



Project Management Agency (PMA) for the Implementation of ERP in KSEBL

Report on Processes & Procedures need to be
considered for ERP Implementation

Kerala State Electricity Board Limited

01 August, 2017

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Document Control

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List of Abbreviations

Abbreviation	Expansion
AAO	Assistant Accounts Officer
AB	Accounts Branch
ADN	Asset Decommissioning Note
AE	Assistant Engineer
AEE	Assistant Executive Engineer
AFO	Assistant Finance Officer
AG	Accountants General
AM	Asset Management
ANERT	Agency for Non-conventional Energy and Rural Technology
APTEL	Appellate Tribunal for Electricity
APTS	Anti-Power Theft Squad
ARI	Audit Report Interface
ARR	Annual Revenue Requirement
ARU	Accounts Rendering Unit
AS	Administrative Sanction
AT&C	Aggregate Transmission and Commercial
ATN	Asset Transfer Note
BEE	Bureau of Energy Efficiency
CCC-ET	Centralised Customer Care – Extended Terminal
CCDB	Commercial Customer Data Base
CDEGS	Current Distribution, Electromagnetic Fields, Grounding and Soil Structure Analysis
CDM	Clean Development Mechanism
CDRF	Consumer Disputes Redressal Forum
CE	Chief Engineer
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
CMN	Contractors Material Note
CMRN	Contractors Material Return Note
CPO	Chief Personnel Officer
CPWD	Central Public Works Department
CRCS	Consumption Report Cum Capitalization Statement
CSR	Corporate Social Responsibility
CT	Current Transformer
CWIP	Capital Work In Progress

Abbreviation	Expansion
DA	Divisional Accountant
DA	Dearness Allowance
DB	Drawing Branch
DB	Data Base
DCE	Deputy Chief Engineer
DDUGJY	Deen Dayal Upadaya Gram Jyoti Yojana
DELP	Domestic Efficient Lighting Programme
DGS&D	Director General of Supplies and Disposal
DIR	Detailed Investigation Report
DISCOM	Distribution Company
DLPC	District Level Purchase Committee
DPR	Detailed Project Report
DR	Disaster Recovery
DRIP	Dam Rehabilitation Improvement Project
DSM	Demand Side Management
DyCE	Deputy Chief Engineer
EA	Establishment Audit
EA	Energy Audit
EB	Establishment Branch
ECSC	Estimate Cost for Service Connection
EE	Executive Engineer
EHT	Extra High Tension
EMC	Energy Management Centre
EMD	Earnest Money Deposit
ERC	Expected Revenue from Charges
ERP	Enterprise Resource Planning
ESCO	Energy savings co-ordination
ETL	Extract Transform Load
EWf	Employees Welfare Fund
FA	Financial Adviser
FEMU	Forest Environmental Management Unit
FGRN	Finished Goods Received Note
FGTN	Finished Goods Transfer Note
FRN	Field Return Note
GB	General Branch
GIS	Geographical Information System
GPF	General Provident Fund

Abbreviation	Expansion
GRN	Goods Receipt Note
HRA	House Rent Allowance
HRD	Human Resource Development
HRIS	Human Resource Information System
HRM	Human Resource Management
HT	High Tension
IDAMS	Identity and Access Management System
ILTP	Induction Level Training Programme
IPDS	Integrated Power Development Scheme
ISMRN	Inter Store Material Received Note
ISTN	Inter Store Transfer Note
IUMIL	Inter Unit Matched Item List
IUTN	Inter Unit Transfer Note
IT	Information Technology
KASPL	KPMG Advisory Services Pvt Limited
KSEBL	Kerala State Electricity Board Limited
KSERC	Kerala State Electricity Regulatory Commission
kVAR	Kilo Volt Ampere Reactive
kV	Kilo Volt
kW	Kilo Watt
LAD	Local Area Development
LA&DEO	Legal Adviser and Disciplinary Enquiry Officer
LAI	Legislative Assembly Interpellation
LD	Load Despatch
LFA	Load Flow Analysis
LT	Low Tension
LTOA	Long Term Open Access
MBC	Metering Billing and Collection
MCS	Material Consumption Statement
MDAS	Meter Data Acquisition System
MIS	Management Information System
MLA	Member of Legislative Assembly
MM	Maintenance Management
MNRE	Ministry of New and Renewable Energy
MoP	Ministry of Power
MoR	Monthly Operating Review
MRCI	Material Requisition Cum Invoice

Abbreviation	Expansion
MP	Member of Parliament
MTN	Material Transfer Note
MTU	Master Trust Unit
MW	Mega Watt
NA	Network Analysis
NRA	Non-Refundable Advances
NEFT	National Electronic Funds Transfer
NPS	National Pension Scheme
OEM	Original Equipment Manufacturer
OMF	Overall Multiplication Factor
OMS	Outage Management System
PED	Projects Electrical Design
PET	Power Equipment Testing
PETARC	Power Engineer's Training & Research Centre
PIR	Preliminary Investigation Report
PMA	Project Management Agency
PPA	Power Purchase Agreement
PRAN	Permanent Retirement Account Number
PSC	Public Service Commission
PSS/E	Power System Simulator for Engineering
QAP	Quality Assurance Programme
RAO	Regional Audit Office
R-APDRP	Restructured Accelerated Power Development & Reforms Programme
RCA	Resident Concurrent Audit
RE	Renewable Energy
REES	Renewable Energy & Energy Savings
RF	Reconnection Fee
RFP	Request for Proposal
RFQ	Request for Quotation
RGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
RIA	Right to Information Act
RIST	Requisition for Inter Store Transfer
RMU	Renovation Modernisation & Upgrading
R&M	Repair and Maintenance
ROM	Register of Materials
ROC	Registrar of Companies
RPO	Renewable Purchase Obligations

Abbreviation	Expansion
SARAS	Structured and Real time Accounting system
SCPSP	Standing Committee for Power Systems Planning
SD	Security Deposit
SLDC	State Level Despatch Centre
SOR	Special Officer Revenue
SB	Stores Branch
SBU	Strategic Business Unit
SCADA	Supervisory Control and Data Acquisition
SCM	Supply Chain Management
SMART	Safety Management and Reporting
SN	Stores Note
SPIN	Sports Pre-Engineered Infrastructure and New Technology
SR	Southern Region
SRCTC	Southern Region Computer Training Center
SRPC	Sothern Region Power Committee
SS	Senior Superintendent
STN	Stores Transfer Note
TA	Travel Allowance
TCC	Travancore Cochin Chemicals
ToD	Time of Day
T&P	Transfer and Posting
TF	Testing Fee
UCM	Un connected Minimum
UTR	Unique Transaction Receipt
TMR	Transformer and Meter Repair
WAN	Wide Area Network
WSS	Web Self Service

1 Introduction

1.1 About the Project

The Government of India has launched Integrated Power Development Scheme (IPDS) with broad objectives of 24x7 power, AT&C loss reduction and access of electricity for all. As part of the IPDS project Implementation Kerala State Electricity Board Ltd. Appointed KPMG Advisory Services Private Ltd (KASPL) as a Project Management Agency (PMA) for assisting the utility in formulation, bidding process, monitoring the physical and financial progress of the projects etc., ensuring timely implementation of the project.

As part of the work flow automation of functional processes, the Human Resource Management including Self Service for Employees, Finance & Accounts, and Materials have been already implemented in KSEBL through the in-house developed/maintained applications namely, HRIS, SARAS and SCM respectively.

KSEBL entrusted KASPL to conduct a detailed As-Is-Study for the business processes involved in the above applications. Based on this study, a Gap Analysis is to be conducted to find which activities are yet to be integrated and automated from the perspective of deploying an integrated ERP solution.

The broad scope of PMA includes As-Is Study, Gap Analysis, System Study, Process fine tuning, Preparation of DPR and Preparation of a Comprehensive Request of Proposal for the ERP application software.

1.2 Scope of Work

The project scope includes the development of the following key deliverables:

1. Report on Process and Procedures at KSEBL with respect to formulation DPR for RFP implementation.
2. Report on As-Is study of business processes with respect to ERP
3. Gap analyses and System Study
4. DPR for ERP Implementation
5. RFP for selection of ERP Implementation Agency
6. Bid evaluation report
7. Completion of implementation and declaration of Go – Live
8. Completion of handholding to KSEBL and third party acceptance

As part of the Process and Procedure study KPMG has considered all the processes under;

- Human Resource Management including Self Service for Employees
- Finance and Accounts
- Materials (Purchase and Stores)

Which are the major ERP components that need to be considered at KSEBL. We shall also consider over the course of our investigation other processes and external or legacy systems' integration requirements between the current applications and the proposed integrated ERP solution.

1.3 Purpose of this Report

This report, which is the ERP Process and Procedures documents the current business processes and procedures followed at KSEBL, which come under the purview of the ERP implementation. This report summarizes the process flows along with the functional objectives. The business process flows was developed in a series of discussions with various business focal points managing or overseeing the operations within the various administrative units identified across the major organizational units. The detailed list of discussions held are listed in Annexure A of this report.

2 About KSEBL

The Kerala State Electricity Board Limited is the successor entity of Kerala State Electricity Board which was constituted by the Government of Kerala, as per order no. EL1-6475/56/PW dated 7-3-1957 of the Kerala State Government, under the Electricity (Supply) Act, 1948 for carrying out the business of Generation, Transmission and Distribution of electricity in the state of Kerala. The Kerala State Electricity Board Limited has been incorporated under the Companies Act, 1956 on 14 January 2011 and started operation as an independent company with effective from 1 November 2013.

Currently KSEBL has an a total installed capacity of 2845 MW and created Transmission and Distribution networks of over 10404 and 272480 circuit kilometres respectively. At present, the Board caters to the needs of over one crore consumers spread over the urban and rural areas of the state. This incremental growth in the power system has brought several changes in the characteristics of the system. The hydroelectric plants owned by the Board has been supplying a major portion of the energy requirement of the state till 1980 when the Forest Conservation Act was promulgated. From 1980 onwards the implementation of new hydroelectric projects had been seriously affected and more costly thermal energy had to be generated / purchased to meet the increasing demand.

2.1 Vision and Mission

Vision

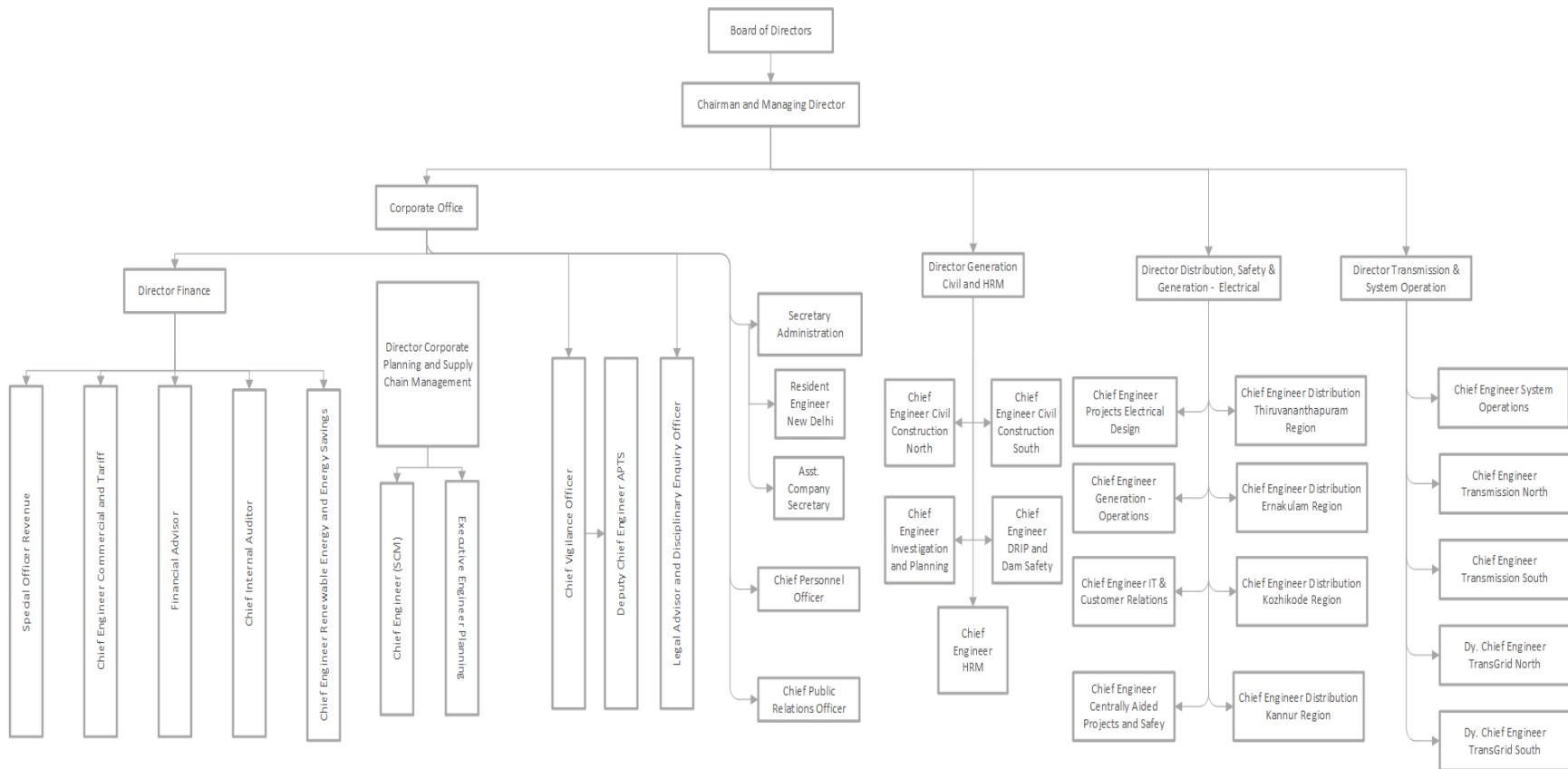
KSEB Limited envision to be the best power utility in India

Mission

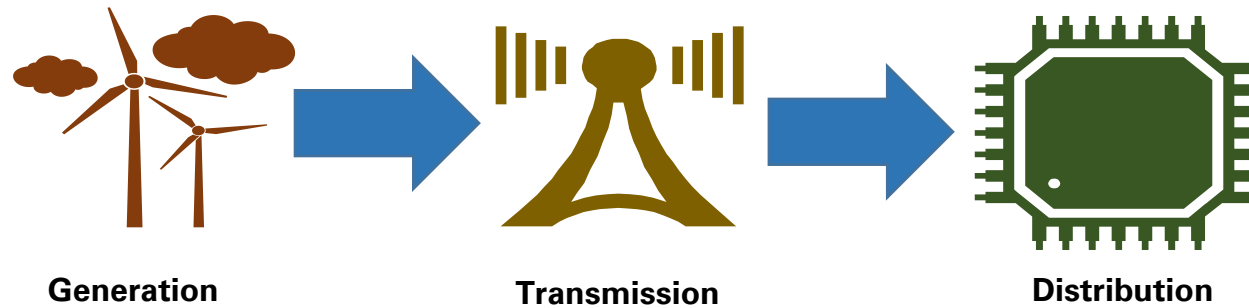
KSEB Limited mission is to provide quality electricity to customers adequately, safely, sustainably at affordable cost

The IT wing aims to make KSEB one of the model utilities in India, by fully automating the whole functionaries. KSEB has setup IT Infrastructure which includes Data Centre, DR Centre, WAN connecting all offices.

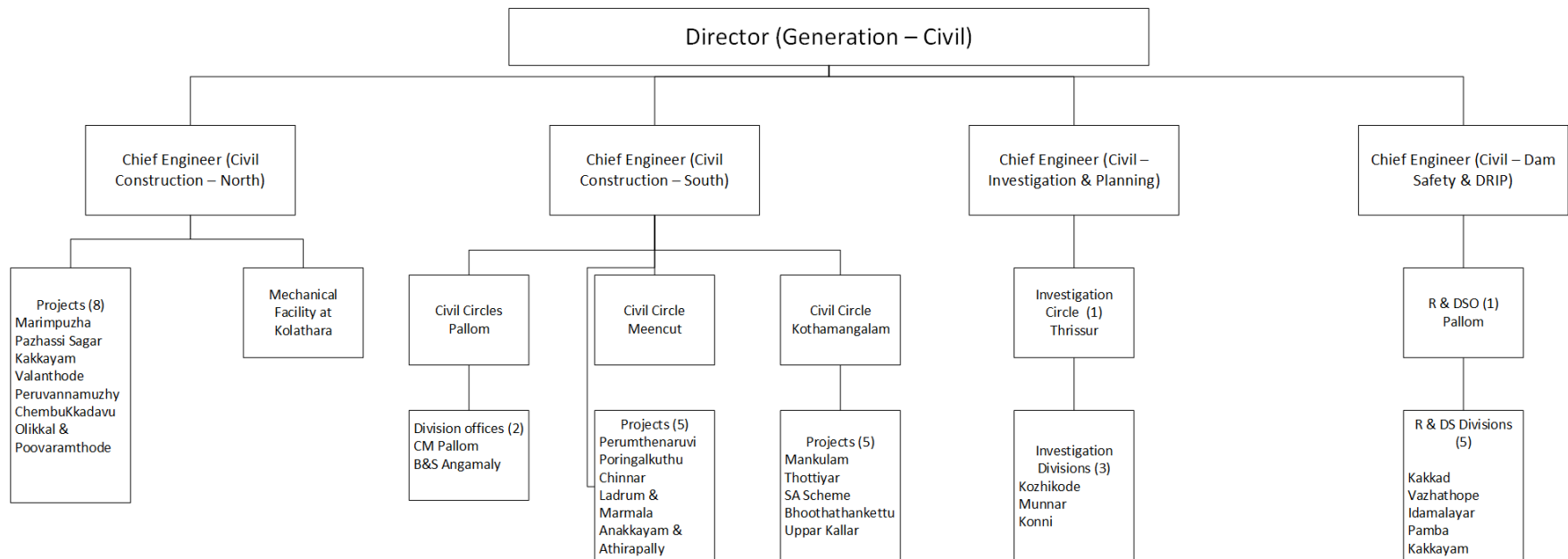
2.2 Organizational Structure

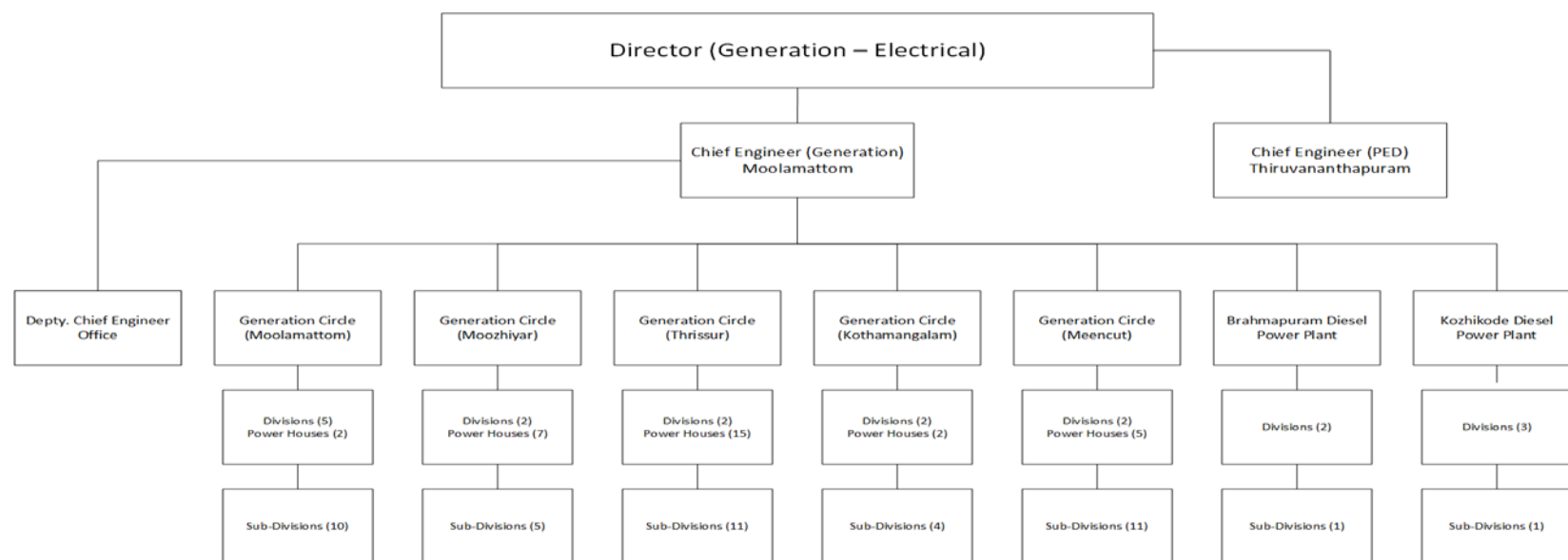


KSEBL has three Strategic Business Units (SBU) namely, Generation, Transmission, and Distribution which are headed by the Directors concerned.



2.2.1 Generation





This SBU is responsible of generating power as per the availability of resources and the end user demand.

The Director (Generation) heads the Generation SBU who is assisted in management by the following Chief Engineers:

— Director (Generation Civil &HRM)

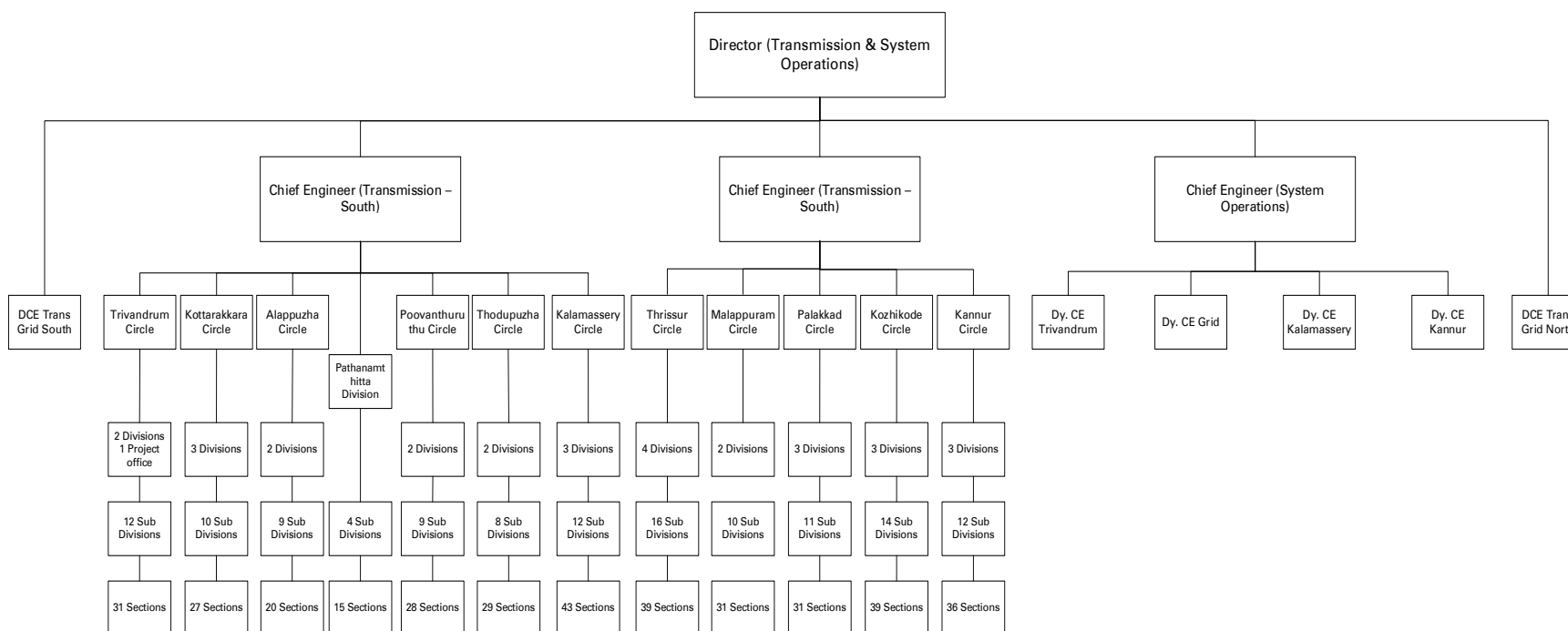
- Chief Engineer (Civil Construction - North)
- Chief Engineer (Civil Construction - South)
- Chief Engineer (Civil - Investigation & Planning)
- Chief Engineer (Civil - Dam Safety & DRIP)

— Director (Distribution, Safety & Generation Electrical)

- Chief Engineer(Generation)
- Chief Engineer(PED)

The Generation SBU operates and maintains 34 hydroelectric generating stations, 2 thermal power plants, and the wind farm at Kanjikode. Renovation, modernization and uprating of the old hydroelectric projects which have surpassed their useful life are also being carried out by this wing. Investigation, planning and design of all hydroelectric (hydel) projects, land acquisition matters connected with various hydel projects, works connected with the environmental and forest clearance aspects of generation schemes, safety and maintenance of dams and connected structures, construction works of all hydroelectric and thermal projects come under the Generation SBU. Other activities include construction and maintenance of various office buildings, fabrication of line materials for distribution, yard structures for substations and accessories for hydraulic structures.

