

Costing and Control

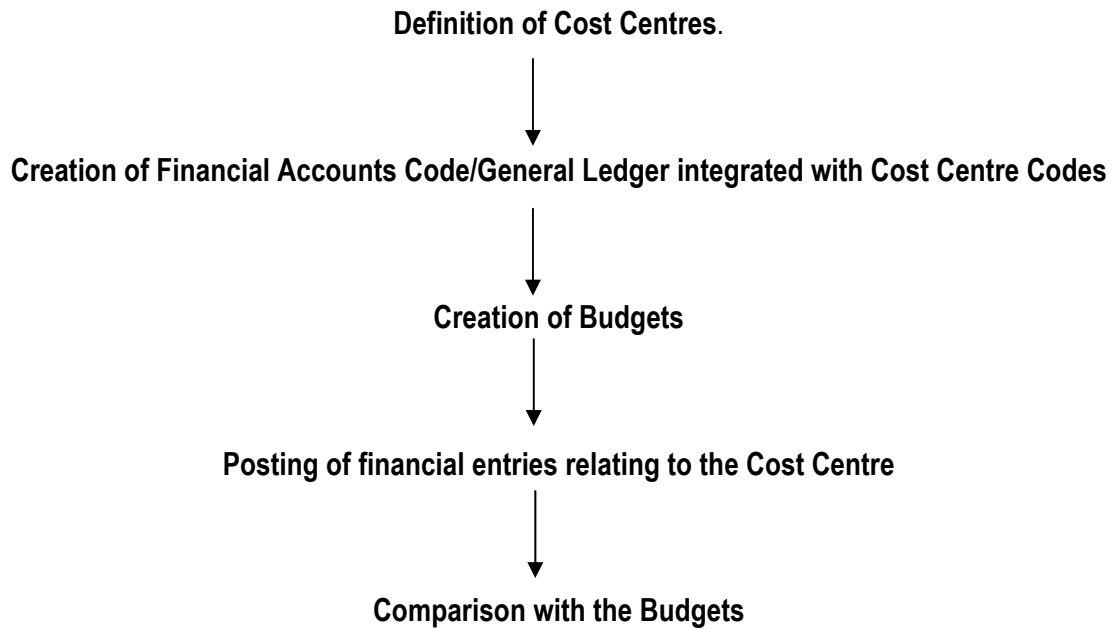
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I. COSTING AND CONTROL

Cost Accounting is an important control tool which when integrated with the Financial Records forms a system which is easy to operate as well as reduces data redundancy.

The Logical outlay of an Integrated Financial and Cost Accounting System



1. Definition of Cost Centres and integrating with Financial Accounts

Cost Centres are defined based on the primary control that needs to be exercised. In the case of AP Genco the primary definition can be made done at an operational unit level of Stages whereby the operational and maintenance costs of each Stage is captured. The cost center codes have to be pre fixed to the accounting codes thereby enabling the posting to the cost records. This step obviates the need to capture data separately for both financial and cost accounting needs.

2. Creation of Budgets

Budgets have to be created on a Cost Centre wise basis and preferably on a Zero Based approach annually or in any other time horizon. These Budgets form the basis on which control can be exercised over the cost.

3. Posting of Financial Entries

Financial entries to be posted have to be pre fixed with the cost center codes and the same is posted into the financial ledger and the respective cost center books.

4. Comparison with Budgets

The amounts posted in the Cost Records are then compared with the Budgets to ensure compliance with them as well as to ensure that there are no overruns and if there are overruns whether the same is authorised.

An Illustration of the same is provided below:

Unit Code	Cost Center Code	Financial Account Code		
		Account Group	Sub Account Group	Account Code
xxxx	Xxxxxxx	xx	xx	xx

An example is given below to illustrate the same

Unit Code	Cost Center Code	Financial Account Code		
		Account Group	Sub Account Group	Account Code
4500	1103010	29	21	01
VTPS	VTPS Stage I O&M	Employee Costs	Salaries & DA O&M Staff	Basic Pay

Location Code

First four digits designate the Unit (location) Code of the Power Stations. This coding has been introduced for final consolidation of the accounts. AP Genco follows a system of accounting for all the transactions pertaining to a particular unit at the unit level. Considering this aspect a unique four-digit location code has been created to identify the location from where trial balances are prepared. For example VTPS – 4500, RTPP-Stage 1 – 4701. The codes for the locations are controlled centrally and the definition of the same also has to be done at the Head Office.

