

EXPRO National Manual for Projects Management

Volume 7, Chapter 2

Project Historical Cost Reporting Procedure

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Project Historical Cost Reporting Procedure

1.0 PURPOSE

The Project Controls procedure describes the concepts for preparing the Historical Cost Reports (HCR) on all Projects. The report detail will depend on the overall value of the project and require the agreement of the Entity Project Controls Manager.

This procedure applies to works performed under all Government construction projects executed throughout the Kingdom of Saudi Arabia.

1.1 Importance

The Historical Cost Report is the report which records the final installed scope, certain technical data, installed quantities, actual construction and services hours, schedule, cost and other pertinent information. Each Entity critically needs HCR information to support new proposals and for use in validating new estimates by providing a solid foundation for cost, schedule, quantity and erection hour metrics, comparisons and reconciliations

2.0 SCOPE

2.1 Reporting Requirements

All projects must prepare a full Historical Cost Report unless the applicable Entity Project Controls Manager directs otherwise. For those projects not completing a full Historical Cost Report, it is recommended that the project provide a final summary of the project for the Entity Estimating archives. The content of this final summary will be at the discretion of the Entity Project Controls Manager, it will also be defined based on the value.

2.2 Timing

The Historical Cost Report will be prepared and submitted to the Entity Estimating Department prior to demobilizing the project controls team. A plan for completion of the Historical Cost Report should be in place when the work is approximately 50% complete so that input can be obtained from engineering discipline leads before they are reassigned.

2.3 Format

The format should be electronic standard applications which should be used for all documents, reports, spreadsheets and drawings. Proprietary applications and hard copy documents should be issued in an appendix to the published Historical Cost Report.

3.0 DEFINITIONS

Definitions	Description	
BA	Budget Adjustment/Transfers	
CA	Procurement Commitment Authorization	
CAS	Contract Assignment Schedule	
СВ	Current Budget	
CCA	Contract Commitment Authorization	
CF	Current Forecast	
CA	Contract Administrator	
COA	Code of Account	
CoCo	Cost and Commitment	
DOR	Division of Responsibility	
ECAR	Extra Charge Approval Request	
EP	Engineering Procurement	
EPC	Engineering, Procurement and Construction	
EPCM	Engineering, Procurement and Construction	
	Management	

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EVMS	Earned Value Management System
ESOS	Equivalent Scope of Services
FMR	Field Material Requisition
HCR	Historical Cost Report
LD	Liquidated Damages
MAS	Material Assignment Schedule
NTP	Notice to Proceed
ОВ	Original Budget
OBS	Organization Breakdown Structure
OOM	Order of Magnitude (Estimate)
ED	Engineering Director
PS	Procurement Specialist.
PCE	Project Controls Engineer
PCM	Project Controls Manager
PCR	Project Cost Report.
PM	Project Manager
PMS	Proposal Management Schedule
PO	Purchase Order
QURR	Quantity and Unit Rate Report
SC	Subcontract
SM	Site Manager
TIC	Total Installed Cost
WBS	Work Breakdown Structure
Backcharge	A charge by either the Entity/Contractor as a means of recovering all the costs incurred by the Contractor/Entity to correct or repair and/or modify deficient work that is directly result of the
Contractor	Entity/Contractor.
Contractor	A Third party the Entity has contractual relationship with, to perform a defined scope of work.
Entity	Any government Entity/Entity developing projects in Saudi Arabia.
Job Number	Unique Identifier given to each Project

4.0 REFERENCES

- 1. EPM-KPR-PR-000002 Project Monthly Reporting Procedure
- 2. EPM-KPR-PR-000003 Project Cost Reporting Procedure
- 3. EPM-KPC-PR-000001 Project Cost Coding Structure Procedure
- 4. EPM-KPC-PR-000003 Project Cost and Commitment Procedure
- 5. EPM-KPC-PR-000004 Project Forecasting Procedure
- 6. EPM-KPC-PR-000007 Project Trend Program Procedure
- 7. EPM-KPC-PR-000008 Project Management of Change Procedure
- 8. EPM-KPC-PR-000009 Project Backcharges Procedure
- 9. EPM-KPP-PR-000001 Project Planning and Scheduling Definitions and Concepts Procedure

5.0 RESPONSIBILITIES

5.1 Historical Cost Report Preparation

The assigned Project Controls Manager will be responsible for directing the project controls team in the Historical Cost Report's preparation and distribution. Historical Cost Report preparations should be an integral part of the project control system's planning and setup.

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Project Historical Cost Reporting Procedure

5.2 Historical Cost Report Review and Approval

5.2.1 Accuracy

The Project Manager and Entity Project Controls Manager will review and approve the Historical Cost Report for accuracy.