2.2.2 Transmission



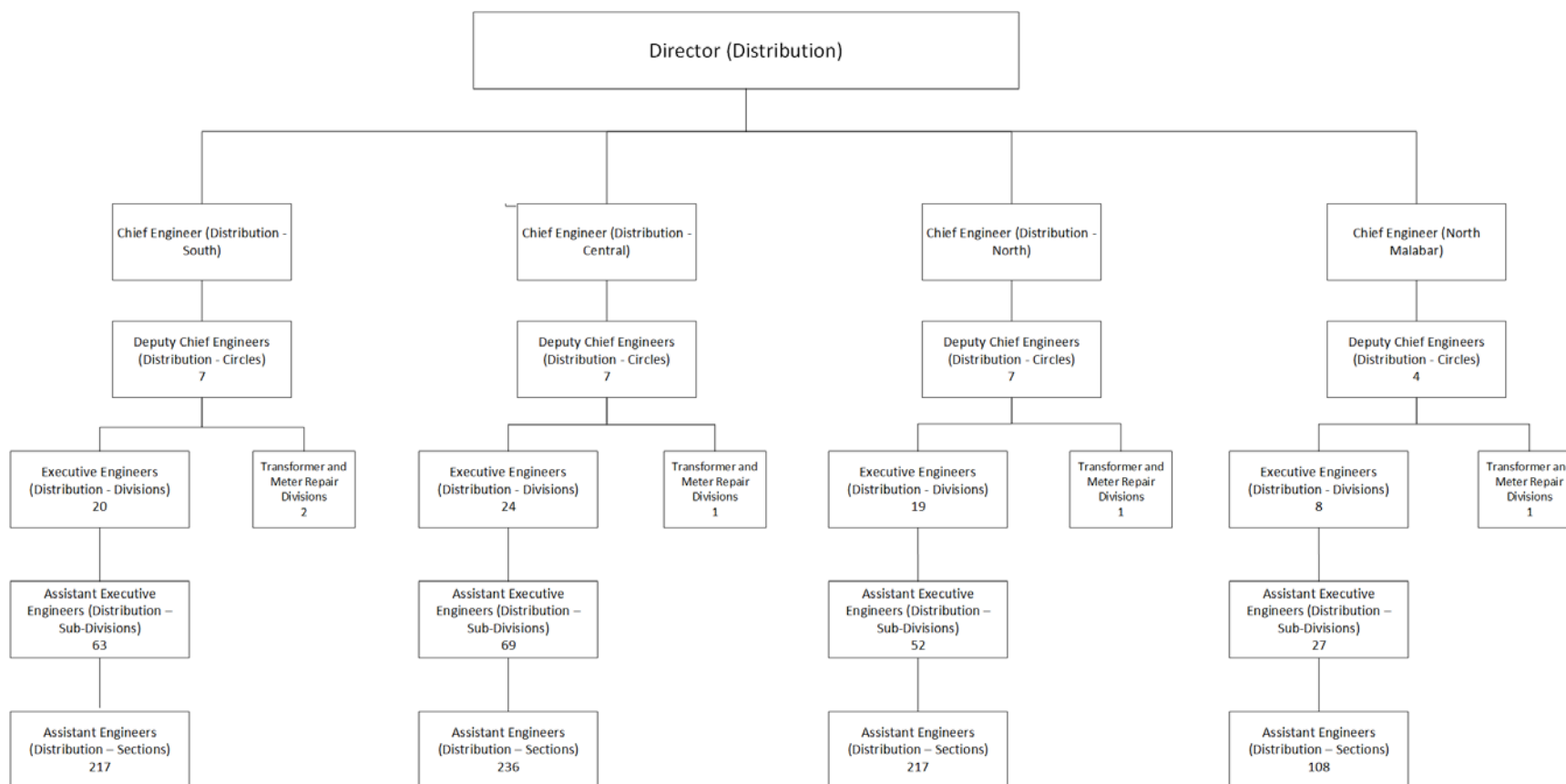
Director (Transmission & System Operation) heads the Transmission SBU. The following three Chief Engineers manage the operations of this SBU.

- Chief Engineer (Transmission - North)
 - Chief Engineer (Transmission - South)
 - Chief Engineer (Transmission - System Operation)
 - Deputy Chief Engineer Trans grid North and
 - Deputy Chief Engineer Trans grid South
-
- North zone headed by Chief Engineer (Transmission - North) with its headquarters at Kozhikode is divided into 5 Transmission Circles, 15 Divisions, 58 subdivisions.
 - South zone is headed by Chief Engineer (Transmission - South) with its headquarters at Thiruvananthapuram has 6 Transmission Circles, 17 Divisions, 59 Subdivisions. Pathanamthitta transmission division is an ARU directly reporting to CE
 - System Operation is headed by Chief Engineer (Transmission - System Operation) with its headquarters at Kalamassery has 3 System Operation Circles, 6 Divisions, 38 Subdivisions and 19 Sections.

Transmission SBU manages the construction, operation and maintenance of EHT substations and transmission lines and the supply of power to EHT consumers. Transmission SBU is responsible for the implementation of transmission loss reduction programs and coordinating the activities for system development. Transmission SBU has absolute control over all load dispatch activities, with full responsibility for real time management and matters pertaining to protection system and communication system. Scheduling of generation, scheduling of annual maintenance, import of power from independent power producers and central generating stations and export of power are also managed by this SBU. Other important activities include monitoring of daily system statistics, implementing policy matters related to merit-order dispatching, communication planning, networking of computers and co-ordination of activities under the system operation circles.

Transmission works of Centrally Aided Projects like R-APDRP, IPDS, and DDUGY and funded works of Power System Development of the ministry of Power, Government of India are also being managed by Transmission wing

2.2.3 Distribution



The Distribution Licensing area of KSEBL had zones/regions namely South, Central and North, each headed by a Chief Engineer. The North region was bifurcated to form the fourth region with headquarters at Kannur.

- Chief Engineer Thiruvananthapuram Region
- Chief Engineer Ernakulam Region

- Chief Engineer Kozhikode Region
- Chief Engineer Kannur Region

Distribution SBU manages distribution of electricity business in the State other than in other Licensee's areas. The activities of the SBU include construction, operation and maintenance of distribution network up to a voltage level of 11kV. Implementation of Central sector schemes like RAPDRP, RGGVY, DDUGJY, IPDS etc., distribution sector projects funded externally, like MP LAD/MLA LAD/ Kerala Development Scheme are undertaken by this SBU.

- Thiruvananthapuram Region with its headquarters at Thiruvananthapuram has 7 Electrical Circles, 22 Divisions (including TMR Divisions at Tirumala & Pallom), 63 Subdivisions and 217 Electrical Sections.
- Ernakulum Region with its headquarters at Ernakulum has 7 Electrical Circles, 25 Divisions (including TMR Division at Angamaly), 69 Subdivisions and 236 Electrical Sections.
- Kozhikode Region: with its headquarters at Kozhikode has 6 Electrical Circles 18 Divisions (including TMR Division at Shoranur), 46 Subdivisions, 136 Electrical Sections
- The Kannur Region headed by the Chief Engineer with headquarters at Kannur has 5 Electrical Circles, 11 Divisions (including TMR Division at Kannur), 33 Electrical Sub divisions, and 189 Electrical sections.

2.2.4 Account Rendering Units (ARU)

Presently all electrical divisions and Transmission Division – Pathanamthitta are ARUs. All the Executive Engineers of Electrical Divisions and the Executive Engineer of Transmission Division – Pathanamthitta are ARU Heads. The centralised circles are Transmission circles, Generation Circles, Civil Circles, System Operation Circles, System Operation Circles, and Research and Dam Safety Organization. Apart from Electrical Circles centralised circles are ARUs. Detailed list of ARUs are provided in Appendix - A

All establishment matters of officers and staff are dealt by the Executive Engineer (Office) of the Electrical and Transmission circles / In case of Generation, System operation circles Assistant Executive Engineer (Office) deals with all establishment matters of Officers and Staff under such Circles. The ARU consists of five branches namely, Accounts Branch (AB), Store Branch (SB), Establishment Branch (EB), General Branch (GB) and Drawing Branch (DB). AB and SB are supervised by Divisional Accountant (DA)/Assistant Financial Officer (AFO)/Financial Officer (FO), EB and GB are supervised by Senior Superintendents (SS) and DB is supervised by Assistant Executive Engineer (AEE). The Asst. Administrative Officer supervises AB & GB functions in Electrical Circles

3 Current Processes and Procedures

This section describes the current process, procedures and its functional objectives followed at KSEBL which need to be considered for ERP implementation.

3.1 Corporate Planning

The KSEBL corporate planning headed by Chief Engineer Corporate Planning under the Director (Corporate Planning & SCM). The major function of corporate planning wing are;

- 1 Preparation of Annual Plan, Five Year Plan, Perspective Plan, Budget Estimate
- 2 Reviewing and commenting on various new Policies, Guidelines and Acts formulated by the State and Central Governments.
- 3 Reviewing and commenting on various Regulations notified by the State and Central Regulatory Commissions
- 4 Matters related to allocation of power from CGS/UMPPs/Stations outside Kerala
- 5 Matters related to Coal block allocation and setting up of Coal based power project
- 6 Matters related to various proposals on setting up new gas based power projects and gas conversion of existing diesel/naphtha based plants in the state.
- 7 Policy matters related with the development of Renewable Projects such as SHP, Wind, Solar and Co-generation Projects under IPP/CPP route
- 8 Review of Annual Plan Progress and Reporting, updating monthly status on PLAN SPACE Portal
- 9 Preparing notes on Subject committee / Demand for Grants / Budget Speech / Governor's Address etc.
- 10 Preparing notes on Collector's conference / Power Secretary's conference / Chief Secretary's conference / MP's conference / Power Minister's conference / Chief Minister's conference etc.
- 11 Preparation and submission of Monthly Performance Report of KSEBL to the Board of Directors
- 12 Preparing notes on various critical issues to be taken up with Government of India
- 13 Revision of delegation of powers
- 14 Preparation of Annual Power System Statistics Report
- 15 Preparation of Annual Administration Report
- 16 Progress monitoring of 24x7 'Power For All program'(24x7PFA), updating progress status including progress status of other agencies on 24X7 PFA portal of Kerala.
- 17 Progress monitoring of projects/activities under UDAY Scheme and updating status to UDAY Portal.
- 18 Providing inputs to CEA –
 - a. for the preparation of National Electric Power Survey report (EPS),

- b. for the preparation of All India Electricity Statistics etc.
 - c. Reliability Index
 - d. 20-Point programme
- 19 Submission of inputs to State Planning Board for preparation of Economic Review
- 20 Submission to PFC-
 - a. Quarterly Performance Report
 - b. Quarterly AT&C loss of KSEBL
- 21 Submission of inputs to various agencies for various Award Schemes
- 22 Submission of progress report to GoK on 20-Point Programme
- 23 Submission of inputs for the Preparation of Perspective Plan for DISCOM.
- 24 Matters related to setting up of 50 MW West Kallada Floating Solar project
- 25 Giving reply to the Interpellations in the Legislative Assembly and Parliament.
- 26 Compilation of various reports to GoK/CEA/MoP etc.

3.2 Finance and Accounts

The financial activities are headed by Director – Finance. Following are the major financial verticals;

- Commercial and Tariff
- Financial Adviser
- Chief Internal Auditor
- Special Officer Revenue

3.2.1 Commercial and Tariff

3.2.1.1 Tariff and Regulatory Affairs Cell (TRAC)

Tariff & Regulatory Affairs Cell (TRAC) is mainly responsible for preparing and filing the Aggregate Revenue Requirement, Expected Revenue from charges and other allied activities to obtain approval from Regulatory Commission. Following major functions of TRAC are;

- KSERC related works
 - Preparation of ARR & ERC and Tariff Petitions
 - Issuing billing procedures and tariff related clarifications
 - Truing up petition
 - Defending ARR & ERC petitions and Truing up petitions of other licensees
 - PPAs with bulk licensees
 - Fuel surcharge petition
 - PPA approvals
 - Capital investment approval
 - Quarterly performance report

- Filing other miscellaneous petitions
- Ensuring compliance of directives of Commission
- CERC related works
 - Filing petitions relating to tariff of CGS and other stations with composite tariff
 - Defending cases in CERC relating to tariff of generating stations
 - Defending cases in CERC relating to tariff of transmission lines
- APTEL related works
 - Filing petitions against orders of KSERC, CERC and defending cases filed against KSEBL
 - High Court and Supreme Court cases relating to Regulatory framework
 - Providing clarifications on tariff related matters for field offices
 - Other establishment matters, RIA, LAI, replying audit enquiries and handling miscellaneous petitions and other correspondences. Compilation of technical particulars (generation, power purchase, sales etc.) for preparation of annual accounts.

Currently revenue and collection related details are available from OrumaNet and En'rgise applications in pre-defined reports format, customized reports are not available.

IT Applications Used: SARAS, OrumaNet and En'rgise

3.2.1.2 Power Purchase and Commercial

This Department deals with the matters related to procurement of power, regulatory affairs including tariff, cost of distribution works, other licensees, arrear clearance etc. Following are the major functions of the departments;

- Power Purchase
 - Purchase Planning
 1. Assessing requirements for purchase and preparing planning report
 2. Preparing power purchase statements monthly and yearly
 3. Managing Short term / Medium term / Long term power purchases as per power generations from different power stations.
 4. Verification of point of connectivity bills and execution of transmission service agreement
 5. Power Position assessment and revising purchase/generation plan
 6. Analyzing the proposals received from various traders/generators for sale of power from Hydro and Thermal stations and communicating the decisions.
 - Admin
 7. Convening the core committee meetings for discussing issues related to power management/ purchase/ new regulations etc.
 8. Other establishment matters, RIA, LAI, replying audit enquiries other correspondences.
 - Tendering
 9. Floating bids for power purchase as per planning

10. Processing of bids (Pre-bid, RFQ, RFP)
11. Obtaining approval of KSERC, for the purchase through TRAC
- Contracting
12. Contracts (PPA) for power purchase
13. PPA management including BG/security
14. Processing of bills after getting admissibility on energy received from LD and forwarding to FA for releasing the payment after availing eligible rebate

Currently no IT systems are utilized, the complete transactional process, approvals and reports are all maintained in unstructured manual systems.

IT Applications Used: Nil

3.2.1.3 Sale of Power

Seasonal and diurnal variations in demand is monitored constantly, and all possible market opportunities are tapped for maximising revenue from available resources. It deals with raising of demand, collection, accounting for collection and disconnections.

IT Applications Used: OrumaNet, En'rgise

3.2.2 Accounts Receivables (Collections)

The bulk of collections are made by Sections/Locations under Distribution Circles either on their own or through various collecting banks acting as collecting agents. Special Officer (Revenue) collects cash on account of EHT and HT consumers. Other type of collections which are largely of a miscellaneous nature are also made by Divisions, Circle Offices, Stores and other Administrative Offices. All these collections are deposited into non-operative collection bank account specified for each location where from the funds will be transferred to H.O Bank account.

Currently "Orumanet" application manages the energy demand generation and collections of LT connections. It has provision to collect the amounts over counter, through NEFT, payment gateway, inter office collection or through friends and Akshaya.

Sections collect money on account of sale of power or of miscellaneous nature. Demand is generated in section by Assistant Engineer

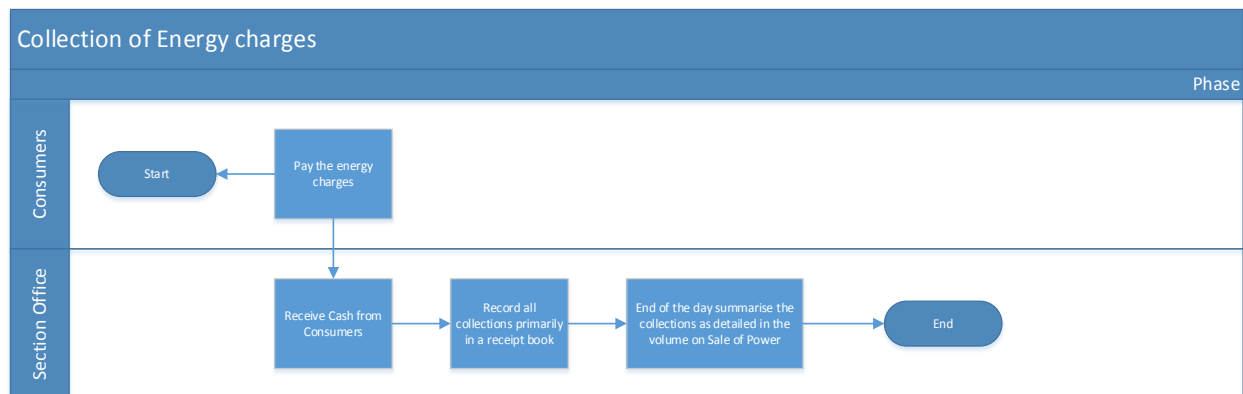
Collections are as follows:

- Energy charges
- Fixed charges
- Electricity Duty
- Inspection Fee
- Interests
- Reconnection Fee (RF)
- Testing Fee (TF)
- Surcharge

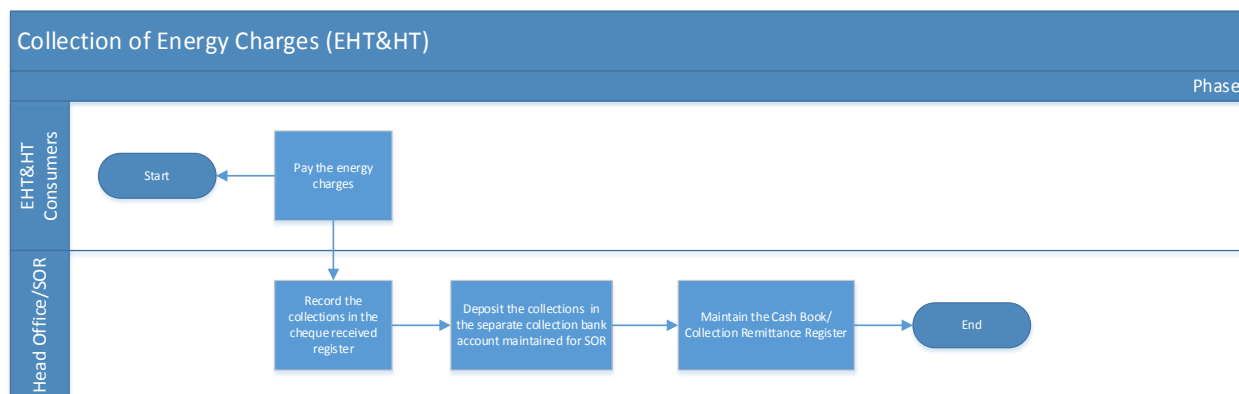
Collection on behalf of Executive Engineer/Deputy Chief Engineer etc. are as follows:

- Consumer contribution
- Deposits
- Sale proceeds of Tender forms
- Sale proceeds from sale of scrap
- Sale proceeds from sale of assets
- Application fee etc.
- Pole rental charges
- Other charges (bulling lease income, equipment rent)
- Testing fees
- Meter/CT/PT testing charges
- Testing of oils
- Relay test
- Service Charge
- Cable fault servicing
- Processing Fee
- Auction procedures of Usufructs
- Deposit work remittances
- Testing charges of protective gear

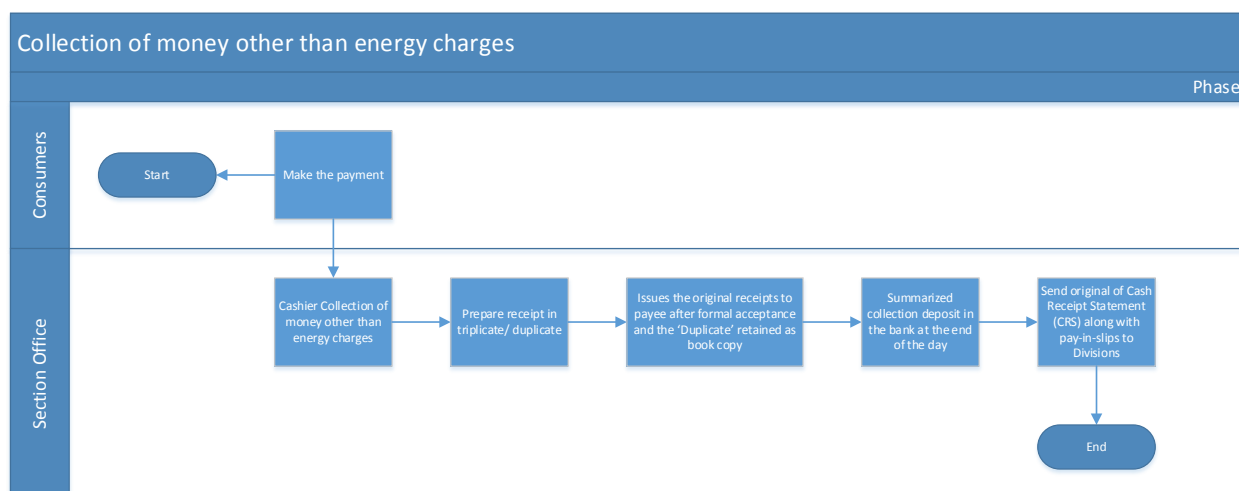
Collection of Energy Charges



Collection of Energy Charges (EHT&HT)



Collection of money other than energy charges



3.2.3 Corporate Accounts –Financial Adviser (FA)

3.2.3.1 Annual Accounts

The main function of the Annual Accounts section is to monitor the accounting activities of ARU and prepare the statement of accounts of the KSEBL. Following are the major functions of the Annual Accounts section.

- Consolidation of the annual statements of accounts
- Preparation of the annual financial statements of the KSEBL to be submitted for board approval
- Coordination with the statutory audit activities
- Support and follow-ups with supplementary audit by Accounts General (AG)
- Submit income tax return of KSEBL and coordination of other Income tax related appeals

- Prepare different reports on financial status of KSEBL for top management, regulatory commission, Legislative Questions etc.

IT Applications Used: SARAS

3.2.3.2 Budget & Planning

The Budget and planning section coordinates the annual budget preparation process. The following are the major functions

- Monitoring the budgetary control of expenditure
- Preparation of variance analysis of budget with actuals
- Re-appropriation, additional authorization of budget provision

The following are the process overview for budget preparation

- In the month of October Financial Adviser sends a notification to all ARUs to submit the details of actual expenditure/revenue for the first half and revised estimates for current year and budget estimates for next financial year in the prescribed format.
- The capital expenditure budget of KSEB is prepared on the basis of approved Capital Investment Plan. FA provides approved plan outlay inviting ARU wise details of capital expenditure estimates under different schemes adhering to the plan outlay
- On receipt of the details from the field offices, the budget section feed the data into the excel templates for arriving at overall budget estimates based on previous years expenditure. The cap for the expenditure will be based on ARR provided to regulatory authority.
- The revenue is estimated from existing tariff. The estimates are prepared based on generation and power purchase details provided by SLDC. ARU wise revenue details are not prepared as the power is procured centrally
- The compiled budget estimates for next financial year along with revised estimates for current year to the Board for approval
- On approval the budget will be published in the official website and hard copies are circulated among all ARUs along with circular for budgetary control of expenditure.

IT Applications Used: Budgets are prepared in excel with the inputs from MIS reports generated from SARAS application

3.2.3.3 Credit section

The major activities of credit section are management of fund allocation to ARUs

- Assignment of fund to ARUs based on credit requests
- Maintenance of fixed deposit register

IT Applications Used: SARAS

3.2.3.4 External and Internal Borrowings section

The major functions of the section are management of

- Loan accounts and debt-servicing.

- Capital liability
- Various Central and State Government Grants
- Short term loans
- Long Term Loans

IT Applications Used: Nil

3.2.3.5 Bank Reconciliation

The major activities are

- Statements preparation for drawing and collection accounts
- Opening of non-operative bank accounts for field offices

IT Applications Used: Nil

3.2.3.6 Tender Advise

Financial Adviser is a member of Purchase committees constituted for centralised procurement. FA's office also conducts evaluation (scrutiny of supporting documents) and provides remarks in pre-qualification stage of two part tendering process of value above One Crore.

Apart from this FA's office provides clarification on tender conditions, commenting on price variation clauses, price re-fixation, and tax related queries etc.

Financial Viability of new projects and major maintenance projects are evaluated by Financial Adviser.

IT Applications Used: Nil

3.2.3.7 Pension / Master Trust Cell

A separate master trust has been formed for disbursement of pensions and other terminal benefits to retired KSEB employees. Master Trust Cell co-ordinates the disbursement activities

IT Applications Used: HRIS, SARAS for Master Trust

3.2.3.8 Cost Accounting unit

The main function of the Fixed Assets & CAS Monitoring Cell is the updating of cost records prepared by the cost consultant and appointed cost auditors.

IT Applications Used: Nil

3.2.3.9 Tax Cell

Provides information on latest circulars, notifications, and amendments of prevailing tax laws and furnishes clarifications to tax related queries from field

IT Applications Used: Nil

3.2.3.10 Purchase of Power Section

Arranging payment to power purchase bills admitted by CE (Commercial & Tariff), accounting of payments, reconciliation of accounts with various power suppliers and related matters

IT Applications Used: Nil

3.2.4 Internal Audit

The Chief Internal Auditor heads the Internal Audit wing and reports to Director (Finance). Internal audit Department carry out various internal audit activities across different functional areas in KSEBL. The audit covers expenditure as well as revenue areas and consists of pre-audit, post audit, special audit, surprise inspections, site inspections etc. Below are the current major functions of the department;

- 1 Resident Concurrent Audit (RCA):** RCA is responsible for Pre-check bills in respect of capital expenditure and Repairs and maintenance bills related to Transmission, System operation, IT and Civil wing of value 10 lakhs or more. RCA is also responsible for post audits of accounts and bills of all civil ARUs across the state.
- 2 Establishment Audit (EA):** Establishments Audits are responsible for pre-audit of Medical bills and TA bills and also Post audit of Pay roll bills and Leave surrender bills related to ARUs functioning in Head Office.
- 3 Pay Fixation:** Pay fixation is responsible for verification of Service books/ related records of all employees /Officers in connection with Fixation of Pay on promotion/Grade Promotion/ Reversion / Punishment.
- 4 Audit Report Interface (ARI):** Major functions include liaison with various Departments/ Field offices/ Office of AG/ Government for providing clarifications to Audit Reviews, recommendations of Public Audit Committee/Committee of Public Undertakings.
- 5 Arrear Clearance Cell:** Responsible for audit of revenue bills related to HT/EHT customers in Special Officer Revenue. Other responsibilities are collection and consolidation of quarterly reports on arrear receivables.
- 6 Establishment General Section:** Responsible for consolidation and processing of monthly attendance reports for payroll processing. It also supports audit queries related to establishment/ administration.
- 7 Pension Audit:** This section carries out post audit of all fixations of new pensions as well as pension revisions and also carries out pre audit of arrear bills related to pensioners where the claim amount exceeds Rupees Two Lakhs.
- 8 General Provident Fund (GPF):** Major functions of this section are allotment of Employee code, and coordinates formalities of new joiners' admissions to GPF. Manages all GPF related works.
- 9 Works Audit:** Functions of the section includes pre audit of work bills and purchase bills from all the offices operating from Head Quarters, and also audit of power purchase transactions, verifications of power purchase agreements. Also conducts post audit of ARUs related to expenditure bills except distribution and civil ARUs.
- 10 Regional Audit Offices:** responsible for revenue audit of monthly/bimonthly bills of LT consumers, expenditure bills and accounts related bills of Distribution wing, surprise office inspections.
- 11 Audit Monitoring Cells:** functions of this cell is to monitor/ review the reports of all Regional Audit Offices, second level follow-up with Field Auditee units for clearing audit reports. Consolidation and verification of audit plans of RAO. Preparation of Annual Audit Report.

