77	69	84



EARNED VALUE OVER TIME

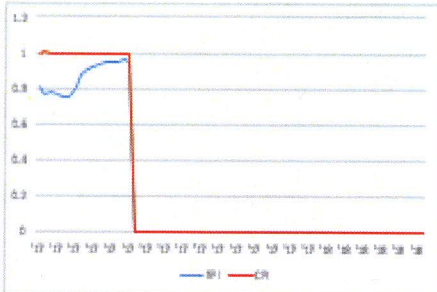
The project's earned value based on the status date. If actual cost (ACWP) is higher than earned value (BCWP), then the project is over budget. If planned value (BCWS) is higher than earned value, then the project is behind schedule.

[Learn more about earned value](#)



VARIANCE OVER TIME

Cost and schedule variances for the project based on status date. If CV is negative then, the project is over budget. If SV is positive then the project is behind schedule.



INDICES OVER TIME

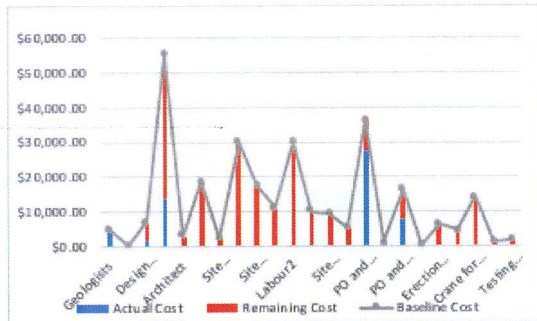
Cost and schedule performance indices for the project based on status date. The greater the performance index, the more on schedule and cost saving the project.

11.11 Resource Cost Overview:

RESOURCE COST OVERVIEW

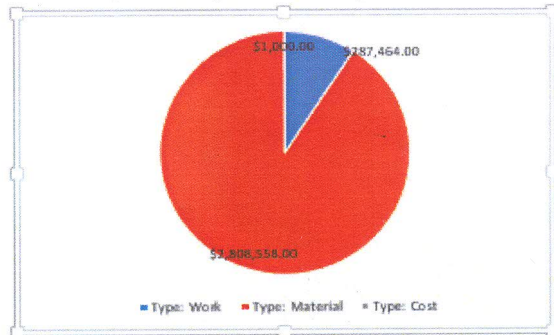
COST STATUS

Cost status for work resources.



COST DISTRIBUTION

How costs are spread out amongst different resource types.



COST DETAILS

Cost details for all work resources.

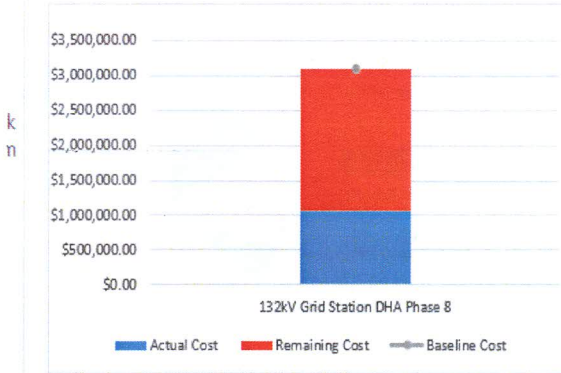
Name	Actual Work	Actual Cost	Standard Rate
Geologists	240 hrs	\$4,800.00	\$20.00/hr
Electrical Engineer	24 hrs	\$360.00	\$15.00/hr
Design Engineer (Electrical)	113 hrs	\$1,695.00	\$15.00/hr
Design Engineer (Civil)	915 hrs	\$13,725.00	\$15.00/hr
Architect	11 hrs	\$165.00	\$15.00/hr
Site Engineer 1	0 hrs	\$0.00	\$13.00/hr
Site Engineer	11 hrs	\$143.00	\$13.00/hr
Site Engineer 2	0 hrs	\$0.00	\$12.00/hr
Site Engineer 3	0 hrs	\$0.00	\$12.00/hr
Labor 1	0 hrs	\$0.00	\$7.00/hr
Labour2	0 hrs	\$0.00	\$12.00/hr
Labor 3	0 hrs	\$0.00	\$7.00/hr
Site Engineer 4	0 hrs	\$0.00	\$12.00/hr
Labor 4	0 hrs	\$0.00	\$7.00/hr
PO and Design Consultancy approval Onshore Procurement	2,296 hrs	\$27,552.00	\$12.00/hr
LOI Consultancy Approval Onshore Procurement	152 hrs	\$1,008.00	\$7.00/hr
PO and Design Consultancy approval Offshore Procurement	648 hrs	\$7,776.00	\$12.00/hr
LOI Consultancy Approval Offshore Procurement	72 hrs	\$504.00	\$7.00/hr
Erection Labor 1	0 hrs	\$0.00	\$7.00/hr
Erection Labor 2	0 hrs	\$0.00	\$7.00/hr
Crane for Erection	0 hrs	\$0.00	\$12.00/hr
Testing Labour1	0 hrs	\$0.00	\$7.00/hr
Testing Labor 2	0 hrs	\$0.00	\$7.00/hr