5.2.2 Completeness

The primary customers of the Historical Cost Report are the Entity Project Controls Manager and the Entity Manager of Estimating who will undertake a review of the Historical Cost Report for completeness.

6.0 PROCESS

6.1 Historical Cost Report Content

6.1.1 Currency should be SAR.

For international projects, a table should be created showing the currency of spend by commodity and the conversion factor and effective date used to obtain SAR

6.1.2 Existing Information

Wherever possible, the final reports/outputs from the existing project controls programs should be used as the content for the Historical Cost Report. The intent is to maximize the use of existing information.

6.1.3 Data Versus Information

When selecting the content for the Historical Cost Report, please use the following priority:

Information, data that has been analyzed and organized into reports.

6.1.4 Reader's Perspective

When creating the HCR, assume the reader knows nothing about the project but is familiar with the type of projects, tools and processes used by the Entity.

For those sections that contain data, the initial page(s) should be a summary. If detail reports cannot be easily reconciled with the summary, an explanation should be provided.

6.1.5 Multiple Contract

If the project has more than one job number, the cost data should be combined to reflect the project as a whole, or it should be presented so that the user can easily identify and locate the components.

6.2 General Content

An Executive Summary should be included at the beginning of the Historical Cost Report. The content and format should be defined by this procedure or the Entity's Historical Cost Report procedure.

Where applicable, the Historical Cost Report should address the following macro topics:

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Project Historical Cost Reporting Procedure

6.2.1 Project Information

6.2.1.1 Scope of Project

Describe briefly the nature of the project; indicating purpose, capacity and other significant features. Describe existing facilities, obstructions or any other unique aspects which would be a consideration when using the data for comparison to other projects or future bids. Describe any offsite facilities or services utilized. For work performed in existing facilities, describe work which would require a shutdown of the facility and/or any hot tie-ins. A summary level "as built" execution plan should be included if available.

6.2.1.2 Contract Terms

For ease of reporting purposes, condense the contractual terms for responsibility and method of reimbursement (e.g., EPC, EPCM). For very complicated contracts, attach supplemental information should include a prime contract description.

6.2.1.3 Project Location and Site Conditions

Provide brief statements describing general characteristics of the site and vicinity. As a minimum, the report should address geographic location and jobsite elevation, weather and its effect on labor, concurrent or nearby construction projects/industries, locations of the nearest cities that serve as a source of the craft labor, transportation facilities, sources of field-purchased material, and soils and water table.

6.2.1.4 Key Engineering Drawings

This section should include key drawings such as the site plan, plot plan, buildings arrangements and elevations, civil and structural layouts, electrical single lines and architectural renderings.

For projects with a Scope Book, the entire Scope Book should be included as a reference document or be available in the project's document management system. For projects with no Scope Book, a job data book should be prepared by engineering that should include a narrative description, key technical drawings, system descriptions, etc.

• Quantities - Bulk Commodities

Provide a detailed breakdown of all the quantities installed on the project. The actual quantities from a completed project are the most important information to archive from a project. A QURR report can be used to provide the installed quantities as long as any subcontractor-installed quantities are identified separately.

• Quantities – Basis for Equipment Erection Hours

The erection of major equipment can yield a large percentage of the overall erection hours on a project. Equipment drawings that provide weight and shape of assembly should be included to establish the basis for the major equipment erection.

6.2.1.5 Tables of Organization

Provide tables indicating supervisory individuals in Entities and the Contractor's organizations. The tables should illustrate the structure of the organizations and are not meant to list every individual who filled the various positions. Additional pages should be included which show all Entity Field Non-Manual positions at the peak of the project.

6.2.1.6 Entity/Contractor Relations

Provide a brief synopsis of Entity's relationship with the Contractors on the project. Identify the key members of the Contractor's team and identify any lessons learned or noteworthy developments, positive or negative, during the course of the project to be considered in future dealings.

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6.2.1.7 Monthly Progress Highlights

Include brief statements containing the highlights of the project for each month from start to completion. On jobs of over 2 years, this section could be modified to describe highlights during each quarter (3 months) of the project.

6.2.1.8 Erection Labor Data

This level of detail available is dependent on the type of Contract and the level of reporting that has been agreed. If erection labor data is available, then it should be included in this section. This should be broken down into as much detail as possible.

6.2.1.9 Temporary Construction Facilities

This level of detail available is dependent on the type of Contract and the level of reporting that has been agreed.

This should include where applicable an overall plot plan showing the location and dimensions of temporary buildings/shops/bays, rail spurs, storage areas and unloading facilities, parking, and utilities.