IT Applications Used: Nil

3.2.5 Special Officer Revenue

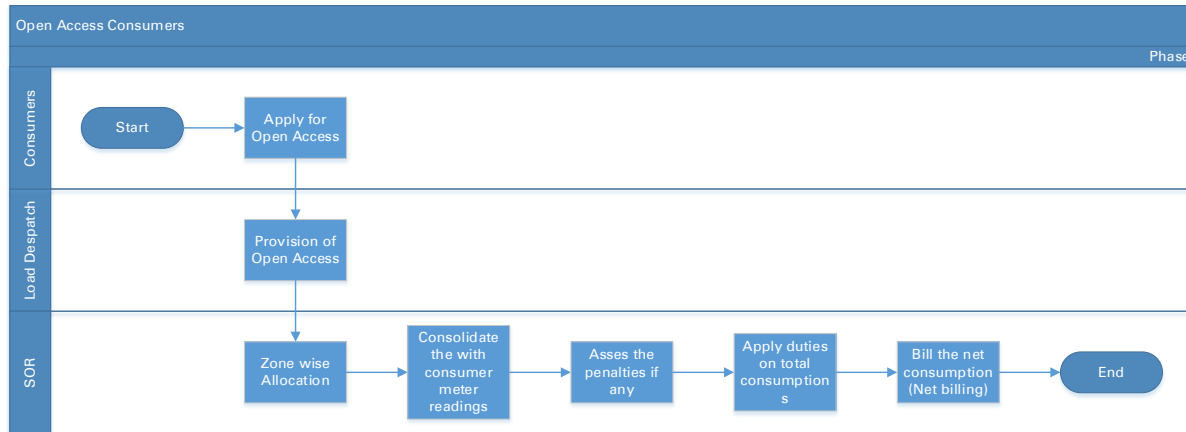
Special Office Revenue (SOR) under Director (Finance) is responsible for the revenue for the bulk supply, extra high tension and high tension consumers

Activities include

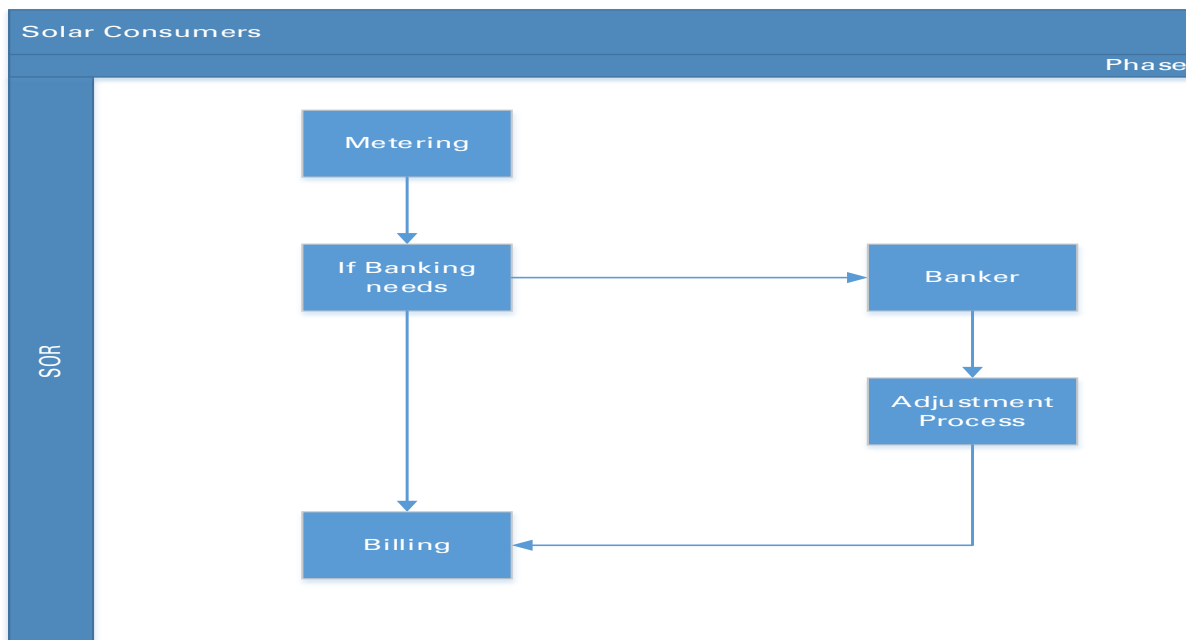
- Monthly revenue billing and allied works of HT/EHT consumers, licensees, captive power plants, railway traction, KMRL, interstate wheeling charges and reactive energy charges.
- Centralised billing and collection for Government departments - Consolidation of LT & HT bills of different offices under a particular department and providing facility remit the total payment at a single point.
- Collection of cash deposit / additional cash deposit and its interest adjustments and accounting, issuance of disconnection/ reconnection notice to defaulters, follow up of revenue recovery and court cases pending before various courts/ other forums.
- Annual Security Deposit & Bank Guarantee review
- Remittance of Tax, returns filing and issuance of Form 16A
- Issuance of subsidy certificates to star classification hotels
- APTS bill calculation for HT & EHT
- Revenue Recovery and case follow-up
- Solar adjustment for HT consumers
- Open access consumers adjustments
- Electricity Duty consolidation for HT and LT

Open Access Consumer Adjustment and Duty Consolidation process

- SOR collect Open Access Consumer consumption details from load dispatch centre (manual process)
- Zone wise allocation
- Consolidate the with consumer meter readings
- Asses the penalties if any,
- Apply duties on total consumptions
- Bill the net consumption (Net billing)



Solar Consumers



IT Applications Used: Orumanet, En'rgise, SARAS

3.2.6 Renewable Energy & Energy Savings (REES)

Renewable Energy & Energy Savings is responsible for effective implementation of energy conservation activities, an Energy savings co-ordination (ESCO) team is functioning under this office. The main function of the RESS division is to identify viable and beneficial renewable energy projects. Following are the major functions of REES;

- Renewable Energy (RE)
 1. RPO Compliance Reporting (ANERT/ KSERC/ GoK/ MNRE/ MoP)
 2. RE Plan

3. Regulatory Issues
 4. Grid Integration of Prosumers
 5. RE Power Purchase Agreements
 6. Off Grid Incentives
 7. RE Project Implementation under KSEBL (Solar, Wind & Other RE)
 8. RE Project Implementation under Consultancy Services (Govt. & Non Govt.)
 9. RE Project Identification/DPR Preparation/Financing plan
 10. Decentralized Distributed Generation Project
 11. In the identified hydroelectric stations generations are managed by REEs to meet renewable energy obligations
- Innovation & ESCO
 1. To find out innovative ideas and works in the power sector
 2. Identify innovators from startup villages and coordinate them
 3. ESO Model Implementation
 4. Supply side Management & Demand Side Management
 5. Energy Auditing
 6. DSM Status Reporting (EMC/BEE/MoP)

IT Applications Used: Nil

3.2.7 Cash Management

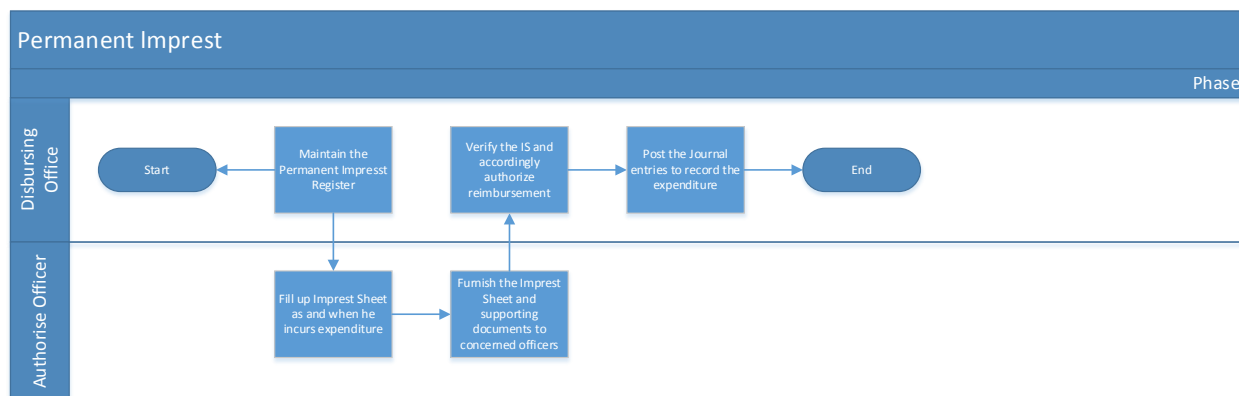
Imprest

Imprest is of two types

Permanent Imprest: - This indicates an amount which is given at the beginning of the accounting year or otherwise for meeting expenses on account of miscellaneous purchases of minor nature throughout the year. The expense made from the imprest is reimbursed periodically (usually monthly) to restore the original amount

Temporary Imprest: This is an amount given to a particular employee of the Board to meet certain specific expenditure, such as emergency works. The imprest is taken immediately before meeting the expenditure and the expenditure must be accounted for immediately thereafter. The balance, if any, should be refunded. Further advances shall not be given till the accounts for the first advance is submitted. However, temporary advance should be cleared as soon as possible and should not extend beyond a reasonable period, preferably 30 days

All works related to Permanent Imprest & Temporary Imprest such as auditing, passing, sanctioning and recouping of Permanent imprest and closing of Temporary imprest. Preparation and maintenance of permanent imprest & temporary imprest Day Books. The Day Book must be closed and Journal entries prepared on the 5th working day of the succeeding month.

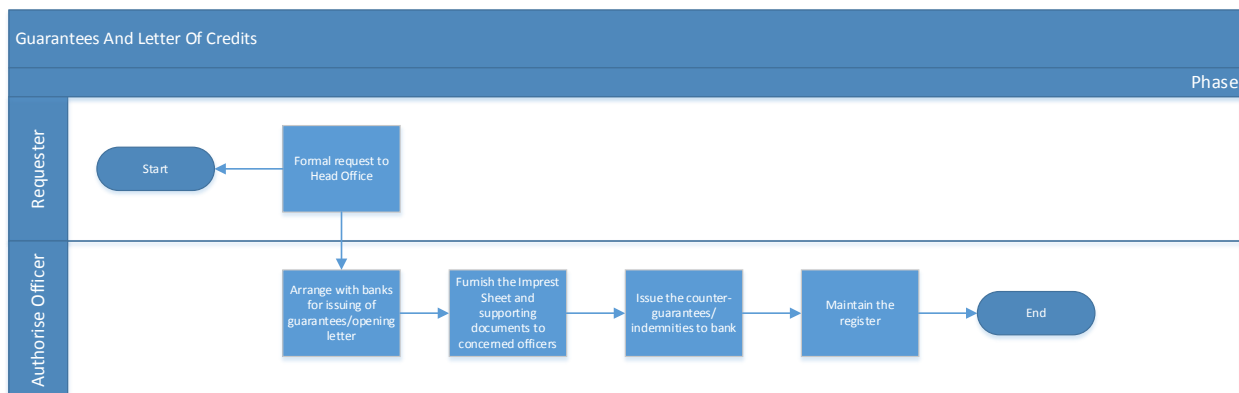


Records maintained

1. Permanent Imprest Register
2. Temporary Imprest Register

Guarantees and Letter of Credits

Issuing of Guarantees and opening of letter of credit are done at Head Office within the limits prescribed by the Board



Vehicle expense monitoring:

Auditing vehicle related bills (All bills are passed by ARU head through Divisional Accountant/Account Officer/Financial Officer)

All works related to vehicles such as auditing of Log Books and vehicle bills, passing and sanctioning of bills for effecting payment etc. by 10th of the succeeding month. Maintaining vehicle maintenance register showing expenditure on fuel, Oil, spares and labour. Registration, re-registration, C.F. Test, Permit of vehicles, Prompt remittance of Tax, Insurance etc. of all vehicles attached.

Records Maintained

1. Vehicle register
2. Log Book

Other Payables

Payment of Building Tax, Land Tax, Lease rent & Inspection Fee, Passing of all contingent Bills. All bills & vouchers connected to AB1 will be submitted to ARU through Divisional Accountant / Account Officer/Financial Officer. After passing, the bills will go to cash section for arranging payment.

Work Bills

Auditing of work bills, maintenance and upkeep of work group ledger, subsidiary ledgers for asset accounting, Preparation and maintenance of CWIP, R&M Day Books. The Day Book must be closed and Journal entries prepared on the 2nd working day of the succeeding month.

Records Maintained

Contractor's Bill Register

Cash

Disbursement of claims, collection and remittance of cash, cheque writing etc. The acquittance rolls, R.D receipt book etc. must be put up to the Head of Office on the 2nd of every month for verification and countersignature. Preparing and maintaining acquaintance rolls (with revenue stamps wherever necessary)

Cash remittance details are system generated and are available in "SARAS" (online IT Platform developed in house by KSEBL), Transfer of remittance to Head office, preparation of journals for fund transfer and receipt of money. The relevant journals are to be prepared before the 2nd working day of the succeeding month. Maintain R.D receipt Book register.

Disbursement Cash Book details are system generated "SARAS". All other connected works related to credit assignment and utilization. Maintaining of log books, M. Books, Vouchers and Bills etc. till payment is made and returning the documents to the concerned sections after issuing cheque.

Preparation of credit application for Master Trust Unit (MTU) on 7th, 14th, 20th & 28th of the month for disbursing pensionary claims. Cheques related to pension claims with statements are to be presented to Post Office and Bank on the due date.

Remittance of Income Tax, before the 5th of succeeding month. Remittance of Sales Tax, Work Contract Tax and Service Tax before 5th of succeeding month. Maintain proper register for the remittance of taxes, with Receipt details.

Preparation of Sales Tax statement for e-filing of Sales Tax (before 5th of every month.) E-filing of Service Tax (before 5th of every month) and half yearly return filing on April & October of every year.

Checking non- operative collection account through Internet Banking to ensure that the funds remitted has been transferred to Head Office in the same day itself.

Records Maintained

1. Remittance details of Income Tax, Sales Tax & Service Tax collected
2. Cheque sending
3. Unique Transaction Receipt File (UTR)

IT Applications Used: SARAS

3.3 Human Resource Management

The major Human Resources Management activities are the following

- Staffing
 - Transfer and Posting

- Promotion
- Recruitment
- Gradation
- Disciplinary actions
- Matters relating to quarters allocation
- Closure of various advances (HBA, CA etc...)
- Compensation & Benefits
 - Salary
 - Pension
 - Traveling Allowance
 - Leaves
 - Medical reimbursement
 - Other benefits
- HR Development
 - Training

These activities are managed by

- ❖ Account Rendering Units
- ❖ CE (HRM)
- ❖ Board – Secretary's office

Staffing

The employee category are

Officers	1 Assistant Engineer (Electrical/Civil)/ Medical Officer / Senior Superintendent / Divisional Accountant / Senior Confidential Assistant / Fair Copy Superintendent 2 Assistant Executive Engineer (Electrical/Civil) / Assistant Accounts Officer / Assistant Finance Officer / Junior Personal Assistant / Senior Fair Copy Superintendent / Regional Personnel Officer / Public Relations Officer 3 Accounts Officer / Finance Officer / Personal Assistant 4 Executive Engineer (Electrical/Civil) / Personnel Officer 5 Senior Accounts Officer / Senior Finance Officer / Deputy Chief Accounts Officer 6 Deputy Chief Engineer (Electrical/Civil)/ Chief Personnel Officer / Chief Accounts Officer 7 Chief Engineer (Electrical/Civil) / Financial Adviser / Chief Internal Auditor
Workmen	Electrical Worker, Lineman II, Lineman I, Meter Reader, Overseer (Electrical/Civil), Sub-Engineer (Electrical/Civil), Junior Ass./Cashier, Senior

	Assistant, Office Attendant, Junior fair copy assistant, senior fair copy assistant, Confidential Assistant and watchman Driver Grade II, Driver Grade I, Special Driver Grade II, Driver Grade I
Par time contingency (PTC) Employees	Scavengers, Sweepers, Cleaning Assistant

The below table describes the various human resource services being rendered at different levels of offices

Approving authority	ARU	CE (HRM)	KSEB Board
Service Area			
General Transfer		Workmen and Officers of and below AEE Level and AAO, AFO. (CE-HRM)	Officers of and above Executive Engineers Level and AO and FO
Recruitment and Appointment	Electricity Workers are appointed by (Dy. CE electrical (Districts))	Workmen and Officers of and below AEE Level and AAO, AFO (CE-HRM)	Officers of and above Executive Engineers Level and AO and FO
Gradation		All levels of the employees (CE-HRM)	
Promotion		Workmen and Officers of and below AEE Level AAO, AFO. Approval is provided by Lower DPC in case officers (CE-HRM)	Officers of and above Executive Engineers Level AO and FO Approval is provided by Higher DPC
Service book	Maintenance and upkeep of Service Book	Maintenance and upkeep of Service Book	
Attendance	Management	Management	Management
Leave	Upto 120 Days	Above 120 Days	Leave requests escalated from ARU and CE (HRM)
Salary	Salary Processing	Salary Processing (CE-HRM)	
Travel approval	EE – Within Division DyCE – Within Circle	CE – Within their jurisdiction and adjacent districts of neighbouring of state tour	
Medical Expenses	Medical Advance (emergency) EE - < Rs. 20,000 DyCE - < Rs.50,000 CE - < Rs. 2,00,000	All escalated requests will be routed through CE (HRM) Dy.CE (HRM) - < Rs.50,000	

Approving authority	ARU	CE (HRM)	KSEB Board
Service Area			
	Medical Reimbursement EE (ARU) - < Rs. 2,000 DyCE (ARU) - < Rs.20,000 CE (ARU) – all eligible cases		
Pension			
Training			

3.3.1 Gradation

The quota/stream wise seniority list of all the KSEB regular employees working in a cadre are maintained. This is based on the quota to which they are appointed / promoted.

1. Preparation of seniority list of all the employees. In the case of EE, FO, and AO and above are prepared in concurrence with board.
2. Verification of list

Chief Engineer (HRM) verifies the lists and forwards it for Boards approval (In case of EE, FO, AO and above)

3. Gradation list

After final approval the gradation list is published.

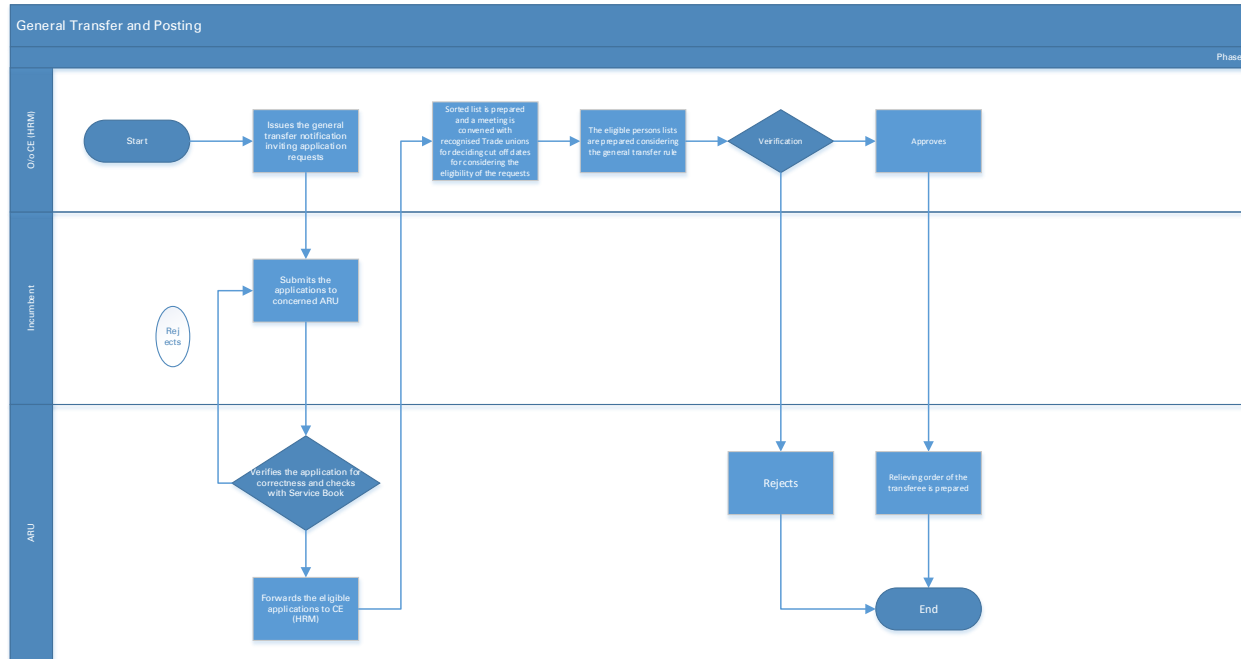
IT Applications Used: Nil

3.3.2 Transfer and Posting

3.3.2.1 General Transfer

General transfer is done every year based on the Guidelines and norms applicable

The transfer and posting of officers below AEE/AAO/AFO are done by CE (HRM). The transfer of officers of and above the EE, FO, AO are done by the Board



3.3.3 Appointment

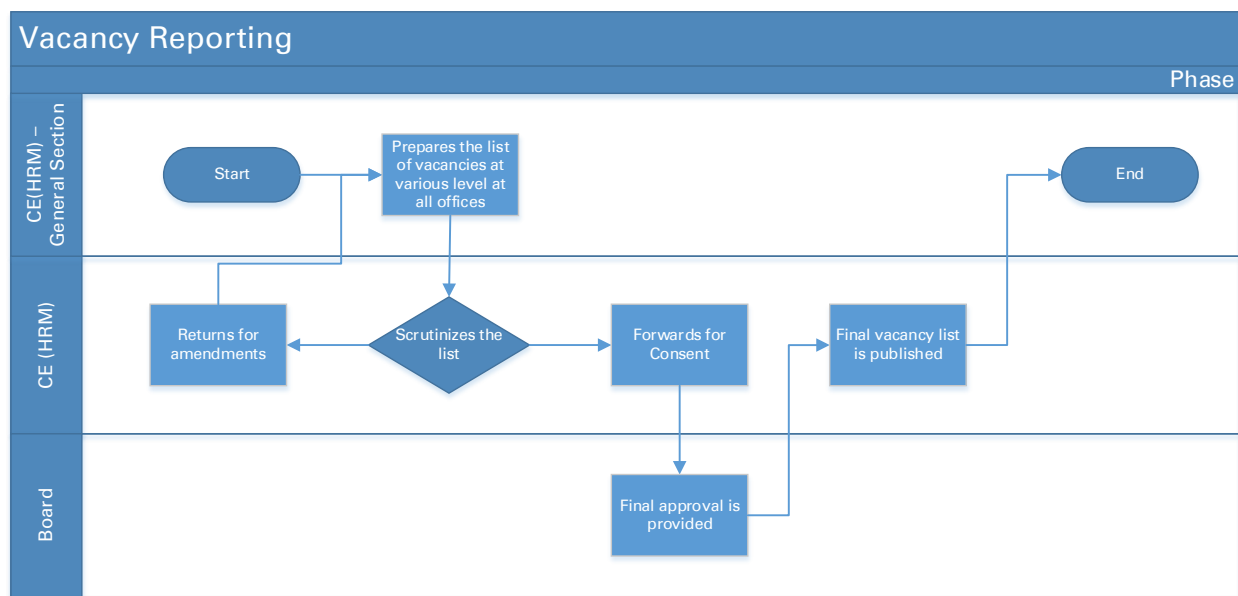
3.3.3.1 Vacancy Assessment

As the first step of recruitment quota wise vacancies are assessed at different levels

Sanctioned strength: - of each category for all offices are fixed by Board time to time. CE (HRM) prepares the list

Working strength: - is the actual number of employees deployed across various offices.

Vacancy: - is assessed by finding out the number of human resource required for each category by finding out the difference between sanctioned strength and actual strength



3.3.3.2 Recruitment

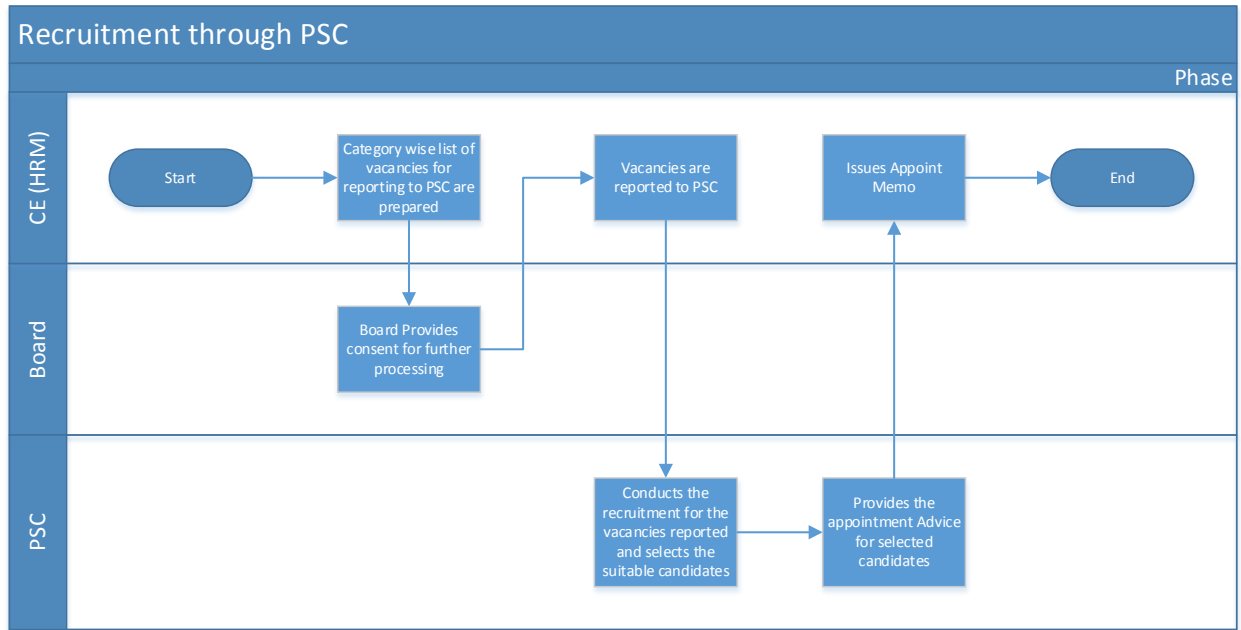
Board recruits people for entry level vacancies mainly through

1. General Appointment through PSC recruitment
2. Appointment under compassionate scheme
3. Appointment under sports Quota
4. Special recruitment
5. Appointments based on Government Orders

3.3.3.3 General Appointment through PSC recruitment

Once the total vacancies are assessed, the quotas setup part for new recruitment will be reported to PSC.