Cost Centre Code

The seven digits designate the Cost Centre code based on activity. The first digit denotes the Unit or the Thermal station . The second digit relates to the nature of activity viz. 1. Preventive maintenance, 2. break-down maintenance, 3. Overhaul, 0. Other than maintenance etc. The next two digits relate to the functional department. The last three digits denote the cost centres relating to the activity. The codification done is to be mapped to the profit and loss account codes The Cost Centre have to be identified based on the cost drivers and separate postings have to be made into the Work Orders based on the Cost Centre Codes allocated to the accounting entry.

Financial Account Code

This code shall be used for posting the financial transactions in the Financial Records. The logical break up of the financial accounting code structure is given below:

- First Two Digits – Account Group – This denotes the Account Group or the head of disclosure under the Balance Sheet or Profit & Loss Account. This is an aggregation of the sub account groups under the Account Group Head.
- Section 2 –Third Digit – Sub Account Group – This has been designed as a schedule whereby it forms a aggregation of all the second sub account group heads.
- Section 3 – Fourth Digit – Sub Account Group – This has been designed as a sub schedule to the main schedule, which is the first sub account group digit code. This Sub account group is the aggregation of the individual account heads in the Sub Account Group.

Section 4 – Fifth and Sixth Digit – Account Code – This is the individual account head under which the transactions will be posted.

The Financial Adviser & Chief Controller of Accounts (Accounts) may alter/add/delete unit codes, cost center codes, account codes and forms to remove difficulties in implementation and to meet day to day requirements.

The cost centre codes recommended above in consonance with the Financial Accounting Codes developed under the Manual, may call for minor modifications in order to facilitate maintenance and compilation of cost data to suit the requirements under the maintenance of Cost Accounting Records (Electricity Industry) Rules 2001 applicable to the Company. This may warrant changes in cost code structure which may be addressed to suitably.

II. COST CENTRE CODES

1. COAL BASED POWER PLANT

S.No.	COST CENTRE CODE	DESCRIPTION
01.	OPERATION	
	01004	CW SYSTEM (INCL COOLING TOWERS)
	01010	WATER TREATMENT PLANT
	01025	MGR
	01026	COAL HANDLING SYSTEM
	01030	ASH HANDLING SYSTEM
	01041	BOILER & BOILER AUXILIARIES
	01046	TURBINE & TURBINE AUXILIARIES
	01056	FUEL OIL SYSTEM
	01064	HYDROGEN GENERATION PLANT
	01065	ELECTRICAL SYSTEM HIGH VOLTAGE
	01067	ELEC SYSTEMS -6.6KV 110VDC
	01071	COMPRESSED AIR SYSTEM
	01073	OTHER MISCELLANEOUS SYSTEM
02.	MECHANICAL MAINTENANCE	
	02004	CW SYSTEM INCLUDING COOLING TOWERS
	02010	WATER TREATMENT PLANT
	02025	MGR
	02026	COAL HANDLING SYSTEM
	02030	ASH HANDLING SYSTEM
	02046	TURBINE & TURBINE AUXILIARIES
	02056	FUEL OIL SYSTEM
	02063	MECHANICAL WORKSHOP
	02064	HYDROGEN GENERATION PLANT
	02071	COMPRESSED AIR SYSTEM
	02090	MISCELLANEOUS SYSTEM
03.	ELECTRICAL MAINTENANCE	
	03004	CW SYSTEM (INCL COOLING TOWERS)
	03010	WATER TREATMENT PLANT
	03025	MGR
	03026	COAL HANDLING SYSTEM
	03030	ASH HANDLING SYSTEM
	03041	BOILER & BOILER AUXILIARIES
	03046	TURBINE & TURBINE AUXILIARIES
	03056	FUEL OIL SYSTEM
	03063	ELECTRICAL WORKSHOP
	03064	HYDRIGEN GENERATION PLANT
	03065	ELEC SYSTEM HIGH VOL 400-132KV
	03067	ELEC SYSTEM LOW VOL 6.6 KV-110KV