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

11.12 Task cost overview:

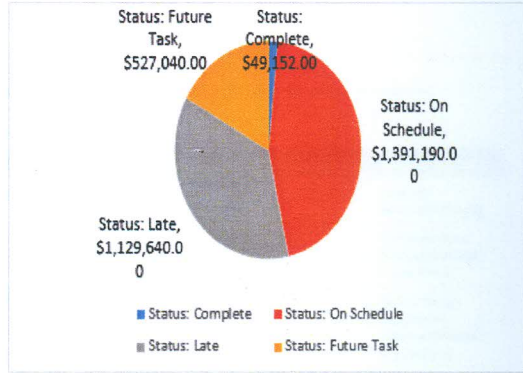
COST STATUS

Cost status for top-level tasks.



COST DISTRIBUTION

How costs are spread out amongst tasks based on their status.



COST DETAILS

Cost details for all top-level tasks.

Name	Fixed Cost	Actual Cost	Remaining Cost	Cost	Baseline Cost	Cost Variance
132KV Grid Station DHA Phase 8	\$0.00	\$1,072,924.69	\$2,024,097.31	\$3,097,022.00	\$3,097,022.00	\$0.00

11.13 Critical Tasks:

CRITICAL TASKS



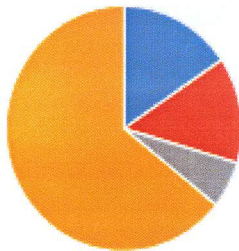
- Status: Complete
- Status: On Schedule
- Status: Late
- Status: Future Task

A task is critical if there is no room in the schedule for it to slip.
[Learn more about managing your project's critical path.](#)

Name	Start	Finish	% Complete	Remaining Work	Resource Names
FAT and Shipment of Power Transformer	Fri 3/24/17	Thu 10/19/17	30%	0 hrs	Chint China[1]
Construction of Power Transformer Foundations	Thu 10/19/17	Mon 1/22/18	0%	960 hrs	Labor 1,Material like Steel Cement Sand [1],Site Engineer 1
Erection of Power Transformer	Mon 1/22/18	Mon 2/5/18	0%	160 hrs	Crane for Erection,Erection Labor 1
Laying of Power and Control Cables	Mon 2/5/18	Fri 3/9/18	0%	176 hrs	Erection Labor 1
Transformer Bay-2 testing	Fri 3/9/18	Tue 3/20/18	0%	48 hrs	Testing Labor 2
Preparation of Test Protocols	Tue 3/20/18	Thu 4/12/18	0%	0 hrs	
Signing of Test Protocols	Thu 4/12/18	Mon 4/23/18	0%	0 hrs	
Commissioning of Grid Station	Tue 4/24/18	Mon 4/30/18	0%	0 hrs	
Energization/ Handing over Grid Station	Mon 4/30/18	Mon 4/30/18	0%	0 hrs	
TOC Issuance	Mon 4/30/18	Mon 4/30/18	0%	0 hrs	

11.14 Late Tasks:

LATE TASKS



- Status: Complete
- Status: On Schedule
- Status: Late
- Status: Future Task

Tasks that are late as compared to the status date. A task is late if its finish date has passed or it is not progressing as planned.