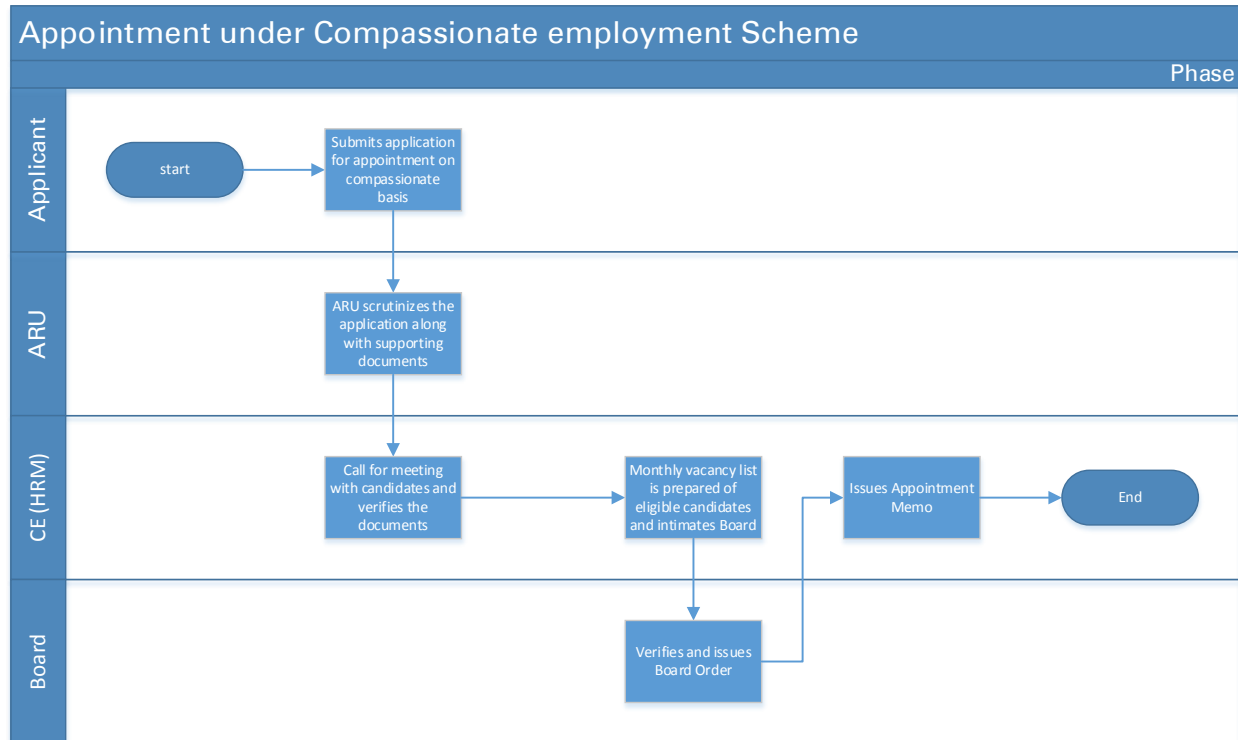
- Officers of the grade Assistant Engineer and workmen - CE (HRM) assesses the vacancy requirements, the consent is obtained from Board and is reported Secretary PSC. PSC recruitment is conducted for general candidates and for in-service appointments



- Electricity Workers – Dy.CE (DHQ) Circle reports the vacancies to concerned Regional PSC offices.
- Part-time Contingency Workers – Concerned Executive Engineers will coordinate with District Employment exchange for the recruitment.

3.3.3.4 Appointment under compassionate scheme

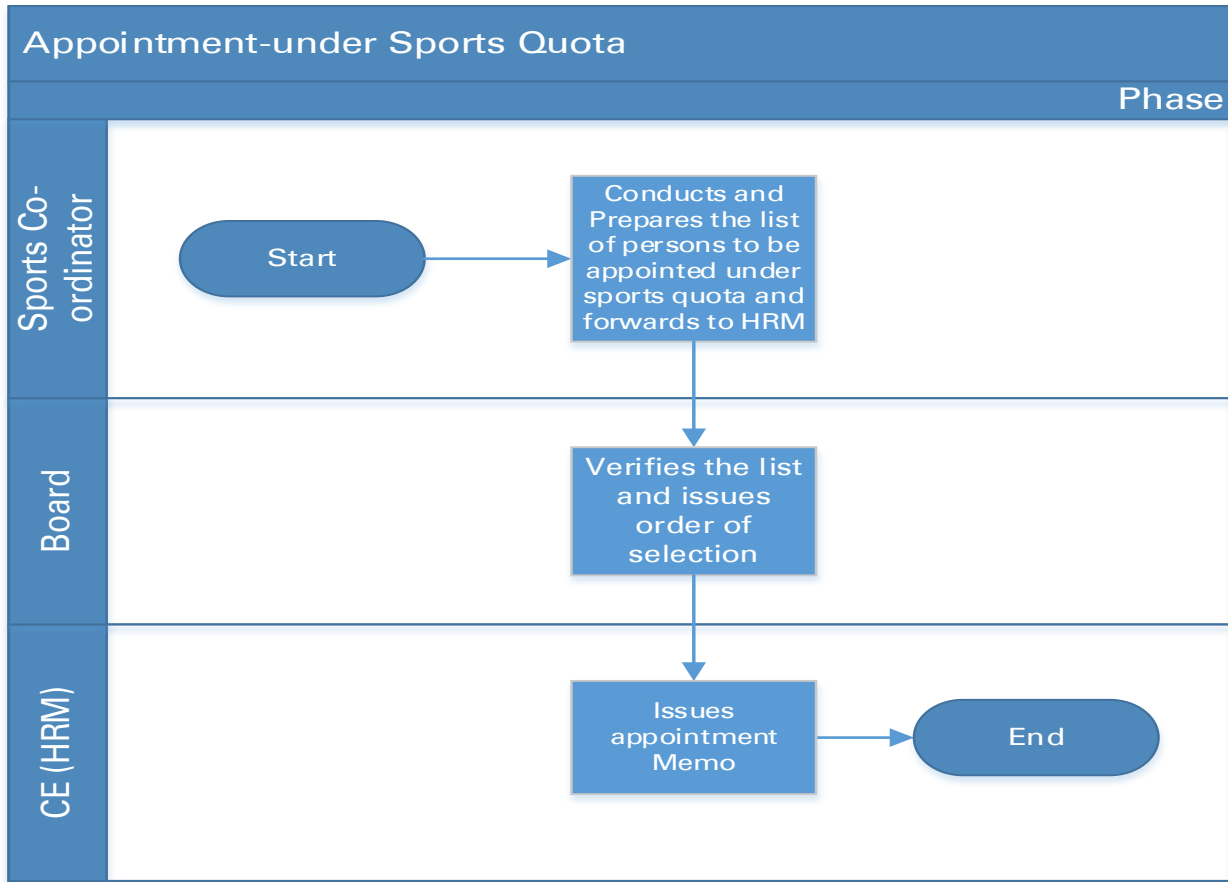
Compassionate appointments done at only workmen entry cadre based on the qualification processed. Applicant submits the job request to ARU. ARU conducts the preliminary verification and forwards the application to CE (HRM). CE (HRM) conducts interview and do the verification of documents. Forwards the monthly appointment list to Secretary for Board's approval. Board Issues order. Based on the board order CE HRM issue the posting order.



- Electricity Workers – Dy.CE (DHQ) Electrical Circle prepares the list of eligible candidates and intimate board for the consent and to issue order. As per the approved list issues appointment memo

3.3.3.5 Appointment under Sports quota

The Sports co-ordinator on behalf of board conducts the selection trials and verifications, submits the list of eligible candidates to Board. Board verifies the list and issues order after the interview. CE (HRM) based on Board order releases the appointment memo.



3.3.3.6 Special Recruitment

Special recruitment committee has been formed and Chief Personnel Officer is the convenor. Quarterly meetings are convened and shortfall in percentage is reported to PSC through CE HRM.

3.3.3.7 Appointments based on Government Orders

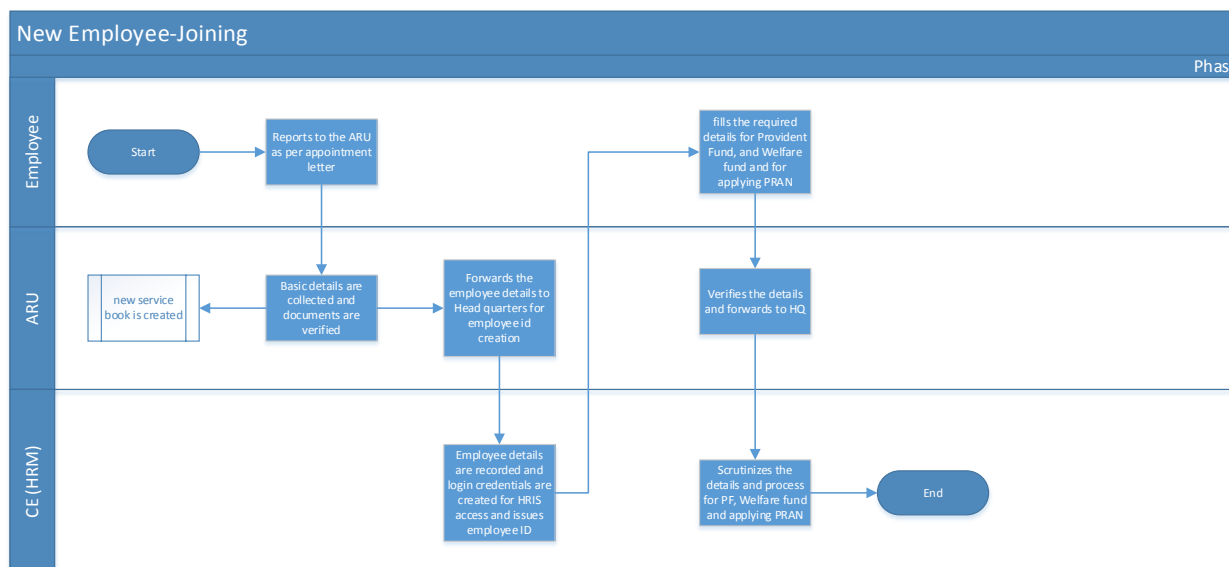
Board issue an order based on the Government Order and then CE HRM issue the appointment order as per the board order.

3.3.4 New Employee Joining

The new employees will be reporting to various ARUs. The service books are maintained at ARUs. The ARU will collect the basic details from joiners and send to head office for employee ID creation and HRIS login creation.

Once the user credentials are created in HRIS, the employees can login and will be able to fill the required details for Provident Fund, and Welfare fund and for applying PRAN.

Presently the bank account details are maintained by ARU officials



3.3.4.1 Extension of joining time

If a selected candidate is not able to join on the date as per appointment memo he/she submits application for extension of joining time.

Upto 45 Days of extension - CE (HRM) is the authority to approve the extension.

45 to 90 Days – CE (HRM) forwards the request to Board, and Board issues order of extension

Above 90 Days – Board is the approving authority

Electricity Worker's extension request up to 45 Days are approved by Dy.CE (DHQ) Electrical Circle.

3.3.4.2 Service Verification Certificate

For those who have joined after 2011, service verification by PSC is a mandatory requirement. Appointing authority will send the required documents to PSC. PSC calls for the meeting of concerned employee. The service verification certificates are issued to CE HRM (Except in the case of electricity workers)

Dy.CE (Electrical Circle) intimates the regional PSC offices.

3.3.5 Promotion

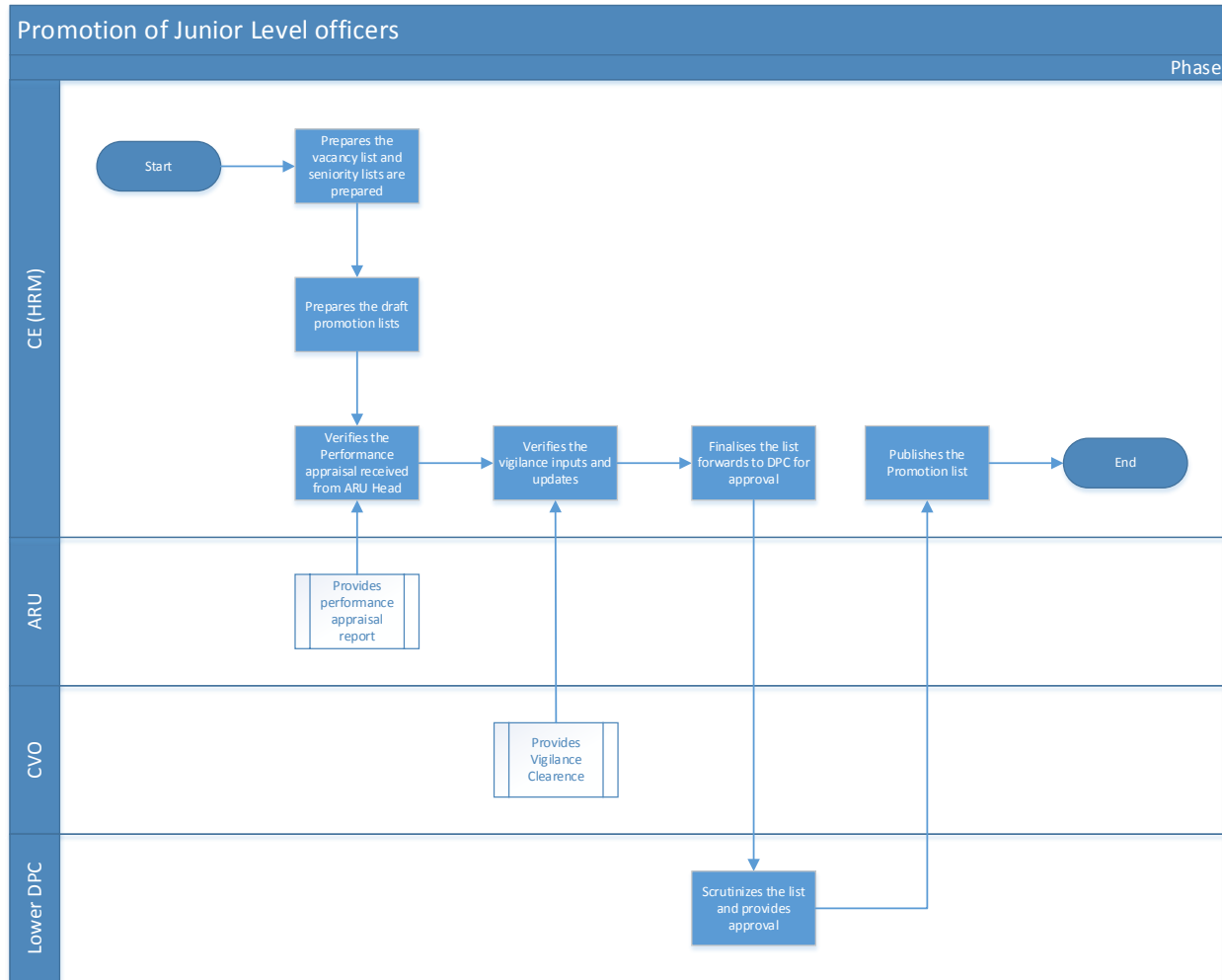
The work flows for promotion activities of various personnel are depicted below:

3.3.5.1 Promotion of Cadre Officers and Workmen

3.3.5.1.1 Promotion of Junior Level officers of and below AEE

CE (HRM) ascertains the vacancies. The gradation wing provides the seniority list. CE (HRM) prepares the promotion list. The performance appraisal for the employees are provided by concerned ARU. Vigilance clearance is provided chief vigilance officer.

Lower level DPC under the chairmanship of Director Finance finalises the promotion list. CE (HRM) publishes promotion list



3.3.5.1.2 Promotion of senior level officers above Executive Engineer Level

Board call for the seniority list for promotion from CE HRM. Higher DPC is the approving authority of promotion of officers above executive engineers' level of above and FO, AO. Based on the higher DPC list board issue the orders.

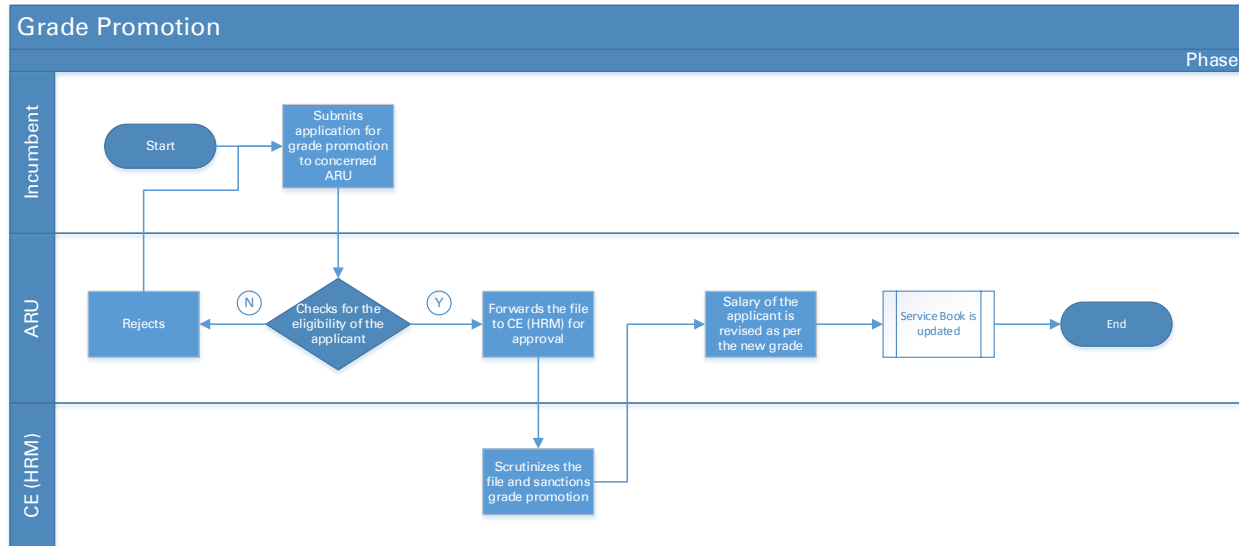
3.3.5.1.3 Promotion of Workmen

Workmen are promoted in two categories

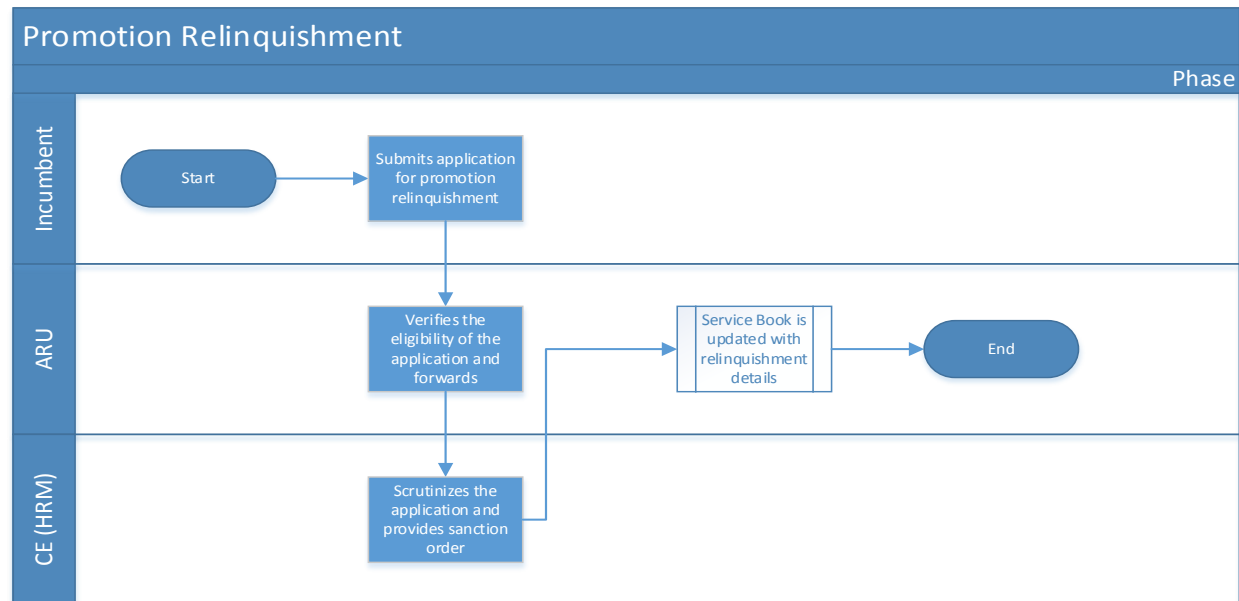
- Based on seniority list
- Based on additional qualification and on percentage basis from the lower categories

3.3.5.2 Grade Promotion

If an employee completes his/her service in a grade for a minimum period he/she could avail higher grade salary by submitting application. ARU head will scrutinizes the request and provides sanction.



3.3.5.3 Promotion Relinquishment



Orders issued by board are relinquishment approved by board.

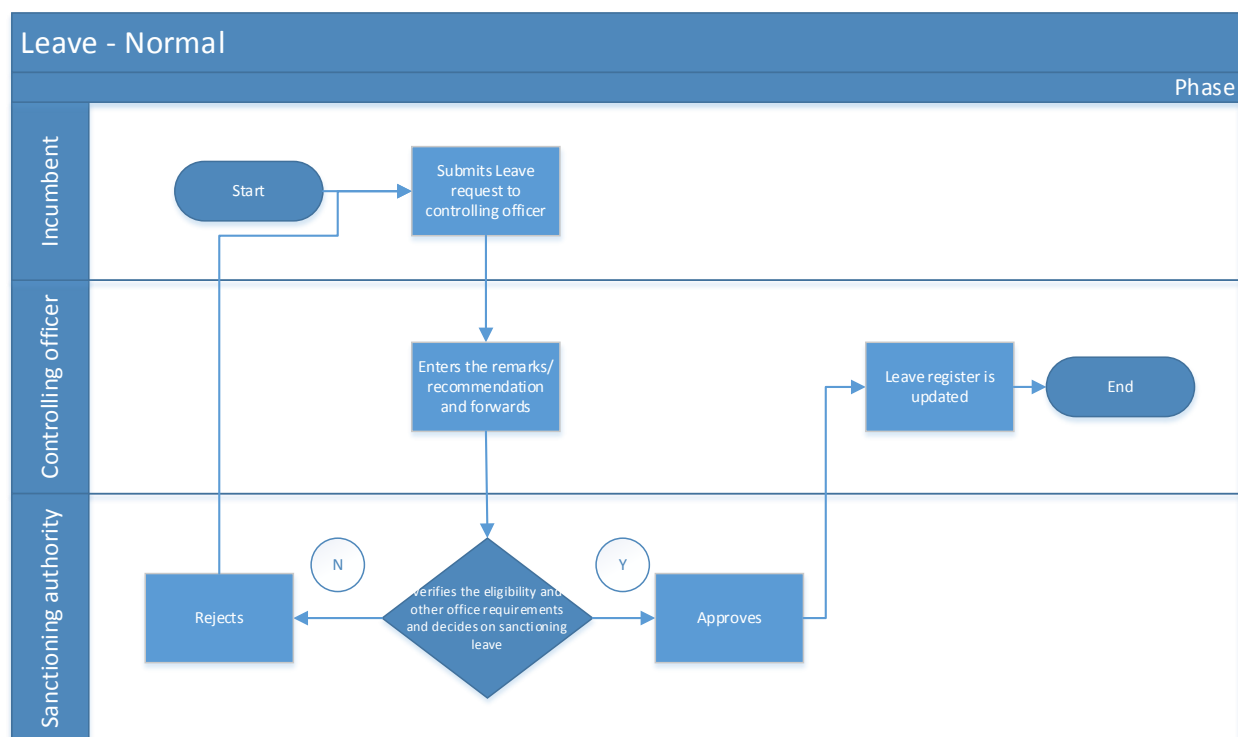
3.3.6 Leave Management

The major types of leaves are

- Casual Leave
- Earned Leave
- Commuted Leave
- Leave not due
- Leave without Allowance

- ❖ Study Purpose
- ❖ Personal
- ❖ Medical grounds
- Special Disability leave
- Leave Casual leave
- Maternity Leave
- Paternity Leave

3.3.6.1 Leave – Normal up to 120 days

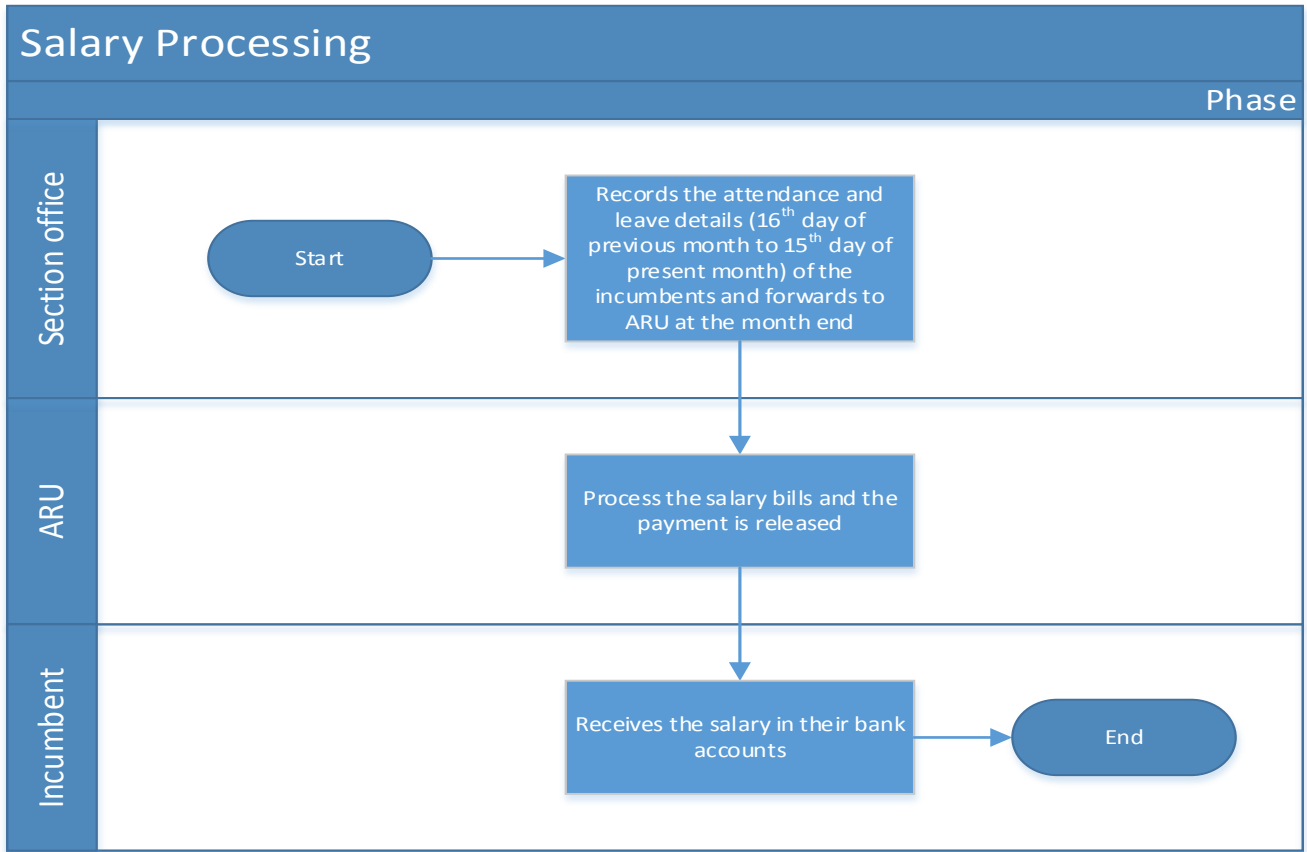


3.3.6.2 Leave – greater than 120 Days

Leaves above 120 days are approved by CE (HRM), which are routed through ARU. For special purpose leave the approval is taken from Board.