S.No.	COST CENTRE CODE	DESCRIPTION
	03068	CABLE NETWORK
	03069	ELECTRICAL LIGHTS & FITTINGS
03.	03071	COMPRESSED AIR SYSTEM
	03090	MISCELLANEOUS SYSTEM
04.	C & I MAINTENANCE	
	04004	CW SYSTEM
	04010	WATER TREATMENT PLANT
	04025	MGR
	04026	COAL HANDLING SYSTEM
	04030	ASH HANDLING SYSTEM
	04041	BOILER & BOILER AUXILIARIES
	04046	TURBINE & TURBINE AUXILIARIES
	04052	FUEL OIL SYSTEM
	04064	HYDROGEN GENERATION PLANT
	04068	CABLE NET WORK
	04070	DAS
	04071	COMPRESSED AIR SYSTEM
	04076	CONTROL ROOM
	04077	FURNACE SAFETY SUPERVISION
	04079	ANALOGUE CONTROL SYSTEM(ACS)
	04080	SAMPLE TABLE
	04081	UNIT CONTROL BOARDS(UCB)
	04082	OTHER CONTROL ROOM INSTRUMENTS
	04090	MISCELLANEOUS SYSTEM
05.	CIVIL MAINTENANCE	
	05004	CW SYSTEM (INCLUDING COOL TOWERS)
	05031	ASH DYKE
	05109	MAINPLANT BLDG & STRUCTURE
	05086	ROADS.DRAINAGE & SEWERAGE
	05090	OTHER AUX PLANT BLDG & STRUCTURE
07.	GENERAL PLANT EXPENDITURE	
	07101	GENERAL PLANT EXPENDITURE
08.	TOWNSHIP	
	08107	TOWN SHIP
	08108	SCHOOL
09.	ADMINISTRATION	
	09100	ADMINISTRATION - ALL
	09102	DISPENSARY
	09103	CRECHE
	09104	TRANSPORT
	09105	SAFETY IMPLEMENTATION
	09106	WELFARE MEASURES

2. GAS BASED POWER PLANT

S.No.	COST CENTRE CODE	DESCRIPTION
01.	OPERATION	
	01004	CW SYSTEM INCLUDING COOLING TOWER & CHLORINATION SYSTEM
	01010	WATER TREATMENT PLANT INCLUDING RAW WATER
	01042	GAS TURBINE GENERATOR & AUXILIARIES
	01045	STEAM TURBINE GENERATOR & AUXILIARIES
	01049	BLACK START SYSTEM
	01051	LIQUID FUEL SYSTEM (NAPHTHA)
	01052	FUEL OIL SYSTEM(HSD)
	01065	HIGH VOLTAGE SYSTEM
	01067	LOW VOLTAGE SYSTEM
	01071	COMPRESSED AIR SYSTEM
	01089	FIRE FIGHTING SYSTEM
01090	MISCELLANEOUS SYSTEM	
02.	MECHANICAL MAINTENANCE	
	02004	CW SYSTEM INCLUDING COOLING TOWER & CHLORINATION SYSTEM
	02010	WATER TREATMENT PLANT INCLUDING RAW WATER SYSTEM
	02042	GAS TURBINE GENERATOR & AUXILIARIES
	02043	BYE-PASS SYSTEM
	02044	WASTE HEAT RECOVERY BOILER & BOILER AUXILIARIES
	02045	STEAM TURBINE GENERATOR & STG AUXILIARIES
	02049	BLACK START
	02050	FUEL GAS SYSTEM (PIPES AND FILTERATION SYSTEM)
	02051	LIQUID FUEL SYSTEM (NAPHTHA)
	02052	FUEL OIL SYSTEM (HSD)
	02063	WORKSHOP
	02071	COMPRESSED AIR SYSTEM
	02072	AIR INTAKE SYSTEM
	02088	HVAC
	02089	FIRE FIGHTING SYSTEM
02090	MISCELLANEOUS SYSTEM	
03.	ELECTRICAL MAINTENANCE	
	03004	CW SYSTEM INCLUDING COOLING TOWER & CHLORINATION SYSTEM
	03072	AIR INTAKE SYSTEM
	03042	GAS TURBINE GENERATOR & AUXILIARIES
	03043	BYE-PASS SYSTEM
	03044	WASTE HEAT RECOVERY BOILER & BOILER AUXILIARIES
	03045	STEAM TURBINE GENERATOR & STG AUXILIARIES
03049	BLACK STRAT	