Name	Start	Finish	% Complete	Remaining Work	Resource Names
Contract Signing	Mon 2/6/17	Tue 4/18/17	0%	0 hrs	Contract Advisor[1,000.00]
LOI issuance of Disconnection	Mon 2/6/17	Tue 2/7/17	0%	56 hrs	LOI Consultancy Approval Onshore Procurement
PO along With Design Data Submission and Approval of Disconnections	Wed 2/8/17	Thu 3/23/17	0%	232 hrs	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Surge Arrestor	Wed 2/8/17	Thu 3/16/17	0%	200 hrs	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Gantries, Beams, Earth Mats and 11kV Structure	Wed 2/8/17	Thu 3/16/17	0%	200 hrs	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Pad Mounted Transformer	Wed 2/8/17	Mon 3/20/17	50%	104 hrs	PO and Design Consultancy approval Onshore Procurement
Fit and Shipment of Miscel. Materials	Wed 3/1/17	Fri 4/14/17	0%	0 hrs	Misc. Material Nuts Bolts etc.[1]
PO along With Design Data Submission and Approval of Power Transformer	Wed 2/8/17	Fri 3/24/17	0%	240 hrs	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of Hvr CGs	Wed 2/8/17	Thu 3/23/17	0%	232 hrs	PO and Design Consultancy approval Onshore Procurement
PO along With Design Data Submission and Approval of CTs/ VTs	Wed 2/8/17	Thu 3/23/17	0%	232 hrs	PO and Design Consultancy approval Onshore Procurement
FAT and Shipment of Power Transformer	Fri 3/24/17	Thu 10/19/17	30%	0 hrs	China China[1]

11.15 Milestone report:

MILESTONE REPORT

LATE MILESTONES

Milestones that are past due.

Name	Finish

MILESTONES UP NEXT

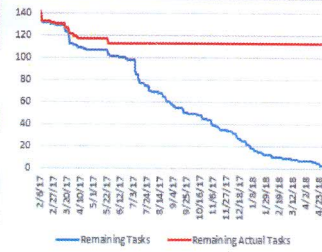
Milestones due in this month.

Name	Finish

COMPLETED MILESTONES

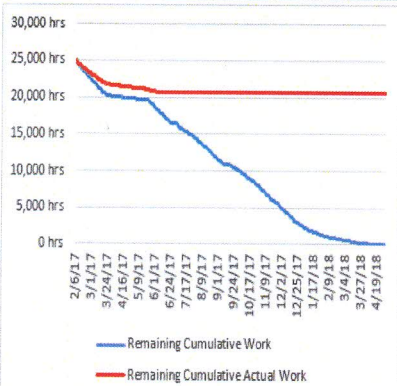
Milestones that are 100% complete.

Name	Finish
Award of LOA	Mon 2/6/17
Signing of Contract	Mon 2/6/17
Site Possession	Mon 2/6/17
Commencement	Mon 2/6/17
Submission of Performance Guarantee	Mon 2/6/17
Submission of Advance Guarantee	Mon 2/6/17
Submission of HV/MV Schemes and interconnections	Tue 5/23/17
Submission of Relays Plug Setting	Tue 5/23/17



11.16 Slipping Tasks:

SLIPPING TASKS



Tasks where the finish date is past the baseline finish date.

Name	Start	Finish	% Complete	Remaining Work	Resource Names

12. References:

- Project management Body of Knowledge (PMBOK) 5th Edition
- <http://www.enmassepakistan.com>
- <http://www.pmi.org/pmbok-guide-standards>
- http://www.pmi.org/~media/PDF/Publications/PMI_Pulse_PMO-Frameworks.ashx
- <http://www.pmi.org/pmbok-guide-standards>
- <https://www.projectsmart.co.uk/project-management-office.php>
- <http://www.brighthubpm.com/project-planning/5161-what-is-a-project-charter/>
- <http://www.brighthubpm.com/templates-forms/2491-writing-a-scope-statement>
- <http://www.projectmanagementdocs.com/project-documents/project-scope-statement.html#axzz3wvnHjoWj>