3.3.7 Salary Processing

Salaries are processed at ARU level. The attendance details and leave details (from 16th day of previous month to 15th day of present month) of all employees are send from concerned office to ARU. ARU prepares the salary bills.



3.3.8 Pension Processing

For employees who have joined after 2013, the pension is with NPS, the pension is contributory, and the amount is deducted from salary.

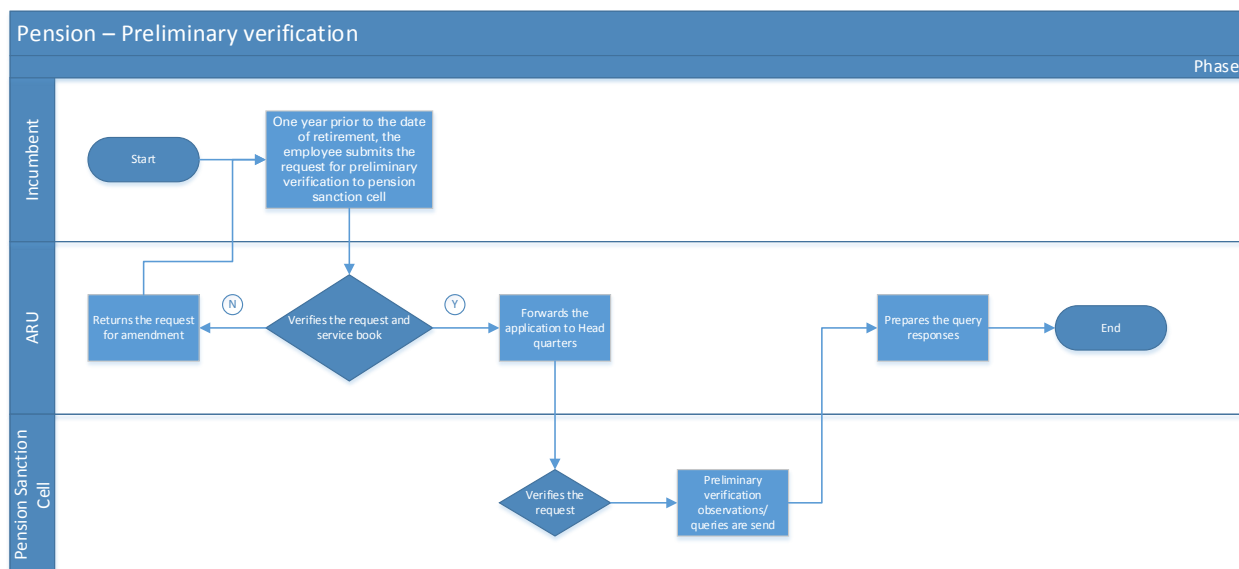
For employees who have joined before 2013, the pensions are provided by KSEBL

3.3.8.1 Preliminary Verification

One year prior to the date of retirement, the employee through ARU intimates the HRM section about the superannuation and submits the application pension sanction cell.

The pension details of every employees are available in HRIS application

The AO pension sanction scrutinizes the application and then returns Pension papers and Service book to the ARU with observations/Objections



3.3.8.2 Pension Sanction

The ARU prepares the pension documents and forwards to CE (HRM) further processing.

- On the retirement of the applicant, the concerned ARU head resubmits the Service Book and final pension papers after addressing the objections/observations along with consolidated NLC etc to the Pension Sanction section of CE(HRM)
- The Pension sanction cell AO calculates the pension amount
- The basic data and calculations are audited by an Audit Officer in the cell
- Pension sanction submits the sanction order along with calculation statement to the Deputy Chief Engineer / Chief Engineer / Secretary KSE Board for sanction
- The sanction order along with the Pension papers and Service Book is forwarded to the AO, Pension authorization and then for post audit in the office of the CIA
- The audited papers are returned to the AO, Pension authorization and then retransmitted to Pension record section.

3.3.8.3 Pension Authorisation

Pension authorisation authorize the pension sanctioned and transmitted to the concerned ARU along with the identification certificates and both halves of Pension Pay Order (PPO) for effecting payment.

3.3.8.4 Pensions Disbursement

On superannuation, pensions will be disbursed monthly from the selected ARU. Pension bill are generated in HRIS and payment details are shared to SARAS for bill payment.

3.3.8.5 NPS pension disbursement

Currently NPS pension disbursement process is not defined or documented.

3.3.9 Medical Reimbursement/Medical Advance

KSEB provides medical reimbursement to the employees – both expense reimbursement and medical advances as per government norms.

Incumbent submits their request to General Branch of CE (HRM) through respective ARUs. As per the claim amount the approvals are provided by CE, Chief Personnel Officer, or the Board.

3.3.9.1 Medical Advance

Executive Engineer - To sanction emergency medical advances in the case of accidents during the course of work upto Rs.20,000 in each case

Deputy Chief Engineer - To sanction emergency medical advances in the case of accidents during the course of work upto Rs.50,000 in each case

Chief Engineer

- To sanction emergency medical advances upto Rs.2 Lakh in each case
- To sanction advance payment for purchase from SAIL/VSP etc.
- To sanction all statutory payments due to Government / PSUs (Such as road restoration fees / PTCC charges etc.)

3.3.9.2 Medical Expenses

The approval limits of expenses are

- Executive Engineer (with ARU) – Rs 2000 in each case
- Dy. Chief Engineer (with ARU) – Rs 20,000 in each case
- Dy. Chief Engineer (HRM) – Rs 50,000 in each case
- Chief Engineer (ARU) – All cases of reimbursement

IT Applications Used: Nil

3.3.10 Travelling Allowances

The travelling allowances are approved by ARUs. Approval of travel plan is prior requirement for processing the travel allowances

3.3.11 Training

Human Resource Development Cell co-ordinates different training activities being conducted for employees.

KSEBL has recently formulated a new training policy in March 2017 (drafted as per the guidelines issued by the Ministry of Power, Govt of India vide the policy document on National Training Policy in Power Sector), which envisions new HRD activities to match the competencies of the individual employees with the jobs they have to perform and bridge competency gaps for current and future roles through training. It also touches on credit system for training programmes attended by an employee which would be considered for performance evaluation and promotion process

HRD prepares annual training calendar. The following are the major training programmes being organised:

- Induction Level Training Programme (ILTP) for new joiners
- Statutory Training Programme
- Computer Based Training

- Safety Training
- National Training
- Training of Trainers
- Refresher Trainings
- Orientation Training
- External Training Provision

There are six training centres:

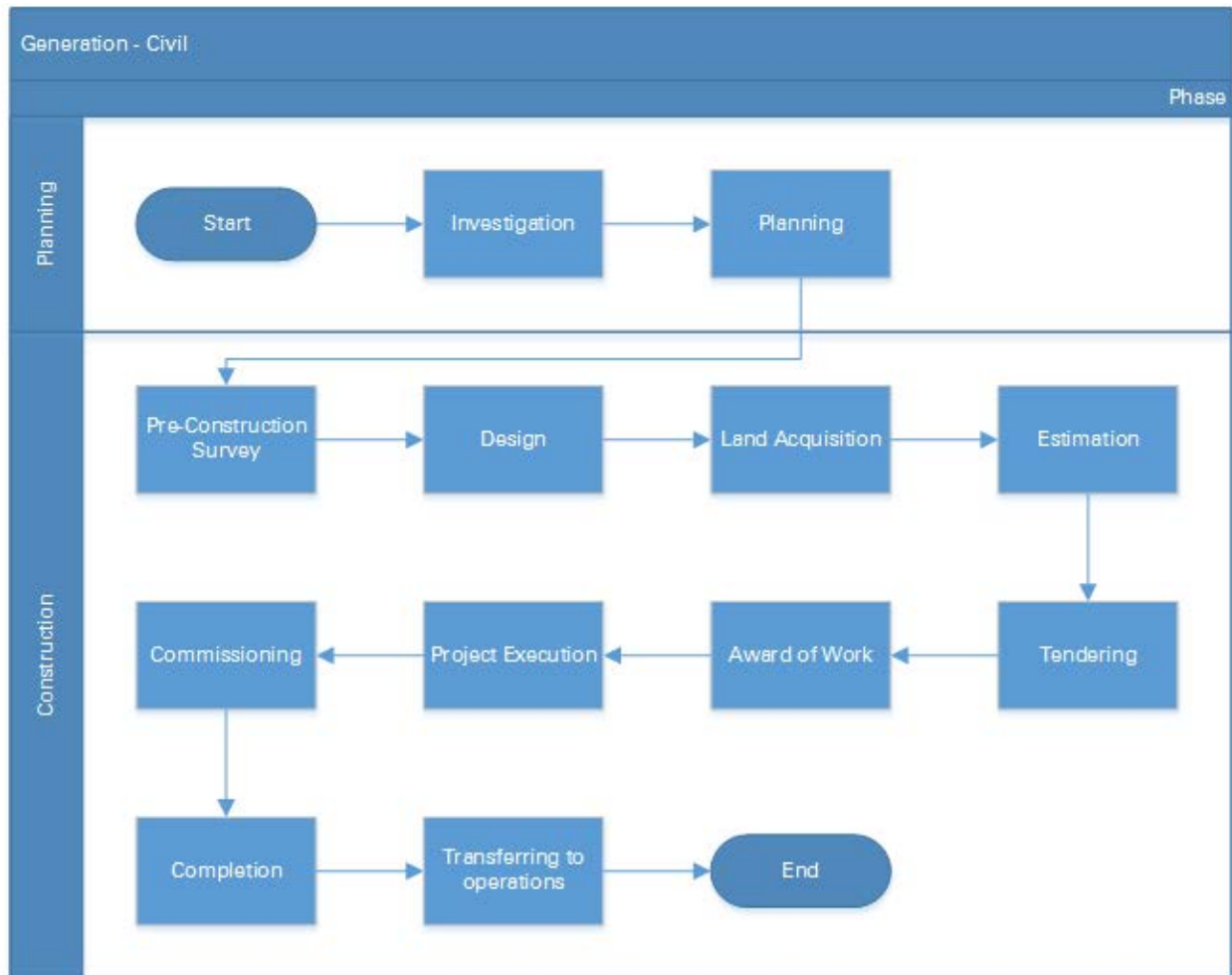
- 1 Power Engineer's Training & Research Centre (PETARC), Moolamattom
- 2 Regional Power Training Institutes
 - Thiruvananthapuram
 - Kottayam
 - Thrissur
 - Kozhikode
- 3 Southern Region Computer Training Center (SRCTC), Thiruvananthapuram

HRD cell schedules different training programmes as per annual calendar and invites nominations for different training programmes.

IT Applications Used: HRIS

3.4 Generation

3.4.1 Civil



3.4.1.1 Planning

3.4.1.1.1 Investigation

Identifies the potential of hydro-electric schemes, both small and large, that can be taken up for implementation, conducting preliminary and detailed investigation/ survey jobs, preparation of Preliminary/ Detailed Investigation Reports (PIR/ DIR). Investigation of Capacity Addition of existing major power project, and pumped storage scheme are also dealt with.

3.4.1.1.2 DPR Preparation

Preparation of Draft Detailed Project Reports (DPR) for those projects that are found technically feasible and economically viable. Electrical portion of DPR is prepared by PED.

IT Applications Used: Nil

3.4.1.2 Construction

3.4.1.2.1 Pre-Construction survey

After approval of DPR by Board, pre-construction survey will be conducted for detailed understanding of the location.

3.4.1.2.2 Design

Detailed designs for the project are prepared by design units at Thiruvananthapuram and Kozhikode and handed over to construction wing. Electrical design unit is there under PED at Thiruvananthapuram.

The design units are using the STAAD Pro and Auto-CAD software applications for structural analysis and design works.

3.4.1.2.3 Land Requirement

Detailed studies are conducted about the land required for the implementation of the project. If forest and revenue lands are involved, requests are forwarded to the concerned departments for transfer of land. If private land is involved, it is acquired either through negotiated purchase (conducted by the District Level Purchase Committee) or by acquisition through the prevailing land acquisition acts.

3.4.1.2.4 Estimation

Detailed estimations for the quantities of works are prepared for the work.

3.4.1.2.5 Tendering

Based on the estimation, the tender is called for execution of work. For works costing more than five lakhs, e-tenders are invited. For works costing more than one crore, pre-qualification process is conducted and the price bids of qualified bidders alone will be opened. The tendering authority will be according to delegation of power.

3.4.1.2.6 Award of Work

The successful bidder selected in the tender process will be awarded the work on contract basis and turnkey basis.

3.4.1.2.7 Project Execution

The progress of the project are monitored on both physical as well as financial front.

3.4.1.2.8 Commissioning

After execution of all the works Civil and Electrical the project is commissioned.

3.4.1.2.9 Completion

After successful commissioning of the project, the project is taken over by operations management team and the completion report is prepared

3.4.1.3 Land Management

Land Management unit have prepared Land Bank - an information base on all the land available with KSEB

3.4.1.4 Dam Safety

Safety aspects of all dams of KSEBL are monitored by the Dam Safety Wing headed by Chief Engineer (Civil-Dam Safety & DRIP) under Generation SBU. The major functions includes

- **Safety monitoring and R&M of dams and appurtenances** - monitoring of dams, instrumentation and preparation of inspection reports, maintenance of dams and connected structures, operation of intake, spillway gates and disperser valves as and when required and its maintenance, general upkeep and maintenance of the dam and its connected structures to ensure their security, arranging security at vital points, material testing, mix design and model studies, monitoring of seismic network,
- Upkeep & maintenance of colony at Vazhathope, Kakkad, Kochu Pamba, Pamba & Padinjarethara, Manage issues regarding land encroachment in Idukki, Ayyappancovil, Lower Periyar, Anayirankal, Kakkad and demarcation of land and land issues at Thariode, research activities based on the dam monitoring results especially for the major & old dams.

IT Applications Used: Maintenance progress are updated in DHARMA dam safety application

3.4.1.5 SPIN

A new cell has been constituted Sports Pre-Engineered Infrastructure and New Technology for execution of contracted work for in-house projects and engineering consultancy to external agencies.

IT Applications Used: Nil

3.4.1.6 Forest & Environment Monitoring

Activities related in obtaining Forest and Environmental Clearances for the various projects, issues on Inter-State water disputes, Clean Development Mechanism (CDM), financial assistance from MNRE for the implementation of Hydel Projects are dealt under this office.

IT Applications Used: Nil

3.4.1.7 Renovation Modernization & Uprating

To bridge the gap between demand and supply and to comply with the regulatory authority's guidelines, the existing power stations are being renovated. Also technology advancement – SCADA, Automation, Equipment upgrading are also being taken up.

IT Applications Used: Nil

3.4.2 Projects Electrical Design

Projects Electrical Design (PED) undertake the pre-contract activities and post-contract activities such as design, preparation of technical specifications, tendering, scrutiny and approval of drawings, design documents and QAP, inspection and test witnessing at works, monitoring and supervision of erection works, testing and commissioning etc. in respect of E & M works for new power generation projects and RMU of existing power projects are under taken by this wing. Prepare technical specification of E&M estimate including power evacuation of projects based on preliminary design and site visit, for incorporating the same in the DPR of new projects. DPR preparation of RMU works are also undertaken by PED. The following are the major activities undertaken

3.4.2.1 Preparation of DPR

After civil wing's investigation study, PED prepares the portion of DPR for electrical work. Detailed design are prepared

3.4.2.2 Tendering

The tendering is done based on the estimation of project. Tendering for electrical work are called

for either along with civil work tendering or separately.

3.4.2.3 Project Execution and Monitoring

After selection of the contractor, detailed plan is prepared and the work is executed. The physical and financial progress of the project is measured through different reports prepared in the site.

Monthly meetings are conducted for updating status

3.4.2.4 Renovation Modernization & Uprating

Renovation and modernization process are undertaken to meet the emerging requirement the modernization process is undertaken

IT Applications Used: Nil

3.4.3 Generation – Operations

3.4.3.1 Operation Management

Power generation is controlled by State Load Despatch Centre at Kalamassery as per actual demand requirement and taking into consideration the supply side constraints. In Power Stations generation units operations are controlled and monitored from the Bench Board or SCADA facility in Main Control Room including parameters regarding power output. Power generated is instantly transferred to the grid.

3.4.3.2 Material Management

The procurement of materials are undertaken in a decentralised manner, as the materials used by each power stations are unique. There is a building and stores division at Angamaly, which have common materials required across. In all power stations local stores are there.

3.4.3.3 Renovation Modernization & Uprating

RMU unit is responsible of reduction in failure rate, such that whenever the grid demands, power generating units should be available for generation. Maintenance are undertaken regularly on a predefined schedule.

IT Applications used: Nil

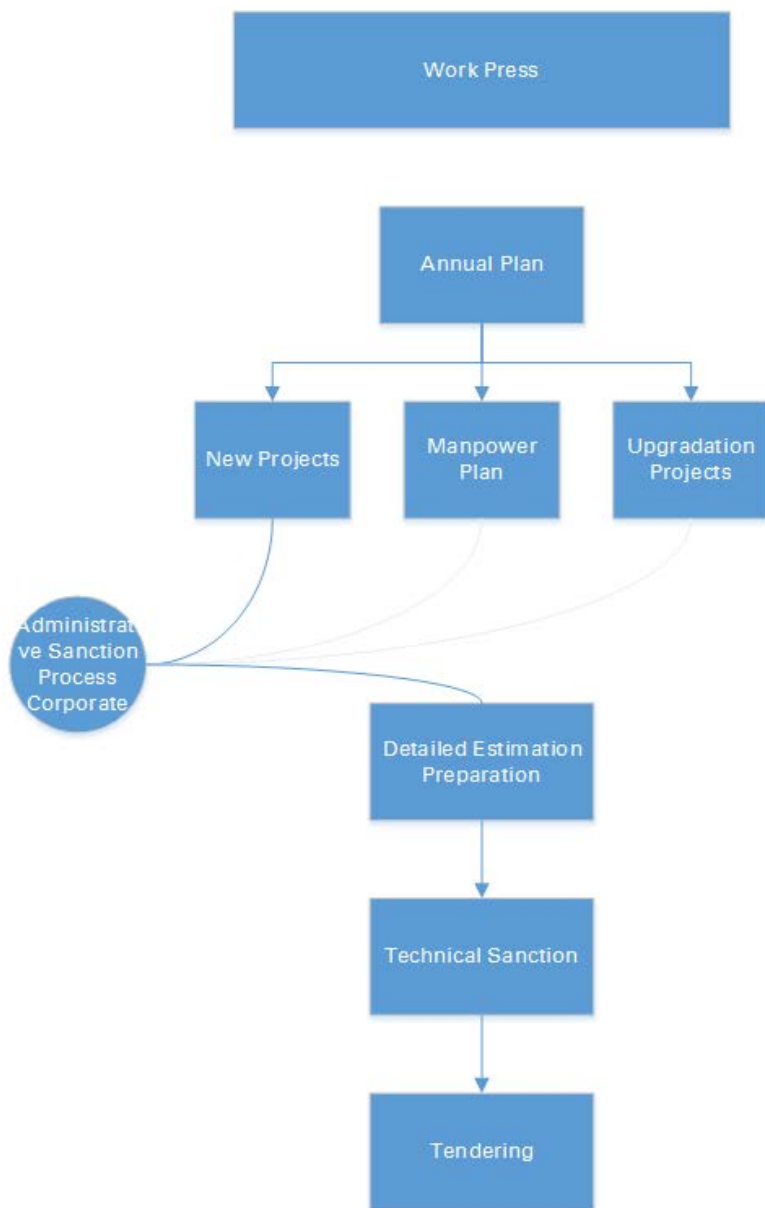
3.5 Transmission and System Operation

3.5.1 Annual Planning

Transmission projects are medium term having time span of two to three years. The project requirements are gathered from field level and are consolidated and scrutinised at corporate level.

As per the fund availability the projects are approved. The maintenance works are planned as per previous years' execution progress

IT Applications Used: Annual plans are consolidated using excel



3.5.2 Administrative Approval

The administrative sanctions are provided to projects as per the budgetary provisions made in the Board's annual plan. For unplanned maintenance activities AS are provided as per the work execution requests from field offices

IT Applications Used: Nil

3.5.3 Land Acquisition

It is acquired either through negotiated purchase (conducted by the District Level Purchase Committee) or by acquisition through the prevailing land acquisition acts or the land is taken on lease.

3.5.4 Material Procurement & Management

The common materials are purchased centrally by Supply Chain Management Wing. The other materials are procured by Transmission wing at different levels as per delegation of authority.

IT Applications Used: Nil

3.5.5 Project Execution & Monitoring

Project monitoring committees are constituted for evaluating the progress of the projects. Regular meetings are convened and project status are assessed. Manual sheets are maintained by executing offices for project monitoring.

IT Applications Used: Nil

3.5.6 Transmission Operation

Maintenance of EHT lines from power generating stations to substations, manages substation operations, development of new substations. They are also responsible for management of power from central and other independent power producers

The SLDC located at Kalamassery functions as the grid manager. Maintenance of EHT lines up to 110kV line is being carried out with the concurrence of Executive Engineer of the Transmission Division concerned and that of 220kV line is sanctioned by the Dy.CE of Transmission circle concerned. For grid feeders and 220kV lines, sanction of shutdown is to be obtained from the load dispatch center.

A standalone software application named "LD Permit Management System" is in operation to manage and obtain sanction for permits –to – work on EHT grid feeders

IT Applications Used: LD Permit Management System and TrAMS

3.5.7 Communication

Communication through electric infrastructure are managed by transmission unit. Communication wing plays an important role in the upkeep of the state-of-the-art Communication Technology which is fiber-optic enabled; the stability and integrity of power grid is being achieved by deploying the special protection schemes (SPS) enabled through communication channel. The SCADA wing is providing the required visibility and situational awareness in the grid by remotely telemetering the measured at various points of the grid to enable the Transmission System Operator to take appropriate decisions.

- i. **Data communication** :-Due to the complexity of Grid, Load Dispatch Centre operation is not possible without real time data from substations and generating stations. At present the real time data of 53 stations [all 220 kV substations, generating stations and important 110 kV substations] are transmitted to the State LDC (Main LDC) at Kalamassery and Back up LDC at Thiruvananthapuram through optical fiber and PLCC communication network of KSEBL. This real time data is required for SCADA system operating at MLDC/BLDC.
- ii. **Tele protection**:- Tele protection systems helps distance protection relays to clear line fault in the shortest possible time ,it isolate primary plant components directly affected by a fault and is required for auto reclosing of 220 kV feeders to avoid brown out and black outs. Protection couplers with Optical fiber communication channel and PLCC channels are used for the above function. Besides this In order to ensure effective grid operation in case of contingencies, System Protection Schemes (SPS) are being used to avoid Blackouts. SPS requires the transfer of signals from one node to many nodes simultaneously. Various

KSEBLs own SPS systems and SPS systems from PGCIL stations are in service.

- iii. For efficient Load Dispatch Centre operation voice connectivity to all Substations and Generating stations are required. KSEBLs optical fiber and PLCC communication network is used for the present private voice communication network of KSEBL connecting all RTU stations.
- iv. Wide Area Measurement System (WAM) is the new emerging technology for grid operators. Phasor Measurement Units (PMU) is the basic building block of WAM and is installed in Substations. The Optical fiber communication network is used for transmitting the data from substations to the Data concentrator units installed at Kalamssery.

3.5.8 System Study

Load flow study is conducted to find out the feasibility of proposals for construction / upgradation / capacity enhancement of substations and power evacuation proposals for new /existing projects. Short circuit study and load flow study are being conducted to assess the fault level of substations

The works undertaken by the System Study Group include Power System Studies for reviewing existing installations as well as new or conceptual proposals and give recommendations on how to upgrade or reconfigure the system to perform safely and efficiently under various operating conditions. Further system studies for long term transmission planning, power evacuation proposals, System loss assessment at various voltage levels from 33kV up to 400 kV, Energy and performance Audit of EHT network etc.; are also carried out on a regular basis. Short circuit studies are also conducted to calculate the fault currents at various points in a network for the evaluation of efficacy of protective devices and other equipment in the system and for facilitating future expansion of the grid. The studies are carried out using Power System Simulation Software like PSS/E and MiPower.