If available, include sketches showing the arrangement of each major temporary building or shop.

If the project is remote, identify parameters, characteristics, etc., of special facilities such as construction camp, dock, customs clearing, concrete batch plant, etc.

6.2.1.10 Visual Record

Photographs

it.

- Include 10 to 12 progress photos. Photos should show project status during early, mid-point, and final stages of construction and one photo of the completed project.
- Digital Video
 If available, include a final video of the completed project in DVD form. The video should show the major process systems and structures and focus on capturing the complexity of the work and unique issues.
 Length of the video will vary by project but shall be of ample detail to allow the estimators, engineers and Six Sigma personnel studying the project to understand the project without having to physically visit

6.2.2 General Content – Cost Data

6.2.2.1 Budgets, Forecasts and Final Costs

Provide the original and final budgets, each major forecast and final costs. The Historical Cost Report should reflect final actuals, but the final forecast may be used. The status of any close-out items in negotiation when the Historical Cost Report is issued should be addressed, including the assumptions of final settlement. Indicate here the source and date of the final costs. The project accounting records are usually not closed out until several months after the Project Cost Report is issued. The ultimate users of the Project Cost Report data will validate the reported cost against the cost shown in the final accounting summary if necessary.

6.2.2.2 Cumulative Commitments and Costs

Show the progress of material and subcontract commitments and the payment of project costs.

6.2.2.3 Entity-Furnished Material and Services

List all material, labor or design office services provided by the Entity or by third parties where Contractor has any contractual responsibility.

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Project Historical Cost Reporting Procedure

6.2.2.4 Change Order Tabulation/Trend Report

This summary tabulates the development of the final budget. Change orders under a predetermined limit may be grouped in one item to reduce the length of the report. Projects using target pricing for sharing of under/overruns should indicate the effect of each change order on the target price. The final Trend Register for the project should also be included.

6.2.3 Planning and Scheduling

6.2.3.1 Schedule Narrative

A succinct commentary describing significant schedule issues such as: Major external/Entity restraints/requirements; particularly effective execution plan and/or schedule logic factors; schedule impact causes and durations (specifying cumulative or critical path); schedule recovery efforts; time extensions, reasons; schedule-related claims.

6.2.3.2 Schedules

- Baseline and final issues of the following schedules:
 - Level I Summary Schedule (Management)
 - Level II Summary Schedule (if used)
 - o Pre-Op Testing, Commissioning/Testing (Summary) Schedule
 - o Critical Path Schedule
 - Selected Subject Schedules for specific tasks such as Front-End schedule, schedules developed for specific difficult tasks, etc.

• Other Subsections for:

- Staffing Curve (average man months)
- Staffing Curve (total project)
- o Performance Graphs
- Project Schedule File
- Curves planned and actual for Engineering manpower and production/release for fabrication,
 Procurement production, construction manpower installation
- o Analysis of variance (how much was due to change orders, etc.)
- o How schedule contingency was managed

Procurement

o Procurement Narrative

A succinct commentary highlighting procurement topics/issues such as purchasing process, expediting, supplier quality, traffic & logistics, etc.

o Procurement Attachments

Attachments such as the material assignment schedule (including milestone summary report), list of major equipment purchase orders/commitments, list of bulk material purchase orders/commitments, reports on supplier performance, etc.

Environmental, Safety, and Health

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Narrative

A succinct commentary highlighting ES&H topics/issues such as environmental program and audits, training, hazardous materials, safety program, safety record, etc.

ES&H Attachments

Attachments such as the ES&H organization chart, safety statistics, etc.

Budgets vs. Final Costs

Provide the necessary detail to show significant differences in quantities, hours and costs between the original budget, final budget and final cost. Note that subcontract hours and costs should also be addressed.

For projects with 2 or more units (where costs are segregated by unit), details should be provided on a per-unit basis. Include one summation for all units. Common facilities should be shown separately or included with the first unit, but never spread to the units.

The original budget data are extracted from the bid estimate. Current budget data is developed by adding all approved and selected pending (where changes are certain to impact project) change orders to the original budget data unless management has subsequently approved a revised budget.

Projects which have incentives in the contract should include the contract incentive provisions and the final calculation of the incentive amount actually received from the Entity. Projects using targets for calculating shared cost over/under runs with the Entity should also include the Original Target and its basis, and adjustments supporting the Final Target.

Final Cost Details – Metrics and Parametrics

Final Cost Metrics

Final quantities, jobhours and costs must be captured (to the extent possible) at the level shown in this exhibit. These metrics are collected for cross-ENTITY analysis, reconciliations and comparisons.