13. Templates:

Templates of following documents are shown in this section:

- A standard template for project charter
- A standard template for project scope statement
- A standard template for change request
- A standard template for reporting format

13.1 Project Charter:

Version History:

Version	Issue Date	Approved By	Approval Date	Changes	Completed By

Project Title	
Project Description	
Project Objectives	
Acceptance Criteria	
Assumptions	
Project Duration	
Start and completion Date	
Milestones List	
Project Budget	
High level Risks	
Main Stakeholders	
Project Manager	
Roles and Responsibilities	

Approval Signature:

Name:

Designation:

Signature:

Date:

Name:

Designation:

Signature:

Date:

13.2 Project Scope Statement:

Version History:

Version	Issue Date	Approved By	Approval Date	Changes	Completed By

1. Introduction:
2. Project Objectives:
3. Major Deliverables:
4. Milestones:
5. Assumptions and Constraints:
6. Limits and Exclusions:
7. Technical Requirement and Specifications

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

Approval Signature:

Name:

Designation:

Signature:

Date:

Name:

Designation:

Signature:

Date:

132 kV Grid Station and Transmission Line DHA Phase-VIII Lahore

13.3 Change Request:

Change Request	
Project:	Date:
Change Requestor:	Change No:
Change Category (Check all that apply):	
<input type="checkbox"/> Schedule	<input type="checkbox"/> Cost
<input type="checkbox"/> Testing/Quality	<input type="checkbox"/> Resources
<input type="checkbox"/> Scope	<input type="checkbox"/> Requirements/Deliverables
Does this Change Affect (Check all that apply):	
<input type="checkbox"/> Corrective Action	<input type="checkbox"/> Preventative Action
<input type="checkbox"/> Defect Repair	<input type="checkbox"/> Updates
<input type="checkbox"/> Other	
Describe the Change Being Requested:	
Describe the Reason for the Change:	
Describe all Alternatives Considered:	
Describe any Technical Changes Required to Implement this Change:	
Describe Risks to be Considered for this Change:	
Estimate Resources and Costs Needed to Implement this Change:	
Describe the Implications to Quality:	
Disposition:	
<input type="checkbox"/> Approve	<input type="checkbox"/> Reject
<input type="checkbox"/> Defer	
Justification of Approval, Rejection, or Deferral:	

Change Board Approval:		
Name	Signature	Date

13.4 Reporting Format:

Activity ID	Activities	Completion (Man/hour)			Material Usage (kg)			Labor Productivity	
		Planned	Actual	Variance	Planned	Actual	Variance	Planned	Actual

14. Plagiarism Report:

Made by Ahsan Nawaz

ORIGINALITY REPORT

%8 SIMILARITY INDEX	%6 INTERNET SOURCES	%2 PUBLICATIONS	%7 STUDENT PAPERS
-------------------------------	-------------------------------	---------------------------	-----------------------------

PRIMARY SOURCES

1	digitalcollections.americanancestors.org Internet Source	%2
2	Submitted to Jones International University Student Paper	%1
3	Submitted to University of Central Lancashire Student Paper	%1
4	Submitted to University of Derby Student Paper	%1
5	Submitted to American Intercontinental University Online Student Paper	<%1
6	Submitted to Higher Education Commission Pakistan Student Paper	<%1
7	www.uakron.edu Internet Source	<%1
8	Submitted to London School of Science & Technology Student Paper	<%1

9	sggswu.org Internet Source	<%1
10	Submitted to Curtin University of Technology Student Paper	<%1
11	www.bbsydpsindh.gov.pk Internet Source	<%1
12	www.cmpdi.co.in Internet Source	<%1
13	www.omfed.com Internet Source	<%1
14	www.dot.state.fl.us Internet Source	<%1
15	de.slideshare.net Internet Source	<%1
16	www.pakistanproperty.pk Internet Source	<%1
17	Handbook on Continuous Improvement Transformation, 2013. Publication	<%1

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EXCLUDE MATCHES OFF

For:  8/6/17

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