S.No.	COST CENTRE CODE	DESCRIPTION
03.	03051	LIQUID FUEL SYSTEM (NAPHTHA)
	03052	FUEL OIL SYSTEM(HSD)
	03055	FUEL GAS SYSTEM (PIPES AND FILTERATION SYSTEM)
	03063	WORKSHOP
	03065	HIGH VOLTAGE SYSTEM
	03066	STATION LIGHTING
	03067	LOW VOLTAGE SYSTEM
	03071	COMPRESSED AIR SYSTEM
	03088	HVAC
	03089	FIRE FIGHTING SYSTEM
	03090	MISCELLANEOUS SYSTEM
04.	C&I MAINTENANCE	
	04004	CW SYSTEM INCLUDING COOLING TOWER & CHLORINATION SYSTEM
	04010	WATER TREATMENT PLANT INCLUDING RAW WATER SYSTEM
	04041	AIR INTAKE SYSTEM
	04042	GAS TURBINE GENERATOR & AUXILIARIES
	04043	BYE-PASS SYSTEM
	04044	WASTE HEAT RECOVERY BOILER & BOILER AUXILIARIES
	04045	STEAM TURBINE GENERATOR & STG AUXILIARIES
	04049	BLACK STRAT SYSTEM
	04050	FUEL GAS SYSTEM (PIPES AND FILTERATION SYSTEM)
	04051	LIQUID FUEL SYSTEM (NAPHTHA)
	04052	FUEL OIL SYSTEM(HSD)
	04063	WORKSHOP
	04071	COMPRESSED AIR SYSTEM
	04074	DDCMTS
	04082	OTHER CONTROL & INSTRUMENTATION SYSTEMS
	04083	PROCESS MANAGEMENT SYSTEM (PMS)
	04089	FIRE FIGHTING SYSTEM
04090	MISCELLANEOUS SYSTEM	

3. HYDEL BASED POWER PLANT

S.No.	COST CENTRE CODE	DESCRIPTION
01.	OPERATION	
	01002	PENSTOCK MAINTANANCE
	01004	WATER INTAKE SYSTEM
	01025	MGR
	01046	TURBINE & TURBINE AUXILIARIES
	01047	GOVERNER MECHANISM
	01056	FUEL OIL SYSTEM
	01064	HYDROGEN GENERATION PLANT
	01065	ELECTRICAL SYSTEM HIGH VOLTAGE
	01067	ELEC SYSTEMS -6.6KV 110VDC
	01071	COMPRESSED AIR SYSTEM
01090	OTHER MISCELLANEOUS SYSTEM	
02.	MECHANICAL MAINTENANCE	
	02002	PENSTOCK AND DRAFT TUBES
	02004	CW SYSTEM INCLUDING COOLING TOWERS
	02046	TURBINE & TURBINE AUXILIARIES
	02047	GOVERNER MECHANISM
	02056	FUEL OIL SYSTEM
	02060	MGR
	02063	MECHANICAL WORKSHOP
	02064	HYDROGEN GENERATION PLANT
	02071	COMPRESSED AIR SYSTEM
	02090	MISCELLANEOUS SYSTEM
03.	ELECTRICAL MAINTENANCE	
	03004	CW SYSTEM INCLUDING COOLING TOWERS
	03025	MGR
	03046	TURBINE & TURBINE AUXILIARIES
	03056	FUEL OIL SYSTEM
	03063	ELECTRICAL WORKSHOP
	03064	HYDROGEN GENERATION PLANT
	03065	ELEC SYSTEM HIGH VOL 400-132KV
	03067	ELEC SYSTEM LOW VOL 6.6 KV-110KV
	3068	CABLE NETWORK
	03069	ELECTRICAL LIGHTS & FITTINGS
	03071	COMPRESSED AIR SYSTEM
	03090	MISCELLANEOUS SYSTEM
04.	C & I MAINTENANCE	
	04001	DAM MAINTANANCE
	04004	CW SYSTEM
	04025	MGR
	04046	TURBINE & TURBINE AUXILIARIES
	04056	FUEL OIL SYSTEM
04064	HYDROGEN GENERATION PLANT	