GIS based grid map and Single Line Diagram of the Transmission network are prepared by this using GIS Software. The design of grounding grid for new Substations and Generation Projects along with evaluation of existing grounding systems in Substations and rendering recommendations for improving the ground grid performance are also carried out by this wing using Autogrid Grounding Design Software from CDEGS.

Other responsibilities of the wing include

- assisting the Planning wing on technical issues related to planning process;
- Assisting the planning wing for Demand Projection / Load forecasting;
- To collect and analyse the Monthly Operating Review (MOR) from various Generating stations and Sub stations, check the healthiness of Energy meters / Capacitors and follow up;
- Maintaining web – based modules for Transmission Asset Management, MOR, Station operating Statistics (SoS), Asset commissioning and Maintenance Management System;
- To address issues related to CEA, SCPSP, SRPC, TCC and the other Central & Southern Regional Forums
- Studies on various LTOA and connectivity issues in the Southern Region
- Studies to reduce the system loss by optimal bus configurations and feeder arrangement, to optimise circuit usage, to develop practical voltage profiles through minimising kW and kVAr losses by determining the location and size of shunt capacitor banks, to identify under-utilized equipment which will allow for future load growth, to identify over-loaded

equipment, to increase the distribution system operating efficiency and to determine the most optimal operating configuration of the network fed from 33kV Substations;

- Assist the System Operation wing in analysing the operational problems etc.

IT Applications Used: MiPower, PSS/E, Auto gridpro, GIS software

3.5.9 System Operation

The State LD operations and related works are managed by System Operation office which is headed by Chief Engineer System Operation. Major functions are Load Dispatch Activities, and all the activities in the Communication, SCADA, Protection, Power Equipment Testing and Meter Testing Field. They also manage the scheduling of generation based on consumption

The relay wings attached to the System Operation Circles are responsible for testing, commissioning power system diagnostics, re-commissioning, consequent upon changes in the system components etc. The Power Equipment Testing (PET) wing under the System Operation Circles are responsible for routine testing, predictive and preventive maintenance of various power system components.

The test results furnished by the PET wing is used to study the trending of equipment and replacement is being done by studying the variation of values obtained subsequently after comparing with the values at the time of commissioning. The field meter testing wing calibrates all the meters used in the Substations.

The following generation activities are dealt in System operations function

- Instantaneous power purchase decision
- Generation scheduling
- Maintenance scheduling
- Power Demand Forecasting
- Blackout management
- Co-ordination with power exchange
- Water management and interstate water sharing
- Monitoring and Management of Power System Development Fund (PSDF)

IT Applications Used: MiPower, Transmission SCADA systems

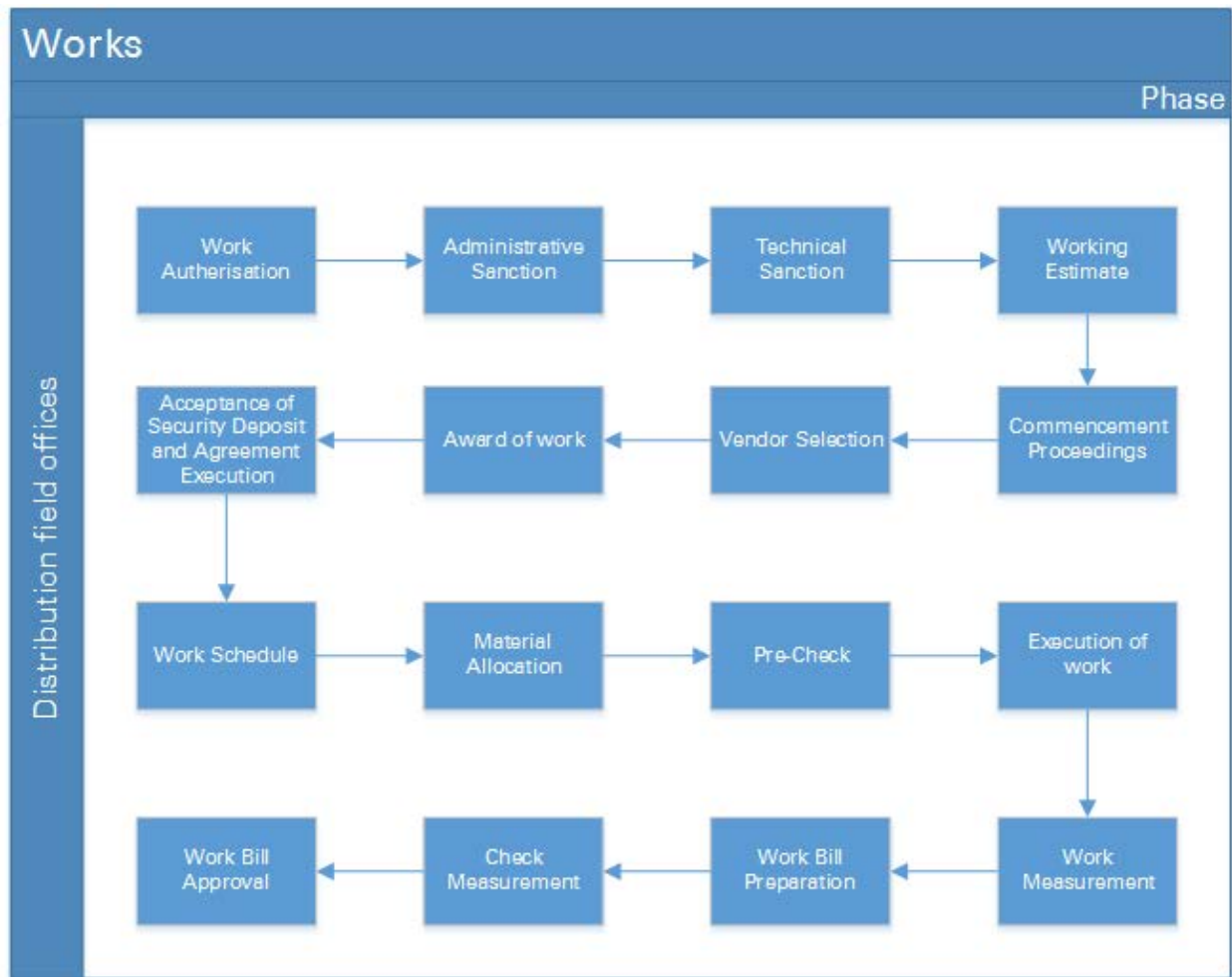
3.6 Distribution

3.6.1 Annual Planning

Field offices prepares for the Capital and Operations & Maintenance works in next financial year and forwards to corporate planning. As per the budget provision available bulk approval is provided.

IT Applications Used: SCM

3.6.2 Works Management



3.6.2.1 Work Authorisation

AE submits the work authorization request. As per the delegation of power approval is provided by AEE/EE/DCE/CE

3.6.2.2 Administrative Sanction

AS is provided by AE/AEE/EE/DCE/CE as per delegation of power. The AS details are recorded in the register maintained at concerned Section Office

3.6.2.3 Technical Sanction

After providing AS TS sanction is provided by AE/AEE/EE/DCE/CE as per delegation of power. The TS details are recorded in the register maintained at concerned Section Office.

For funded projects TS is given after remittance of fund

3.6.2.4 Working Estimate

AE prepares the working estimate and submits for approval. As per delegation of power AEE/EE/DCE/CE sanctions the estimate.

The details are recorded in the working estimate register maintained at concerned section office

3.6.2.5 Work commencement Proceedings

The sanctioning authority issues the proceedings for the work commencement

3.6.2.6 Selection of vendor

As per the value of work quotation process or tendering process initiated.

The records maintained are

- Quotation register
- Tender form issue register
- Tender register
- Notice Inviting Tender register

3.6.2.7 Award of work

The work is awarded to the lowest bidder. Work Order proceedings are prepared.

The details are recorded in WO register

3.6.2.8 Agreement Execution

Agreement is executed between tendering authority and the vendor

3.6.2.9 Work Schedule

The work schedule is prepared by AE, and the work sanctioning authority approves.

3.6.2.10 Material Allocation

The materials are allocated from stores. SCM application is being used for material allocation.

3.6.2.11 Pre-check Measurement

Before commencement of work pre-measurement process is carried out to find the actual work assessment. This is recorded in Measurement Book (M – Book)

3.6.2.12 Work Execution

The contractor executes the work under the supervision of concerned section officials

3.6.2.13 Work Measurement

After completion of work AE measures the work executed and records in the M – Book.

3.6.2.14 Work Bill preparation.

The contractor submits the bill/invoice to concerned Section office. Based on the bill/invoice and M-Book AE prepares the Work Bill and submits to Sub-division office for verification.

3.6.2.15 Work Check Measurement

On receipt of work bill, the AEE conducts the check measurement of the work executed and records the same in M – Book. Verifies the Work Bill and forwards to ARU (Division office).

3.6.2.16 Work Bill Approval

The work bills are processed and approved by Division office. After check measurement the work bills are forwarded to Division office

- In the Division office the details are updated in inward register.
- The Work Bill details are entered into SARAS by Accounts Branch (AB)
- The Technical Audit is conducted by Drawing Branch (DB)
- The Financial Audit is carried out by Accounts Branch

In case of any discrepancies, the objection is intimated to the Section office, AE – through phone or email or the bills are returned to section office for amendment. AE corrects the Work Bill re-submits to Division office through proper channel.

- ARU Head provides the final approval and passes the bill for payment
- The corporate office allocates the fund as per payment bill.
- Division office releases the fund – Cheque or Fund Transfer

IT Applications used: SARAS, SCM

3.6.3 Progress Monitoring

Activity progress are monitored manually and the details are entered into SCM application. Section offices maintains the work progress in hardcopy formats also.

IT Applications Used: SCM application

3.6.4 Material Management

Section offices submits the material requests to Circle office through Division office. The materials are issued to section offices from circle stores. Though the works are scheduled through SCM, due to the high share of unplanned activities, the materials are issued in ad-hoc manner

IT Applications Used: SCM

3.6.5 Revenue Monitoring

LT connection energy charges are collected by field offices and are updated in Orumanet application. The collection details are updated to SARAS the financial system at the end of month.

HT/EHT energy charges details are recorded in En'rgise software. Special Officer Revenue monitors the revenue collection

IT Applications Used: Orumanet, En'rgise

3.6.6 Distribution – Corporate Functions

The following are the major functions of distribution wing at corporate office

- Project Monitoring – Physical, Financial
- Centralised material management
- Manging lines for Cable TV
- Assessing Standard of Performance
- New office formation, restructuring offices
- Public Grievance redressal
 - shifting of lines and installations,
 - service connections,
 - supply interruptions,
 - low voltage,
 - property crossing objections,
 - streetlights,
 - general complaints
- Vehicles management
- APTS inspections details management
- Energy loss assessment

3.6.7 Consumer Related Services

Distribution wing section offices interacts with consumers and provides services, following are the major services rendered in section offices

SI No.	Service Delivery Items	Services
1	New Customer Services	New Connection LT
2		New Connection HT
3		New Connection EHT
4	Existing Customer Services	Meter Change
5		Ownership Change
6		Address Change
7		Phase Conversion

Sl No.	Service Delivery Items	Services
8		Connected Load change
9		Overall Multiplication Factor Change
10		Tariff/Purpose change
11		Billing Frequency Change
12		Consumer card issuance
13		Connected but not using update
14		Disconnection
15		Reconnection <ul style="list-style-type: none"> after disconnection LT, HT & EHT after Removing Unauthorised/Dangerous Installation
16		Dismantling
17		Account Closure
18		Revising Pricing Type (TOD Meter)
19		Revising Reading Pattern (TOD Meter)
20		Connection Re-fitting
21		Light Meter Removal
22	Application Fees Services	Complaints
23		Mass Petition
24		Requests from Local Body
25	Billing related Services	Energy Charge collection <ul style="list-style-type: none"> Low Tension
26		<ul style="list-style-type: none"> Non energy charge Collection <ul style="list-style-type: none"> Sale of Scraps Sale of Tender Forms

Sl No.	Service Delivery Items	Services
		<ul style="list-style-type: none"> ○ Unconnected Minimum (UCM) charges from Prospective Consumers ○ Hire Charges from Contractors ○ Security Deposit-Work/Purchase ○ Earnest Money Deposit (EMD) ○ Work Deposit O & M ○ Work Deposit Capital ○ Special Cash Deposit ○ Bank Charges-SOP
27	Other Services	Installation Testing
28		Transformer Oil testing
29		Voltage Improvement
30		System Improvement
31		Line Extension <ul style="list-style-type: none"> ▪ On Your Electric Connection ▪ under different projects ▪ Temporary basis
32		Meter Testing
33		Grid Connectivity of Solar Energy System-HT
34		Hire & Hire Purchase of Materials by Public
35		Grid Connectivity of Solar Energy System-LT
36		Re-alignment of Existing Service Wire/Post
37	Work Deposit	Re-alignment of Existing Service Wire/Post-HT
38		Work Deposit O & M
39		Work Deposit Capital

3.7 Centrally Aided Projects (CAPs)

CAPS wing monitors the Centrally Aided Projects such as RAPDRP, RGGVY, IPDS, and DDUGJY etc. being executed by KSEBL.

The Deputy Chief Engineer (CAPS & Safety) with full powers of Chief Engineer is the head of the department.

Major functions of CAPS are

- Documentation, liaising with State and Central Government in getting the project sanction
- Coordination with field offices in getting information for DPR preparation
- Submission of DPRs to Financial institutions
- Getting Administrative Sanction from Board
- Executing the project agreement
- Co-ordinating material requirements of the field offices and preparing the procurement plan and submit the plan to board
- Monitoring the progress of implementation of all centrally aided projects
- Managing Power System Development Funded (PSDF) projects

IT Application used: ProMos is being used on pilot basis, SARAS, SCM

3.7.1 Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

DDUGJY has been launched by Gol with the objectives of providing electrification to all villages, separating Feeder to ensure sufficient power to farmers and regular supply to other consumers, Improving Sub-transmission and distribution network to improve the quality and reliability of the supply, Metering to reduce the losses.

The four components approved for the state are

- I. Sansad Adarsh Gram Yojana
- II. Metering
- III. Connecting unconnected households
- IV. System strengthening

3.7.1.1 Fund Management

- All project related payments to the contractors are made from a single bank account maintained
- The interest earned on subsidy/ grant are being paid back to MoP

3.7.1.2 Material Procurement

High Value Items

- 1st Tranche of items are procured by Dy.CE CAPS from Gol empanelled vendors
- 2nd Tranche of items are procured from KSEBL suppliers

Other Items

- SCM procures all other items and supplies to implementing locations
- In emergency case local purchases are being under taken

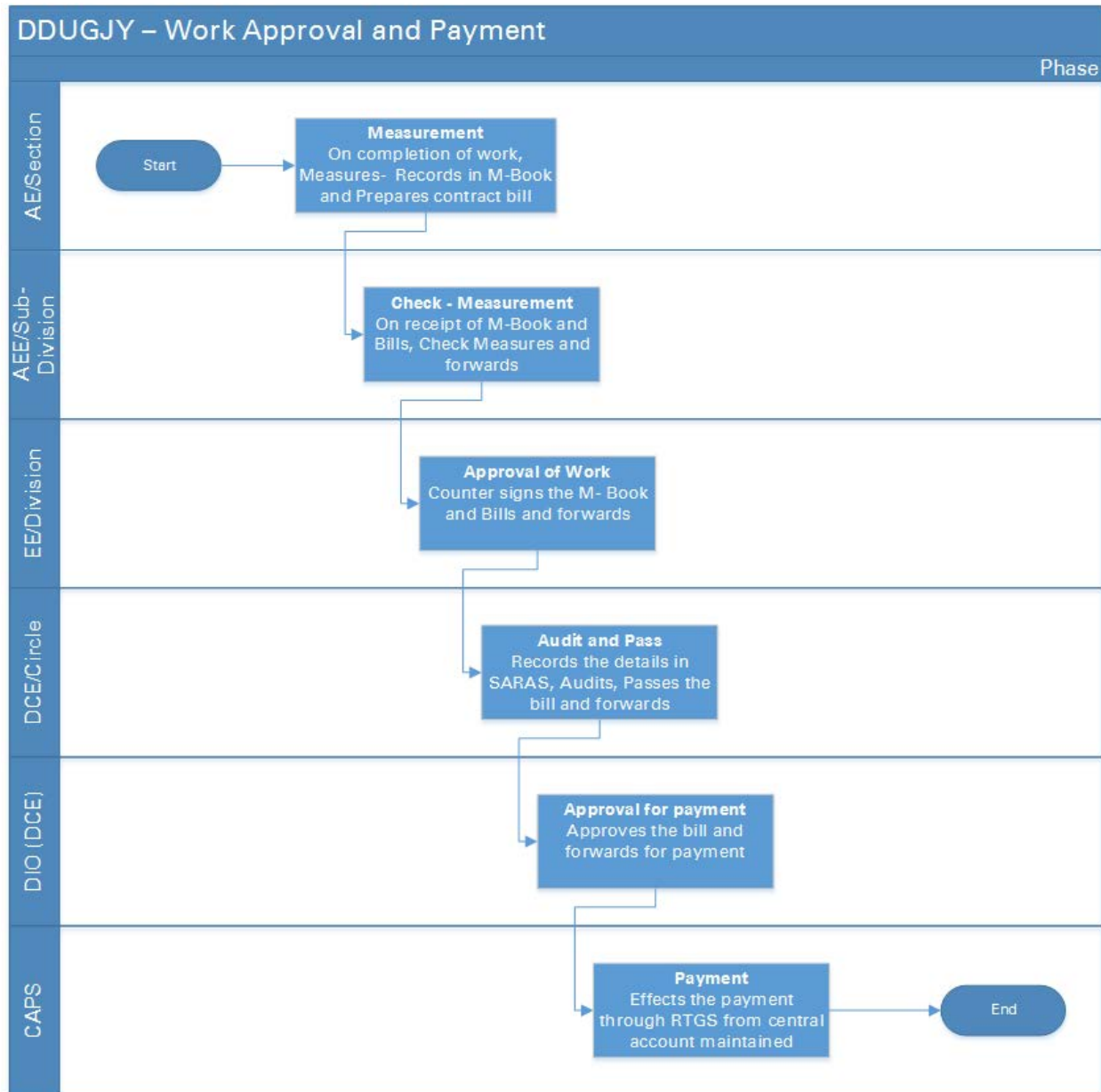
Separate material accounts are maintained under “DDUGJY”, separate MASA is maintained.

3.7.1.3 Work Implementation

The project is executed district wise. Works in a particular district are treated as single project. The works are awarded Circle/Division/Section wise as per the delegation of power. The District Implementation Officer (DIO) is the Deputy Chief Engineer of the Electrical Circle of the district.

All officers in the district are entitled with responsibilities for smooth for the execution of the project.

Separate M-Book are maintained for measurement of work. All transmission works are audited and passed by Dy.CE Transmission circle and forwarded to DIO.



3.8 Information Technology and Customer Relation

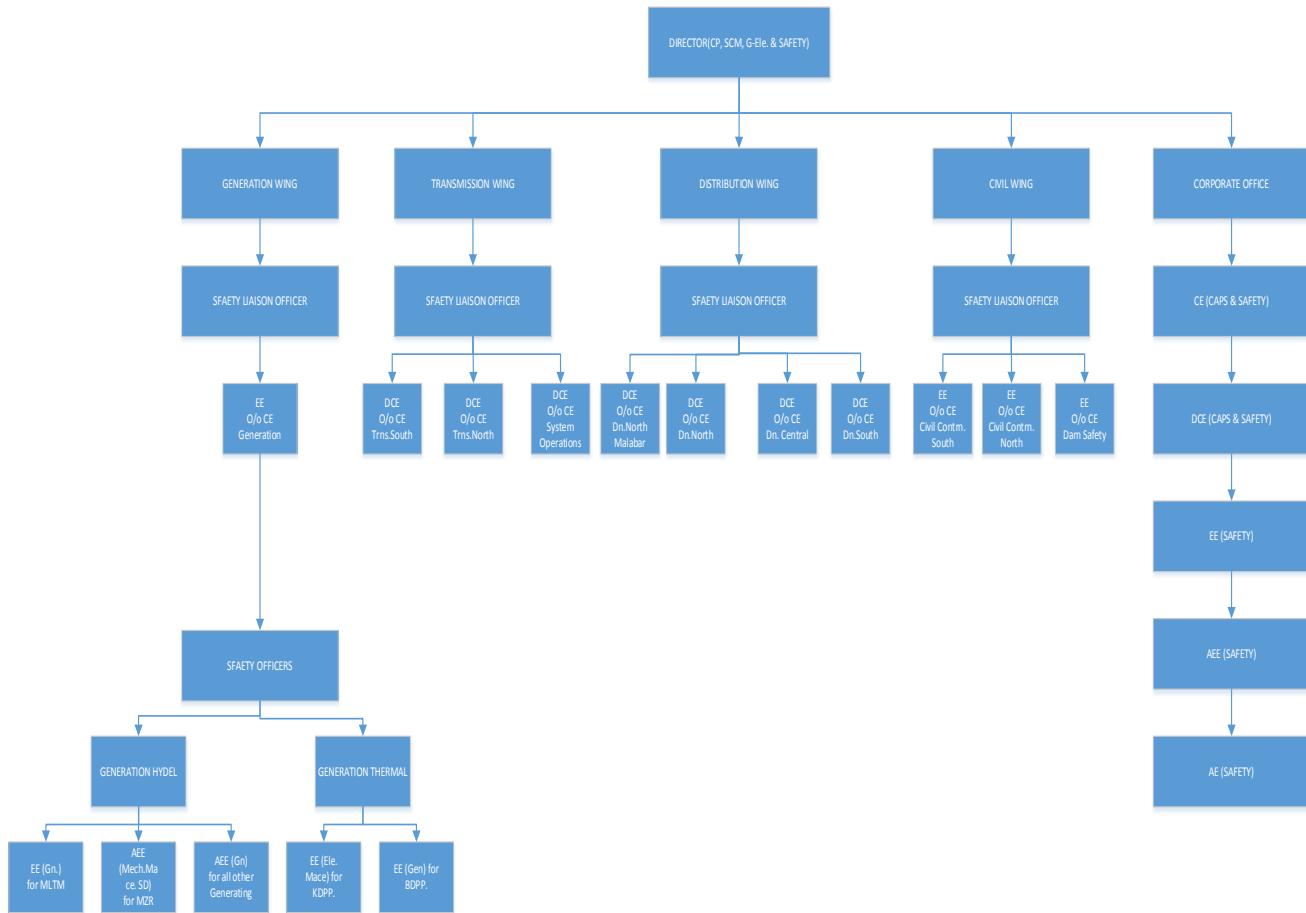
Chief Engineer (IT&CR) heads the Information Technology and Customer Relation wing. Main areas of work are software development, testing, implementation and maintenance related to the automation of various functional areas, setting up and maintaining IT infrastructure including servers, storage, backup units, LAN/WAN, security devices, design, planning and implementation of R-APDRP and IPDS projects.

SARAS, HRIS and Orumanet are three major applications developed by IT wing. Currently IT wing also supporting the development and customization for SCM and Energise applications and providing help desk for Orumanet and HRIS.

CCC is an application used to register complaints from consumers, assign responsibility for closing the complaint to an employee in the concerned section, monitor the status of complaints and manage escalation levels. CCC application is centrally managed by IT&CR team. Complaints or grievances are registered at either section office or directly at corporate offices (from CM Office or other departments).

3.9 Safety

The main objective of the safety wing is to maintain a persistent and systematic safety culture in the organization by reducing the accident to zero level. The infrastructure of the Safety Wing comprised of corporate office at Vydyuthi Bhavanam Pattom and at the field level, Liaison Officers (safety), Safety co-ordinators, and Safety Officers in all the wings.



- **Corporate office** at Vydyuthi Bhavanam Pattom consists of One Executive Engineer, one Assistant Executive Engineer and one Assistant Engineer exclusively for the Safety with the hierarchy of officers , Dyce(caps&safety),Chief Engineer (caps&safety) and Director (CP,SCM,Gen.Ele.& Safety)
- In **Distribution Wing**, the Deputy Chief Engineer in the O/o the Chief Engineers of each region will be the Liaison Officer (Safety) for that region. The Executive Engineers O/o the Deputy Chief Engineer are functioning as safety co-ordinators at Circle level .All the Assistant Executive Engineers of the Electrical Sub Divisions are designated as the Safety Officers.

- In **Transmission Wing**, the Deputy Chief Engineer in the O/o the Chief Engineers of each wing is the Liaison Officer (Safety) for that wing. The Executive Engineers in Transmission Circles/ Transmission Division with ARU and Executive Engineer (O) in the System Operation Circles are the Safety Coordinators of the concerned area. The Assistant Executive Engineers of all Sub Divisions under Transmission and System Operation shall be the Safety Officers including Line Construction & Line Maintenance wing.
- In the **Generation Wing**, Executive Engineer from the O/o the Chief Engineer (Generation) is the liaison Officer (Safety) for Generation. The Executive Engineer (Generation) is Safety Officer for Moolamattom Generation Station. The Executive Engineer (Electrical Maintenance) of KDPP and Executive Engineer (Generation) of BDPP is the Safety Officers of the concerned areas. The Assistant Executive Engineer, (Generation) from each Generating Station and the Assistant Executive Engineer, Mechanical Maintenance Sub Division, Moozhiyar are the Safety Officers for respective areas.
- In the Civil Wing, Executive Engineer, O/o the Chief Engineer, Civil Construction North/South and O/o the Chief Engineer (Dam Safety) are the Liaison Officer (Safety) for those areas. One Assistant Executive Engineer from each Project are designated as the Safety Officer of that Project.

3.9.1 Main Functions

The safety wing in the corporate office has jurisdiction all over Kerala in Generation, Transmission, System Operations and Distribution sectors and civil wing of KSEBL. The safety wing shall monitor and regulate the day-to-day affairs of Safety related matters of the Organization as detailed below.

- Conducting analysis of accident reports and issue suggestions / recommendations / directions to all field offices with the concurrence of concerned Director
- Submitting regular reports to Higher officials ,Director Board and other statutory bodies
- Coordinating with safety liaison officers, safety coordinators, safety officers in each wing
- Arranging awareness programs for employees as well as general public in coordination with Personnel wing.
- Convening SAFE KSEBL Committee as and when required.
- To issue appropriate directions and necessary safety procedures to field offices after obtaining sanction from the board
- Monthly consolidation of accidents from field offices
- Conducting safety week during May 1-7 every year with the co-operation of the Electrical Inspectorate.