Project Parametrics

For those projects that generate comparative metrics, include parametrics spreadsheet with appropriate notes.

Final Weekly Labor Report (Quantity and Unit Rate Report)

This will depend on the type of Contract and the type of Contract that has been awarded but should include a complete detailed Quantity Unit Rate Report with the final forecast posted to the "Current Forecast" columns, with the performance shown based on final budget. Include a copy of the final Labor Analysis Report.

Contract/Subcontract Data



Summary of Contracts/Subcontracts

Summarizes all project contracts/subcontracts and group all contracts or subcontracts for each contractor or subcontractor and subtotal costs and hours by contract/subcontractor. Ratings may be applied once for each subcontractor. For each subcontract, this section should indicate the contract type (i.e., Lump Sum, Unit Price, Time & Materials, etc.). It should also indicate whether the contractor/subcontractor provided specialized services it managed or was a provider of Contractor-managed craft.

Estimate the approximate labor component for each contractor/subcontract by multiplying the hours by appropriate craft wages and fringes in effect during the contract/subcontract's construction period. The approximate material component is the balance of the contract/subcontract cost.

Use backup sheets to detail final quantities, hours and costs for complex contract/subcontracts.

o Contract/Subcontract Manpower Distribution

Tabulate actual field contract/subcontract staffing obtained from force report averages. The time-scale information can be added to suit the actual construction period. For jobs with 2 or more years of construction, staffing can be shown by quarters rather than by months.

Progress and Performance Curves

Copies of progress and performance curves, quantity release curves, planned vs. actual installation rates, etc., used by the project to monitor the status of the job should be included in this section. An explanation of substantial differences between planned, actual. For projects with 2 or more units, it would be useful if curves for the individual units were prepared. Common facilities should be shown separately or included with the first unit, but never spread to the units.

Studies

Most of the information contained in a Project Historical Cost Report reflects final cost and quantities and can be completed only at the end of construction. In many cases, however, special studies can be prepared and distributed soon after the particular events studied are completed. Examples of such special studies might include unusual site preparation operations, unusual or innovative construction operations, lessons learned, participation in/implementation of recent Six Sigma PIPS, and finally project problems. Copies should be included in this section of the Historical Cost Report.

6.3 Report Distribution

The project shall submit the completed Historical Cost Report to its Entity Estimating Department in a handoff meeting with the purpose of reviewing the individual reports to ensure that the unique aspects of the project are understood by the Estimating staff. The originator will prepare one hard copy and one electronic copy for the Entity Library. Other copies will be in an electronic Format.

Additional Historical Cost Report distribution shall be at the discretion of the respective Entity Project Controls Manager. Portions of the Historical Cost Report that contain information that may be of use to other Entities will be distributed to the Corporate Project Controls Group for posting to the website or share drive.

6.4 Appendices for Historical Cost Report

These appendices should be provided to accompany all Historical Cost Report reports.

- Scope of Project (Extract from Project Execution Plan or Contract)
- Contract Terms (Extract from Contract and summarize)
- Project Location and Site Conditions (Pictorial location, photos, narrative description)
- Key Engineering Drawings (Typically plot plans)
- Tables of Organization (Extract from Project Execution Plan Latest)

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- Entity/ Contractor Relations (Narrative description of the interaction between Entity & Contractor)
- Monthly Progress Highlights (Extract from Monthly Reports)
- Labor Data (Based on data provided by Contractor)
- Budgets Forecasts and Final Cost (From Final Cost Report EPM-KPR-RG-000003)
- Cumulative Commitments and Costs (From Cost & Commitment Report EPM-KPC-PR-000003)
- Entity Furnished Material and Services (List materials provided free issue to Contractor)
- Change Order Tabulation (Change Order Register EPM-KPC-PR-000008)
- Schedule Narrative (Extract from Project Controls Plan)
- Schedules (Latest schedules to be produced on the Project, extract from planning software)
 - Level I Summary Schedule
 - Level II Summary Schedule
 - o Pre-op Schedule
 - o Critical Path Schedule

Curves, Analysis (Typical graphs produced in the execution phase to be included:

- Staffing Curve (Average man months)
- Staffing Curve (Total project, per location by discipline as issued in the monthly reports
- Performance Graphs (Extract from monthly reports).