S.No.	COST CENTRE CODE	DESCRIPTION
04.	04068	CABLE NET WORK
	04070	DAS
	04071	COMPRESSED AIR SYSTEM
	04076	CONTROL ROOM
	04079	ANALOGUE CONTROL SYSTEM(ACS)
	04080	SAMPLE TABLE
	04081	UNIT CONTROL BOARDS(UCB)
	04082	OTHER CONTROL ROOM INSTRUMENTS
	04090	MISCELLANEOUS SYSTEM
05.	CIVIL MAINTENANCE	
	05001	DAM MAINTENANCE
	05002	PENSTOCK AND DRAFT TUBES
	05003	CANALS
	05004	CW SYSTEM INCLUDING COOLING TOWERS
	05025	MGR
	05086	ROADS.DRAINAGE & SEWERAGE
	05090	OTHER AUX PLANT BLDG & STRUCTURE
05109	MAINPLANT BLDG & STRUCTURE	
07.	GENERAL PLANT EXPENDITURE	
	07101	GENERAL PLANT EXPENDITURE
08.	TOWNSHIP AND OTHER SERVICES	
	08107	TOWN SHIP
	08108	SCHOOL
09.	ADMINISTRATION	
	09100	ADMINISTRATION - ALL
	09102	DISPENSARY
	09103	CRECHE
	09104	TRANSPORT
	09105	SAFETY IMPLEMENTATION
9106	WELFARE MEASURES	

4. GENERAL

CODE	DESCRIPTION
001	DAM MAINTENANCE
002	PENSTOCK AND DRAFT TUBES
003	CANALS
004	CW SYSTEM (INCL COOLING TOWERS)
010	WATER TREATMENT PLANT
011	SURGE TANKS
020	EFFLUENT TREATMENT
025	MGR
026	COAL HANDLING SYSTEM
030	ASH HANDLING SYSTEM
041	BOILER & BOILER AUXILIARIES
042	GAS TURBINE GENERATOR & AUXILIARIES
043	BYE-PASS SYSTEM
044	WASTE HEAT RECOVERY BOILER & BOILER AUXILIARIES
045	STEAM TURBINE GENERATOR & STG AUXILIARIES
046	TURBINE & TURBINE AUXILIARIES
047	GOVERNER MECHANISM
049	BLACK STRAT SYSTEM
050	FUEL GAS SYSTEM (PIPES AND FILTERATION SYSTEM)
051	LIQUID FUEL SYSTEM (NAPHTHA)
052	FUEL OIL SYSTEM(HSD)
055	FUEL GAS SYSTEM (PIPES AND FILTERATION SYSTEM)
056	FUEL OIL SYSTEM
063	MECH/ELECL WORKSHOP
064	HYDROGEN GENERATION PLANT
065	ELECTRICAL SYSTEM HIGH VOLTAGE
066	STATION LIGHTING
067	ELEC SYSTEM(LOW VOLTAGE) -6.6KV 110VDC
068	CABLE NETWORK
069	ELECTRICAL LIGHTS & FITTINGS
070	DAS
071	COMPRESSED AIR SYSTEM
072	AIR INTAKE SYSTEM
073	OTHER MISCELLANEOUS SYSTEM
074	DDCMTS
076	CONTROL ROOM
077	FURNACE SAFETY SUPERVISION
079	ANALOGUE CONTROL SYSTEM(ACS)
080	SAMPLE TABLE
081	UNIT CONTROL BOARDS(UCB)

CODE	DESCRIPTION
082	OTHER CONTROL ROOM INSTRUMENTS
083	PROCESS MANAGEMENT SYSTEM (PMS)
086	ROADS.DRAINAGE & SEWERAGE
088	HVAC
089	FIRE FIGHTING SYSTEM
090	MISCELLANEOUS SYSTEM
100	ADMINISTRATION - ALL
101	GENERAL PLANT EXPENDITURE
102	DISPENSARY
103	CRECHE
104	TRANSPORT
105	SAFETY IMPLEMENTATION
106	WELFARE MEASURES
107	TOWN SHIP
108	SCHOOL
109	MAINPLANT BLDG & STRUCTURE
110	TRAINING