3.9.2 Liaison Officer (safety)

The Liaison Officer (Safety) shall supervise, control and coordinate the functions of Safety wing, Safety Coordinators and Safety Officers. Investigate all fatal accidents that occur to Board employees and contract workers, under their jurisdiction and submit the investigation report with specific suggestions/ recommendations to Director, Safety. Conduct safety audit of all 400 kV and 220 kV substations/ Generating stations above 50 MW of their jurisdiction for Transmission and Generation once in a year. In Distribution sector, monitor and ensure safety audit conducted by

Safety Coordinators once year in all the Sections under their jurisdiction. Ascertain the safety preparedness, suggest improvements and submit report to the Director, Safety.

3.9.3 Safety co-ordinators

Safety Coordinators are the intermediate persons to ensure, assist and report to the Liaison Officers (Safety) in implementing the Department Objectives and carrying out its functions in the respective jurisdiction. Coordinate, monitor and control the activities of Safety Officers (AEEs) in their respective Circles. Full authority to inspect the safety aspects in their jurisdiction, Conduct evaluation of installations and safety practices in operation and maintenance and submit their monthly report to the Liaison Officers (Safety) of the concerned region for further action. Inspect all fatal & non-fatal accidents in their jurisdiction invariably and submit the report to the Liaison Officer (safety) along with copy to Director (Distribution & Safety) within 10 days. It shall be the responsibility of the Safety Coordinators in Transmission wing to ensure the availability of all safety tools/ equipment for all Substations under their jurisdiction and they are authorized to procure necessary tools and equipment. Also, they shall inspect all Substations under their jurisdiction at least twice in a year and review all safety aspects. Once in a year conduct periodic safety audits in all Sections to ascertain the adherence of safety procedures in their jurisdiction and submit report to the Liaison Officer (Safety) concerned.

3.9.4 Safety Officers

Safety Officers are responsible for maintaining Safety Standards and ensuring Safety Precautions, Procedures and Protocols in all works in their jurisdiction. Prepare monthly schedule and conduct routine inspections and surprise checks in work sites, Sub Stations, Plants and offices to ensure adherence of safe working procedures and protocols in the concerned area.

Adequate Safety Materials and Personnel Protective Equipment shall be made available in the Sections under their jurisdiction. Attend Sunrise meetings on a random basis to ensure its effectiveness and conduct safety awareness programs for Contractors, Employees and Public. In Distribution Wing, conduct surprise inspections at Work sites every month and Submit monthly evaluation and monitoring/ progress report to Safety Coordinators on the basis of their routine inspections. Conduct safety trainings regularly to the staff and contract workers at work sites.

Arrange special training program on electrical safety and first-aid at school level for high school students to cultivate a safety awareness and culture among growing children. Observe Safety week from May 1st to 7th every year with the co-operation of the Electrical Inspectorate in which conduct safety programs oriented to educate the public at large .Distribute leaflets depicting safety related slogans, caricature, cartoons etc to the public during the safety week.

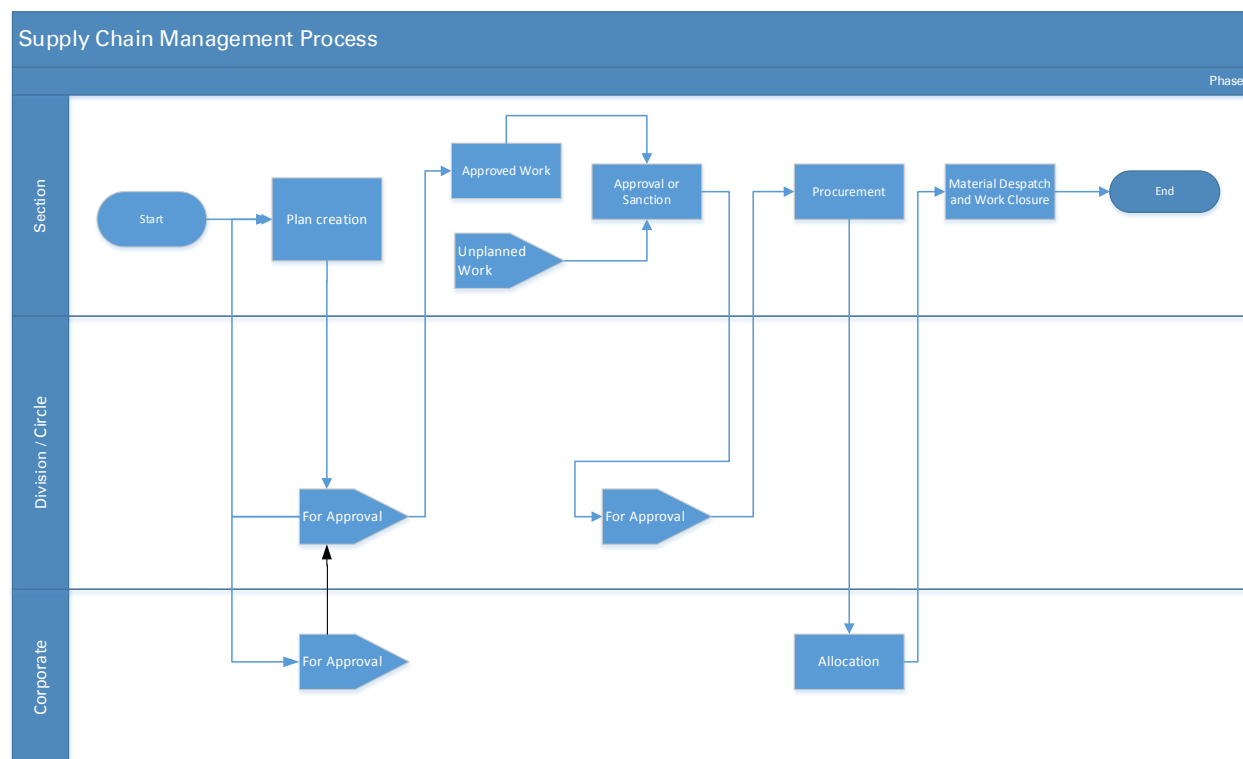
As part of the training; safety, accidents and their prevention, causes of accidents, case studies etc.; are deliberated among the trainees at PETARC, RPTIs and at worksites; to provide an impetus to observe safety guidelines during course of the work in the field. Inter-Subdivision inspections in the Distribution wing and inter-division inspections in Transmission Wing during course of execution of work are undertaken for ascertaining the practice of safety guidelines and reports forwarded to higher-ups which aids inculcating safety guidelines in the work culture of our employees.

IT Applications Used: SMART

3.10 Supply Chain Management (SCM)

KSEB's objective is to ensure top quality at optimal cost and making available the right materials, in the right quantity, at the right time to the right place. Supply Chain Management involves planning of material requirement, procurement process, stores operations and allocation of materials. The SCM system seeks to match the material demand with the procurement of the material.

Centralised procurement process is conducted for the transmission and distribution side. The items that are to be procured for centralised procurement are notified by the board from time to time. Other items can be procured by individual circles through decentralized procurement (local purchasing). At present, 53 items have been notified by the board to be procured through centralised procurement. For the generation side, the ARU or Circles themselves are responsible for the management of the procurement processes.



Process overview for SCM Function

Prepares the Purchase Plan for procurement of centralized distribution and transmission materials and arrange necessary approval from the Purchase Committee and Board. Major function of SCM at the three SBUs are purchase of materials based on purchase plan, ensure availability of the raw materials required for the fabrication of line materials and Inventory control.

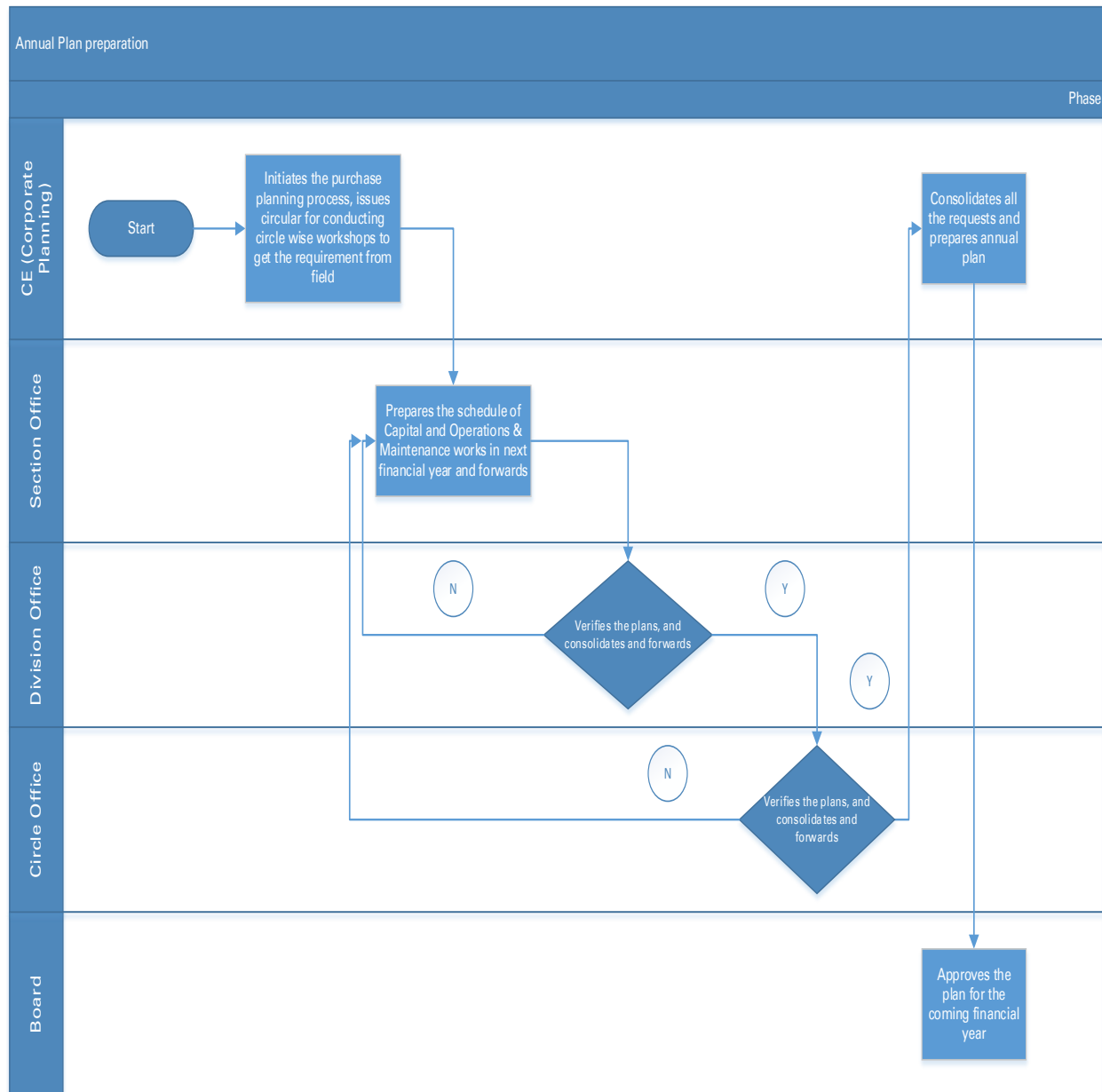
The activities undertaken are identified as follows:

- Planning, Stock Analysis and Estimation
- Pre Despatch Inspection, Material Despatch and Clearance, Store Acceptance

- Vendor Identification, vendor rating, and vendor approval
- Material Allocation, Bill Payments, Guarantee Tracking, Security Deposits, Work Order Closure

3.10.1 Annual Plan

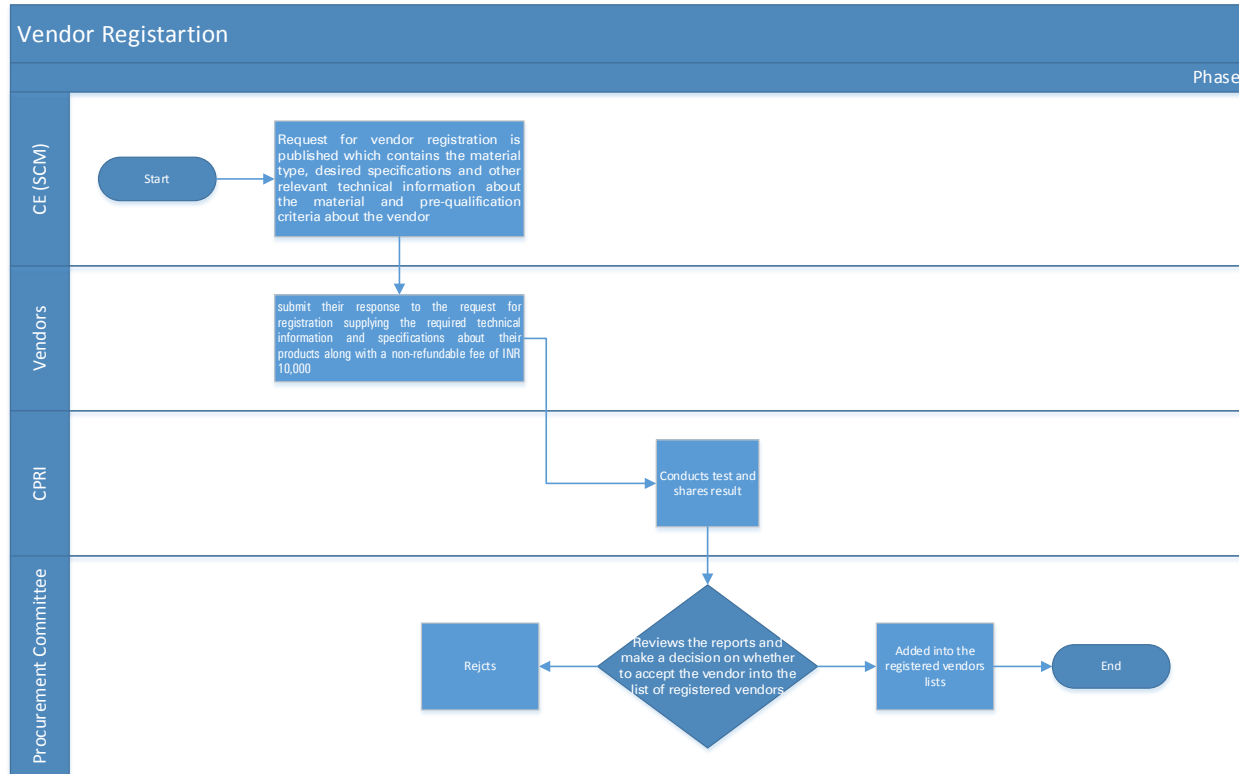
Annual plan preparation is coordinated by corporate planning wing. They consolidate the work requirement from field offices across business units and prepares annual plan and purchase plan.



3.10.2 Purchase Process

3.10.2.1 Vendor Registration

Vendors have to be registered with KSEB for participating in central procurement process



3.10.2.2 Procurement

Based on the material requirement, the procurement is initiated locally (de-centralised procurement) or from SCM section (centralised procurement).

Based on the value of product to be procured the method of procurement is decided.

- For procurement less than Five Lakhs Rupees quotations are invited
- For procurement costing more than five lakhs, e-tenders are invited.
- For procurement more than one crore, pre-qualification process is conducted and the price bids of qualified bidders alone will be opened.
- The tendering authority will be according to delegation of power

Overall procurement process can be logically divided into three main sub processes viz. the pre-tendering, tendering and post-tendering procedures. This section describes the procedures

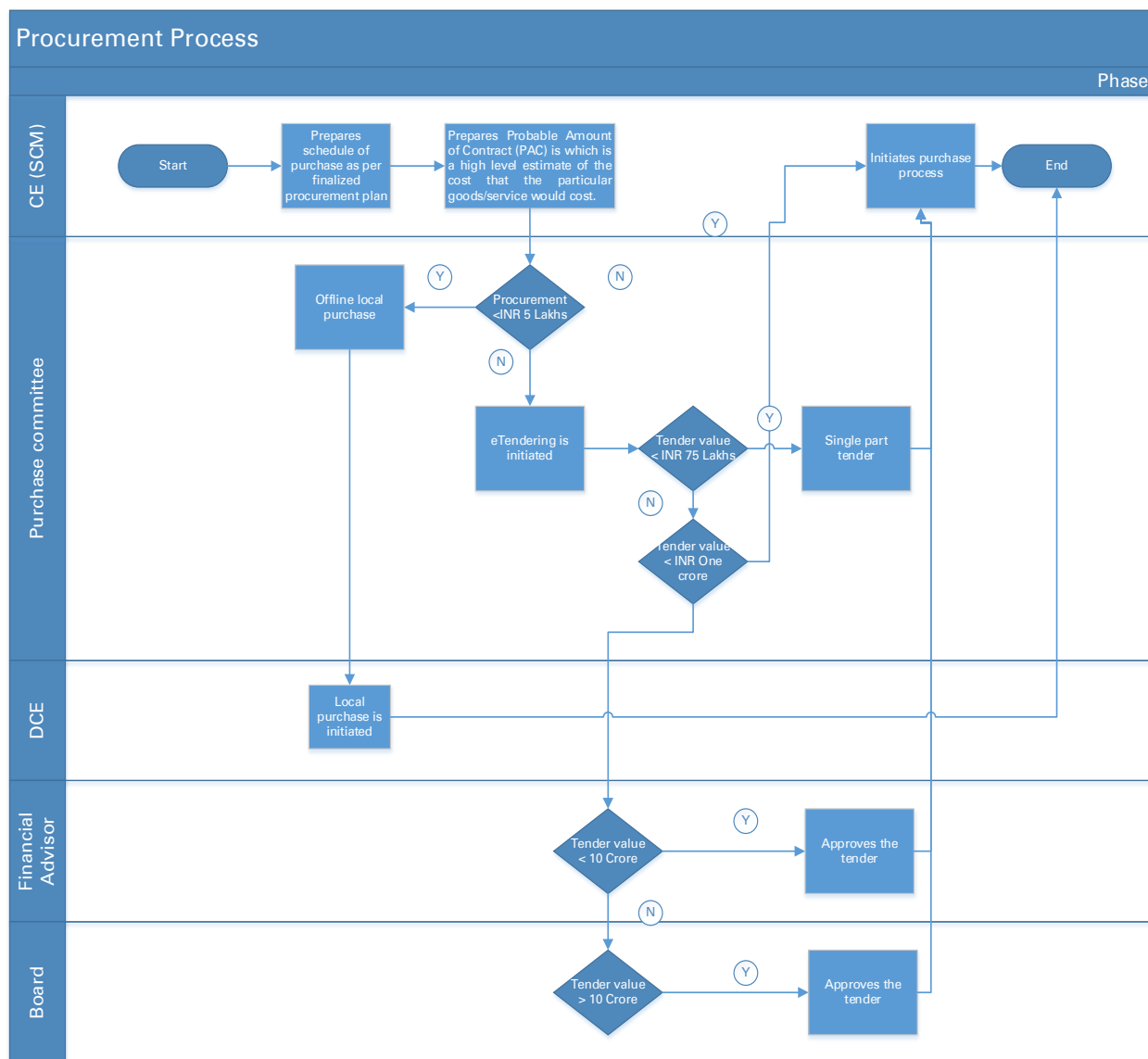
3.10.2.2.1 Pre - Tendering

1. The requirement of an item, shall be reported by the field officer with complete detailed technical specification and drawings.

2. An evaluation of technical specification, drawings and check for departmental availability / procurement.
3. If item procurement from external agency is required, preparation of estimate is made based on DGS & D rates / Delhi Schedule of Rates (CPWD) / Cost data of KSEBL/ a budgetary offer from OEM or Authorised Dealer.
4. At the field office, the concerned authority assess the value of procurement and sanction is requested.
5. Sanction for the procurement by the concerned sanctioning authority based on delegation of powers sanctioned by KSEB Ltd.) Based on the provision in the budget for the concerned financial year.
6. Request for Quotations / Tenders are floated as per the prescribed limits and norms but only after obtaining Administrative and Technical sanction from the Competent Authority
7. Finalising Technical Specification / Commercial conditions as per prevailing rules in KSEBL.
8. As per defined rules, all purchases above ₹ 5 lakhs must happen through Kerala E-Tendering portal.

3.10.2.2.2 Tendering

1. The tender document is floated and responses are received from participating or bidding organizations
2. Verifying the offers for technical competency, financial solvency, black listing, and conditions not generally acceptable to KSEBL / Proof of Remittance of Earnest Money Deposit etc. If the bidder response is not deemed responsive or competent, the offer is rejected.

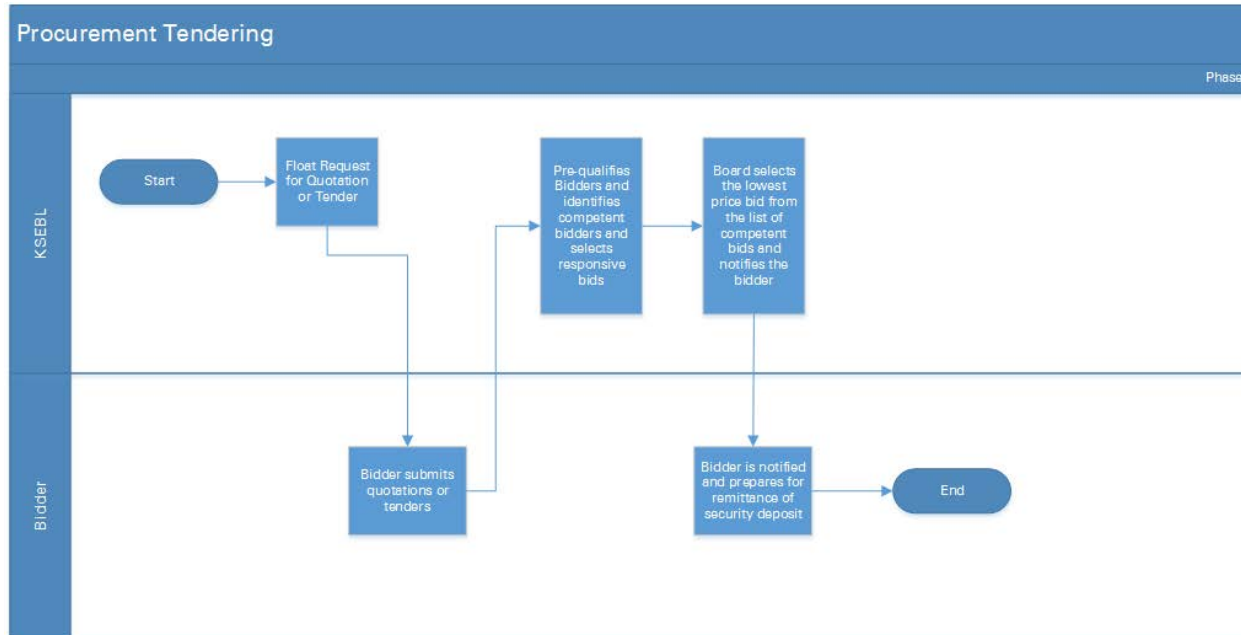


3. Among the competent bidders, place the order with the lowest bidder after evaluating Tender / Quotations thoroughly for Cost incurred by taking into account all factors such as payment of various taxes, other commercial obligations etc.