Procurement Narrative (Extract from the Procurement Plan)

Environmental, Safety, and Health Narrative (Extract from the Project execution plan and monthly reports) Example Budget versus Final Costs

Final Cost Details – Metrics and Parametrics (Extract from monthly report on quantity, cost and hours)

- Final Cost Metrics
- Project Parametrics

Final Weekly Labor Report (Extract from final monthly report)
Contract /Subcontract Data (Extract data from monthly reports)
Progress and Performance Curves (Curves issued in monthly report)
Studies (List all studies performed under the Contract)

7.0 ATTACHMENTS

- 1. Historical Cost Report Preparation Plan
- 2. Title Page
- 3. Table of Content



Attachment 1 - Historical Cost Report Preparation Plan

JOB NO XXXXX

SUBJECT	RESP	DATE
TITLE PAGE	<u>ED</u>	XX/XX
INDEX	<u>ED</u>	XX/XX
I. PROJECT INFORMATION		
A. SCOPE B. CONTRACT TERMS C. PROJECT LOCATION AND SITE CONDITIONS D. KEY ENGINEERING DRAWINGS E. TABLES OF ORGANIZATION F. ENTITY/CONTRACTOR RELATIONS G. MONTHLY PROGRESS HIGHLIGHTS H. CRAFT LABOR DATA I. TEMPORARY CONSTRUCTION FACILITIES J. VISUAL RECORD	ED CA ED ED PM PCM SM SM ED	XX/XX XX/XX XX/XX XX/XX XX/XX XX/XX XX/XX XX/XX XX/XX XX/XX
II. <u>GENERAL CONTENT – COST DATA</u>		
A. BUDGETS, FORECASTS AND FINAL COSTS B. CUMULATIVE COMMITMENTS AND COSTS C. ENTITY-FURNISHED MATERIAL AND SERVICES D. CHANGE ORDER TABULATION/TREND REPORT	PCM PCM PCM PCM	XX/XX XX/XX XX/XX XX/XX
A. SCHEDULE NARRATIVE B. SCHEDULES	PCM PCM	XX/XX XX/XX
IV. <u>PROCUREMENT</u>	<u>PS</u>	XX/XX
V. <u>ENVIRONMENTAL, SAFETY AND HEALTH</u>	ED	XX/XX
VI. <u>BUDGETS VS. FINAL COSTS</u>	<u>PCM</u>	XX/XX
VII. FINAL COST DETAILS – METRICS AND PARAMETRICS	<u>PCM</u>	XX/XX
VIII.FINAL WEEKLY LABOR REPORT	SM	XX/XX
IX. CONTRACT/SUBCONTRACT DATA	CA	XX/XX
X. PROGRESS AND PERFORMANCE CURVES	PCM	XX/XX
IX. <u>STUDIES</u>	ED A	AS REQ'D



Attachment 2 - Title Page

	ENTITY JOB	
	HISTORICAL COST REPORT	
ENTITY	NAME	
HOME OF	FICE	
PROJECT	NAME	
LOCATION	N	
DESCRIPT	TION	
SPONSOR:	ENTITY OFFICE	
SIGNIFICANT DATES:	AWARD	
ENGINEERING START	CONSTRUCTION FROM TO	
CONTRACT- TYPI	E SCOPE ENG'G. / PROC.	/ CONST'N. / MGMT
FINAL COSTS		
(REFLECTS FORECAS	ST NO AS OF)	
		SAR 1,000,000's
CONTRACTOR	FURNISHED	
ENTITY FURNIS	SHED	
TOTAL PROJEC	CT COSTS	0.000



Attachment 3 - Table of Content

JOB NO INDEX

SUBJECT PAGE

INDEX

- PROJECT INFORMATION
 - A. SCOPE OF PROJECT
 - B. CONTRACT TERMS
 - C. PROJECT LOCATION AND SITE CONDITIONS
 - D. KEY ENGINEERING DRAWINGS
 - E. TABLES OF ORGANIZATION
 - F. ENTITY RELATIONS
 - G. MONTHLY PROGRESS HIGHLIGHTS
 - H. CRAFT LABOR DATA
 - I. TEMPORARY CONSTRUCTION FACILITIES
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- II. GENERAL CONTENT COST DATA
 - A. BUDGETS, FORECASTS AND FINAL COSTS
 - B. CUMULATIVE COMMITMENTS AND COSTS
 - C. ENTITY-FURNISHED MATERIAL AND SERVICES
 - D. CHANGE ORDER TABULATION/TREND REPORT

PLANNING AND SCHEDULING SCHEDULE NARRATIVE SCHEDULES CURVES, ANALYSES, CONTINGENCY

PROCUREMENT

ENVIRONMENTAL, SAFETY, AND HEALTH

- VI. BUDGETS VS. FINAL COSTS
- VII. FINAL COST DETAILS METRICS AND PARAMETRICS
- VIII. FINAL WEEKLY LABOR REPORT
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