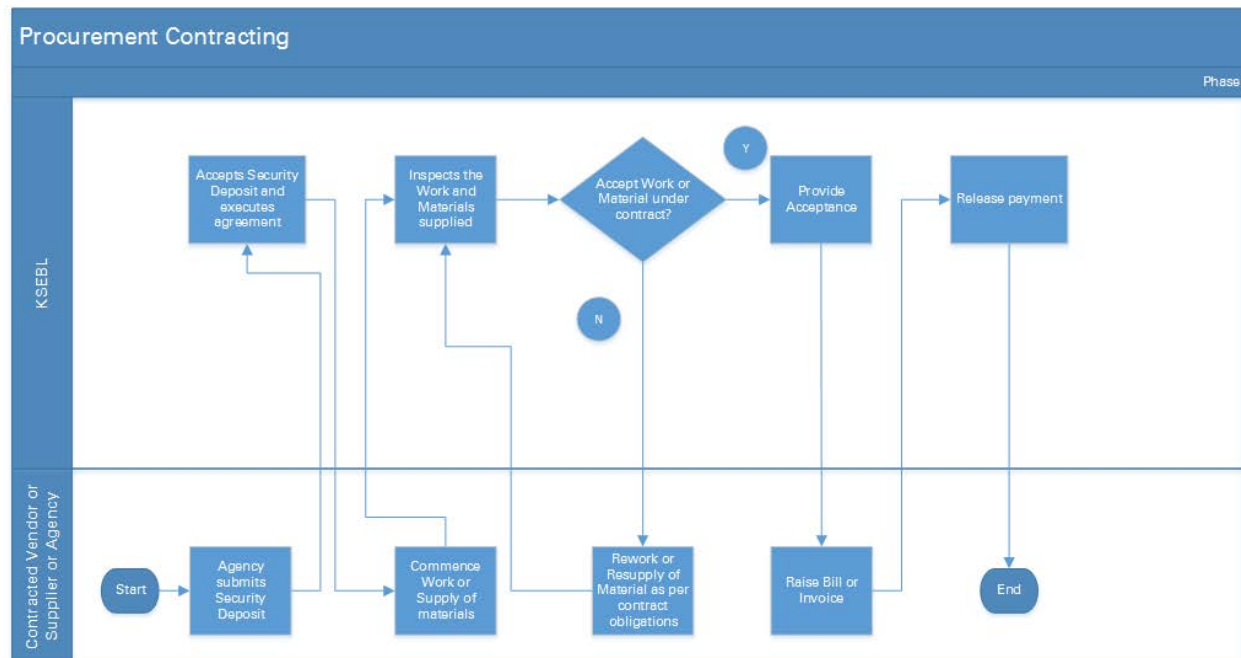
Note:

- Purchase Order shall originate only from the Office of the Purchase order issuing authority.
- There shall be 5 copies of purchase order and it is distributed as under:
 - Original copy to the Supplier
 - Second copy to the purchase file
 - Third copy to the accounts department
 - Fourth copy to In charge of Sub Division concerned
 - Store

3.10.2.2.3 Bid Evaluation and Vendor Selection



3.10.2.2.4 Contracting



1. Execution of agreement after remitting required amount of security deposit (SD) for the purchase.
2. Any change in the terms of purchase order is intimated to the Supplier in an official letter. Follow up action is taken with Suppliers for their action through purchase order amendment, by the

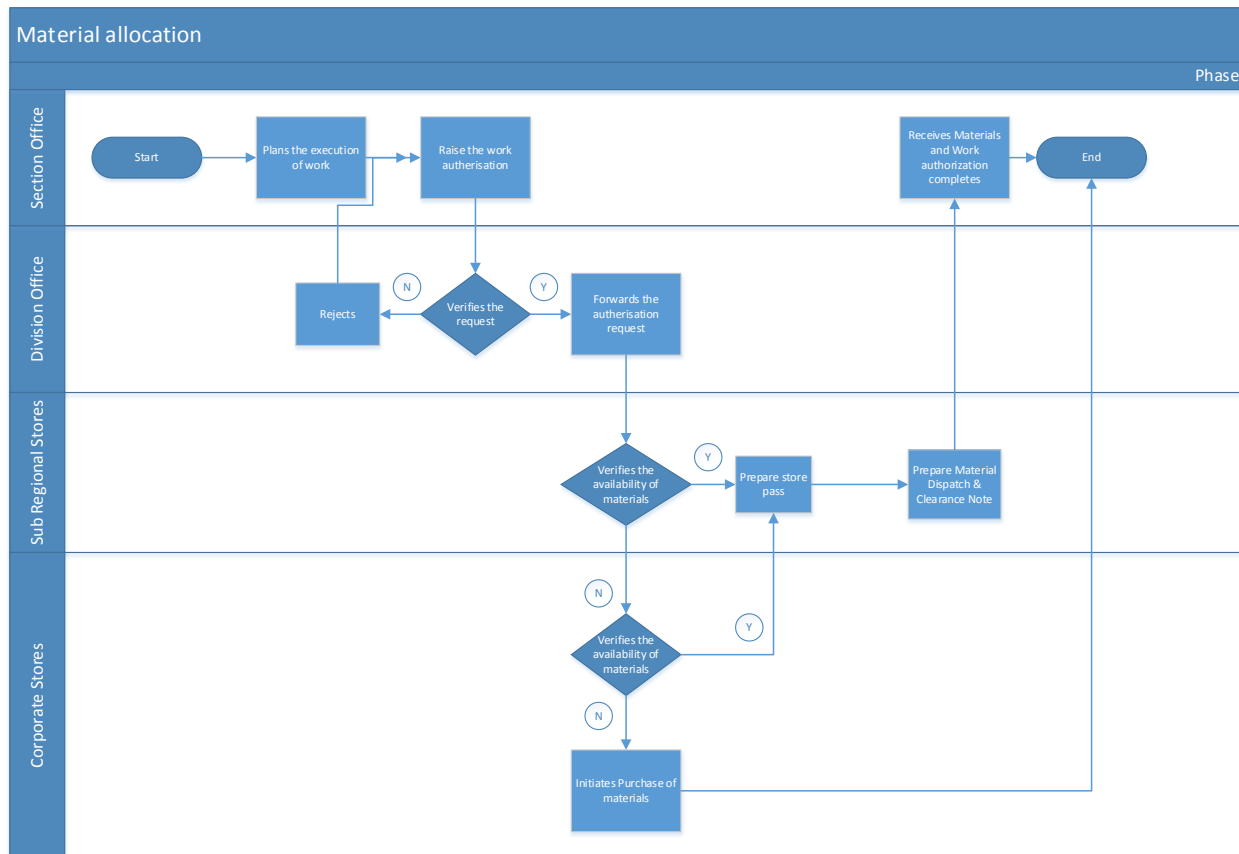
purchase authority by sending reminders at regular intervals to ensure prompt delivery of the right Quantity and Quality of materials.

3. Execution of supply of the item to the satisfaction of the field engineer subject to purchase order conditions.
4. In case if the supply of the item cannot be executed with in the stipulated time frame mentioned in the purchase order, the purchasing authority shall take necessary appropriate action.
5. On completion of supply to the satisfaction, the bill submitted by the supplier has to be forwarded by the field engineer to the accounts branch for payment, which is enumerated in the stores procedure.
6. The Security deposit is released on completion of all the contractual obligations as per the Purchase Order.
7. If not completed, the supplier is rejected as per the rules and regulations prevailing in KSEBL.
8. The supply is again arranged by inviting re-quotation /Re-Tenders.

3.10.3 Stores and Materials Management

3.10.3.1 Material Management

Materials are allotted to field offices from stores



3.10.3.2 Store Management

The key functions handled are identified as follows:

- Stores are Material receipt, Stock Inspection, Stocking, Issuing, and Reconciling. Reporting etc.
- Mode of receipt of materials are from Suppliers, Other Stores of KSEBL, Field returns, Return from Contractor (from works). Mode of material issue shall be to Works, Other Stores, Contractor

3.10.3.2.1 Stock Take (Stock Consolidation and reconciliation)

The key activities undertaken are identified as follows:

- Consolidation and reconciliation of store accounts
- Maintenance of analysis sheets and control registers for MRCL, GRN, ISMRN, SN etc. and valuation of these documents
- Maintaining Priced Stores Ledger, issue and acceptance of IUTN, ISTN, IUMIL etc. connected with stores, preparation and maintenance of purchase bill register
- Physical verification report of stores and all other allied works with material transaction. Journal entries must be prepared before 3rd of the succeeding month
- Value reconciliation of stores with general ledger annually and stock reconciliation with numerical ledger periodically
- Verification of Register of Materials (ROM) and Material Consumption Statement (MCS) submitted by Asst. Engineers and valuation of register of materials as on the 31st March every year
- Preparation of necessary journal entries in this regard debiting to ROM and vice versa.
- Verification and accounting of Completion Report Cum Capitalisation Statement (CRCS) submitted from Field and duly authorised by Superior Officers and updating Asset Register.
- Verification and accounting of Completion Report Cum Capitalisation Statement submitted from Field and duly authorised by Superior Officers
- Update of Asset Register when new assets are created by completion of various works incorporating expenses incurred (Labour & Materials) for formation of the Asset
- Verification and accounting and updating of Asset Register in case Assets are transferred between ARUs through duly authorised Asset Transfer Note (ATN), De-commissioning of any assets (unserviceable or outdated) through Asset De-commissioning Note (ADN)
- Validation of purchase statement and E – filing sales tax return along with the sale statement validated by Accounts Branch Compilation Section. Downloading of 'C' forms and sending promptly

3.10.3.2.2 Procurement Administration

The key activities undertaken are identified as follows:

- Auditing purchase bills
- Prompt collection and remittance of taxes applicable
- Auditing Proforma invoices

- Adjusting final bills etc. related to ARU
- Prompt submission of statements relating to Entry Tax etc.
- Valuation of GRN. Issue statement with details of bill, tax collected, retention etc. is to be attached with bill presented with pass order
- All bills are passed by Dy CE through DA

Records Kept In SB

1. Store Bill Passing Register
2. Advance Payment Register
3. IUTN/IUMIL Register

3.10.3.2.3 Receipt of incoming material and acceptance:

The key activities handled are identified as follows:

- Based on purchase order raised to suppliers, materials are received by stores and material receipts are recorded in Goods Received Note (GRN).
- The quantity and quality are verified and same is recorded in GRN. Completed GRN are submitted to Accounts department along with documents received from suppliers to make the payments. In case of any discrepancy observed in quality and quantity the same is notified to the Supplier.
- After Material Receipt and verification, Stores Ledger (Numerical) is updated.

3.10.3.2.4 Inventory management, recording and issue of material:

The key activities handled are identified as follows:

- In the Stores, various types of materials are stacked as category wise and in easily traceable manner. BIN Cards are used for identifying the material, receipt date, quantity available, Material Code, etc. The details of the Inventory are recorded in Stores Ledger.
- This register contains the following items- Material code, Material description, Location of Storing, Reference, Unit, Quality, Date of receipt / Issue, Balance quantity.
- Issue of Materials to Field Officers (AEE/AE) through Material Requisition cum Invoice (MRCI), after proper authorisation from Superior Officer.
- Issue of Materials to Contractors through Contractors Material Note (CMN) after authorisation from concerned Officer

3.10.3.2.5 Inter Store Material Requisition Receipt and Transfer:

- Materials are also obtained from other Stores of KSEBL
- Requisition for Inter Store Transfer (RIST) is issued from Stores after obtaining concurrence from Deputy Chief Engineer for transfer of materials.
- Materials are received from other Stores with accompanying Inter Store Transfer Note (ISTN)

- Inter Store Material Received Note (ISMRN) is prepared after receiving the Materials and Stores Ledger (Numerical) is updated accordingly
- Issue of Materials to other Stores is done through Inter Store Transfer Note (ISTN) after obtaining concurrence from Deputy Chief Engineer
- The Stores Ledger (Numerical) is updated accordingly as per the Transaction.

3.10.3.2.6 Return of Materials and Acceptance

- Materials are returned by Field Officers after authorisation from Superior Officer through Field Return Note (FRN). The Materials returned can be of two types
 - Excess Quantity of usable material after completion of work
 - Unserviceable material or Scrap
- The functions of Store in relation with Return of Materials includes:
 - Verification of Materials, Prepare Store Note (SN) and record receipt in Stores Ledger (Numerical)
 - Materials returned by Contractors through concerned Field Officers are received by issuing Contractors Material Return Note (CMRN)
 - Complete verification of Materials, prepare Store Note (SN) and update Store Ledger (Numerical).

3.10.3.2.7 Verification, Reconciliation and Reporting

- Conduct Yearly Physical Verification of Stores in presence of AEE from Supply Chain Management Wing of KSEBL.
- Verification of Entries for tallying in Stores Ledger (Numerical) to be done with Entries in Priced Stores Ledger (maintained in Stores Branch in Office) and to be certified by Divisional Accountant and any discrepancy found is to be reported at the end of every Financial Year.

3.10.3.2.8 Survey Reporting and Disposal of Scrap Materials

- Unserviceable materials in the Stores Inventory are of two types
 - Unserviceable and Scrap materials received from Field
 - Very old and obsolete materials and dead stock items available in Stores
- Reports regarding dead stock items in the Inventory is to be circulated among Field Offices, so that any requirement of the same can be met with.
- Preparation of Detailed Survey Report regarding unserviceable items and Scrap materials is forwarded to Scrap Disposal Committee constituted by KSEBL for concurrence.
- Assist Scrap Disposal Committee in physical verification of unserviceable items and Scrap materials. Final Disposal of the items is done after report of Scrap Disposal Committee at the level of Competent Authority.
- Safe Custody of the unserviceable items and Scrap materials till final Disposal of the items are completed.

3.10.3.2.9 Records maintained

3.10.3.2.9.1 For Material Receipt

- GRN - Goods Received Note: It is the responding document for supplier bill.
- ISMRN - Inter Store Material Received Note: It is the responding document for ISTN.
- CMN– Contractors material Note: It is the responding document for CMRN.
- IUMRN– Inter unit material received note: It is the responding document for inter unit FRN/CMRN.
- FGRN (Finished Goods Received Note: It is the responding document for FGTN)
- SN – Store Note: It is the responding document for FRN.

3.10.3.2.9.2 For Material Issue

- MRCI– Material Requisition cum Invoice

3.10.3.2.9.3 For Material Transfer

- RIST – Request for Inter Store Transfer Note
- ISTN– Inter Store Transfer Note
- MTN - Material Transfer Note: It is the transfer document for material transaction between ARU's in the same circle.
- STN - Store Transfer Note
- ATN - Asset Transfer Note: It is the transfer document for transferring assets between the units and between ARU's.
- FGTN - Finished Goods transfer Note:
- It is the transfer document for the transfer of materials (goods) from sub stores where manufacturing activities are carried out.

3.10.3.2.9.4 For Material Return

- FRN– Field Return Note: Prepared by section officer/Field officer for returning materials to store.
- CMRN–Contractors Material Return Note: It is the responding document for CMN/IUMRN.

3.11 Secretary Administration

Secretary Administration is the head of the unit. Main functions of the section are to manage the activities which require board's decision

3.11.1 Establishment Section

Establishment section manages the human resource related functions. The major activities are

- Processing of special leave requests which require Board's approval
- Investigation sanction of belated payments
- Pay fixation and allied matters
- Extension of joining time for new appointments

- Communication to PSC and Government related to recruitment
- Processing of compassionate appointment
- Fixing method for recruitment of posts below AEE
- Fixation daily wages to employee
- Promotion/Transfer and disciplinary actions of officers of and above the posts of Administrative Officer/ Executive Engineer
- Probation, Deputation matters
- Regularization of break in service
- Management of Inspection Bungalow Booking
- Medical Advances approval
- Correction of basic details in Service Book
- Sanction of NRA from GPF and closure of GPF
- Sanction for disbursement of arrears of pension
- Sanction of compassionate allowance
- Pension claims of officers of and above DCE
- Issuing Non Liability Certificate to officers of and above the posts of Administrative Officer/ Executive Engineer

IT Applications Used: Nil

3.11.2 Liaison Office

Liaison office responsible to interact with Ministry of Power, Regulatory Authorities, Power Finance Corporations and other state and central government agencies

IT Applications Used: Nil

3.11.3 Vehicle Monitoring

The wing is responsible for management of vehicles that are used by Board members

- Purchase of new vehicles
- Maintenance of vehicles
- Arranging vehicles on contract basis

IT Applications Used: Nil

3.11.4 Accounts

The works of this section is connected with payments and accounting of bills and invoices received from various corporate offices which required Board's approval

IT Applications Used: SARAS

3.12 Company Secretary

Company Secretary has been appointed after KSEB becoming a company. The major functions of company secretary are

- Managing Company Board Meetings
 - Preparation of Agenda and circulation among board members
 - Recording Minutes of Meeting
- Liaison with Registrar of Companies (RoC)
- Corporate Governance
- Vigil Policy changes
- Coordinating CSR activities
- Liaison with Audit Committee

3.13 Personnel Office

The major functions of personnel office are related to Personnel Management, Industrial Relations and Labour Welfare. The department is headed by Chief Personnel Officer

3.13.1 Industrial Relations

Major activities under this section are

- Functions related to collective bargaining, arbitration and adjudication.
- Revision of pay and allied benefits including DA, TA, HRA and conveyance allowance of the employees of the Board and revision of pensionary benefits of pensioners of the Board.
- Issuance of board orders related to employee welfare

3.13.2 Accident Compensation

Processing and sanctioning of workmen's compensation claims due to fatal and nonfatal accidents to Board employees and petty contractors and their workmen and reimbursement of medical claims to the accident victims of the Board.

- A First report of accident is reported to personnel department with in 24hours of the occurrence of the accident. Followed by the same the personnel department will ask for detailed report of accident and site mahassor. After evaluating the cause of accident, Personnel department will request documents to ascertain the eligibility of compensation/exgratia.
- On receipt of the required documents eligibility of the compensation/ quantum of compensation will be evaluated based on Board Orders and Employees Compensation Act 1923.
- As next step, the eligible compensation/Exgratia will be sanctioned based on the proceedings issued by Chief Personnel Officer.
- The compensation/exgratia sanctioned will be disbursed to the legal heirs of the victim/ victim/deposited before the Office of the Commissioner for Employees Compensation by the Executive Engineers of Division Offices.

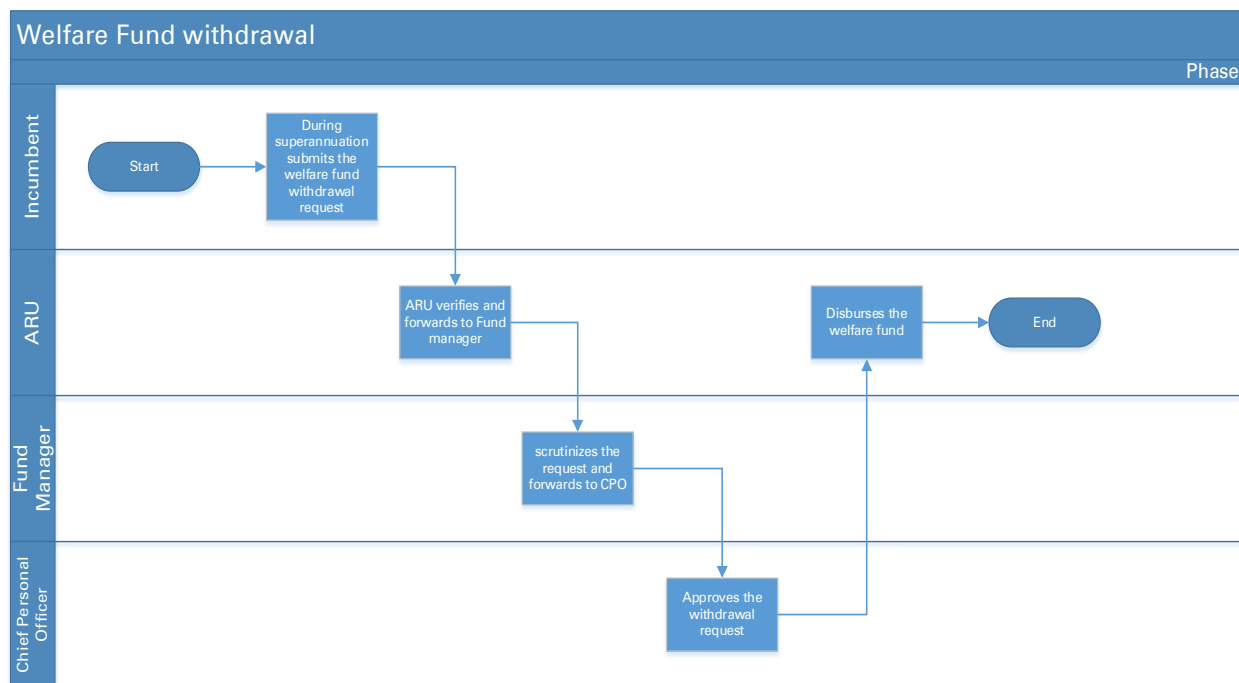
- Receipt regarding the acceptance of compensation by the beneficiaries in the prescribed format will be forwarded to personnel department for record purposes.

3.13.3 Welfare Fund

KSEB trust welfare fund, Employee contributes monthly to the fund. Welfare fund contribution details are maintained in HRIS for each employee

Welfare Fund provides various benefits to the employees of KSEB viz death benefit, retirement benefit, disablement benefit, resignation benefit, dismissal benefit in accordance with the regulations of EWF subject to the decision of the Governing Body.

- During superannuation, employee makes withdrawal request to ARU.
- ARU verifies and forwards to Fund manager, fund manager scrutinizes the request and forwards to CPO
- CPO approves the withdrawal request
- Disbursement is done in the respective ARU



3.14 Public Relations

The section is headed by Chief Public Relations Officer.

Public Relations Department headed by Chief Public Relations Officer and reports to Chairman & Managing Director. This is a major wing of KSEBL and plays a central role in the management of communication between KSEBL and its various Public. It acts as an interface between KSEB, general public and media. Also, processes state-wide tender notices for publication in newspapers, Government website and website of KSEBL. The major activities include

- Disciplinary proceedings, statutory notices etc.
- Display and special advertisements in connection with construction/commissioning and inauguration of projects, substations and new offices,
- Various activities of KSEBL like energy conservation, safety etc. are published in newspapers.
- The Facebook page of KSEBL (<https://www.facebook.com/ksebl>) managed by this wing .KSEBL also uses Twitter (<https://twitter.com/KSEBLtd>) to communicate to the public.
- Production of materials for Doordarshan Programme “Spandanam”
- Printing and Publishing of journal Spandanam
- Documentary production for various purposes
- Processing state-wide tender notices for various purposes
- Campaigns through Audio-Visual Media
- Production of advertisement film on Energy conservation and safety
- E-Letter preparation

IT Applications Used: Nil

3.15 Law

3.15.1 Legal Wing

Headed by the Legal Adviser and Disciplinary Enquiry Officer (LA & DEO), who is a District Judge from the judiciary on deputation.

.The major functions are

- Case monitoring - to conduct cases filed by and against KSEBL before various courts up to Hon’ble Supreme Court, other Judicial Fora and Tribunals.
- Appointment of Advocates - KSEBL has 79 standing Counsels for handling the cases before Lower courts in the state, three Senior Standing Counsels and eight Standing Counsels for High court, and one standing counsel for Supreme court .
 - In all distribution circle offices Nodal officer Litigations are present
 - Standing counsel’s office at Ernakulam
- Legal Vetting – of Agreements executed between KSEBL and the contractors, power purchase agreements and tender documents
- Disciplinary Enquiry – The legal conducts disciplinary enquiry
- Legal advice - LA & DEO gives legal advice and clarification on the legal matters on various files, important legal issues taken up by various field officers of KSEBL and scrutinize reports of title deeds for the acquisition of properties

IT Applications Used: Sathgamaya

3.16 Vigilance

3.16.1 Vigilance Wing

Vigilance Wing headed by is Inspector General of Police on deputation from the Police Department. Chief Vigilance Officer - Superintendent of Police was in-charge of, reports to the Chairman & Managing Director.

There are two wings namely Vigilance and Anti Power Theft Squad (APTS) under the control of Chief Vigilance Officer.

Vigilance: Vigilance responsible to combat with corruption and misconduct on the part of officers/ employees of KSEBL. It deals with complaints of misconduct, malpractices, irregularities, corruption, etc. against KSEBL Officials and also the security aspects of KSEBL's installations. Vigilance Prepares Statement of Facts for cases at Hon'ble High Court, Lok Ayuktha, Civil Courts and CDRF where the Chairman or Chief Vigilance Officer is the respondent.

Anti-Power Theft Squad (APTS): Anti-Power Theft Squad (APTS) detect pilferage and misuse of electricity of KSEB consumers across the state. Three Executive Engineers under the control of Chief Engineer (APTS) Thiruvananthapuram co-ordinates the APTS activities in Southern, Central and Northern Region respectively. Technical vigilance are conducted by APTS team

APTS is responsible for detection and reporting of power thefts to the responsive section offices, further verification of evidences of the case and preparation of provisional invoices to the consumer and consumer hearing and issuances of final invoices are the responsibilities of the Assessing Officer. Assessing Officers are appointed by the Government, currently the respective assistant engineer is designated as the assessing officer with a quasi-judicial power for all the matter pertaining to the section (both LT, HT and EHT).

The complete records of employees' vigilance cases, APTS case details of consumers are maintained in hard files. APTS uses standalone applications for analysing meter data.

The KSEBL has constituted a committee for preparing the SRS document for developing a software application for the APTS wing.

4 Snapshot of existing Applications

Following are the major applications currently used KSBEL

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
1	HR Information System (HRIS)	Human Resource Information System manages Joining of new employees, Salary processing of employees, Pension management (authorisation, sanction, and disbursement) and maintains PF details, welfare fund and promotion details pertaining to a particular incumbent. Also generates various MIS reports providing inputs for HR section for	2008	33,000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		<p>preparing general transfer lists, gradation lists.</p> <p>HRIS fetch information from Identity and Access Management System (IDAMS) on user access. It provides information to Accounting system for establishment of bill processing</p> <p>It is maintained by Thiruvananthapuram IT unit</p>		
2	Structured and Real time Accounting system (SARAS)	<p>It is Financial and Accounting Management system developed and maintained by Kozhikode IT unit. The revenue and expenditure are recorded through separate SARAS modules.</p> <p>The trial balance, receipts and payments report, and balance sheet are prepared combining the inputs from both the modules.</p> <p>The system talks with Energy billing system – Oruma, Human Resource Management system – HRIS</p>	2010	3,800
3	Supply Chain Management System	<p>SCM system manages planning material requirement, procurement of the material, purchase of material, and allocation of material.</p> <p>SCM Asset Management, and SARAS integration has been established</p>	2010	5500
4	OrumaNet	<p>ORUMANET is developed for energy billing process, caters to LT consumers. It manages New Connection Services, Metering, Billing, Collection and other consumer service</p> <p>Oruma fetches information from Identity and Access Management System (IDAMS) on user access.</p> <p>It provides data to Customer Care DB – customer details, Finance and Accounting system – energy bill collection details, and to MIS – for generating reports</p>	2012	22000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
5	En'rgise	<p>Energise manages the new consumer addition, metering, billing and collections of high value (HT & EHT) energy customers.</p> <p>Energise fetch information from Identity Data Management System (IDAMS) on user access</p> <p>Provides data to Commercial Customer Care (CCC), Management Information System (MIS), Energy Audit (EA)</p>	2010	750
6	Outage Management System	<p>Oorja Dhooth – the system informs about the transformer level outages being carried at sections through SMS. The web based solution is being implemented in 755 section offices</p> <p>Oorja dhooth DB is synced with Orumanet DB on a daily basis through ETL for distribution network details</p> <p>CCDB – when the outage is being scheduled the consumer no. and mobile no. are fetched from CCDB for the selected sections and transformers to intimate the outage schedule</p>	2017	800
7	LD Permit Management System	<p>Load Despatch Permit management system manages the permission issuance for feeder outages under transmission functional unit.</p> <p>LD Permit management system will be integrated to Outage Management System</p>	2006	300
8	Customer Care & Call Centre	<p>CCC-ET is an application used to register complaints from consumers, assign responsibility for closing the complaint to an employee in the concerned section, monitor the status of complaints and manage escalation levels.</p>	2014	12000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		<p>Integration is available with following applications</p> <p>Maintenance Application – To notify about apparatus or equipment that needs to be procured in order to rectify a complaint by a consumer.</p> <p>CCDB Application – To fetch data about a consumer from the consumer database while recording and registering the complaint.</p> <p>GIS Application – To locate the consumer on the GIS map.</p>		
9	Energy Audit	<p>EA module comes under the R-APDRP solutions portfolio and is responsible for the computations of Aggregated Technical & Commercial (AT&C) losses thus helping the utility to monitor and control losses.</p> <p>EA is purely a reporting tool which depends on other modules for data. EA module processes huge volume of data and involve intensive computations.</p> <p>The function of EA module is to compute various losses and generate reports for the purpose of monitoring important distribution parameters, capturing hierarchical view of energy accounting, network assets of power distribution utilities, intelligent analysis tools for plugging loop holes and identifying revenue leakage.</p> <p>It talks with following applications</p> <p>GIS: Consumer mapping with network/organizational hierarchy</p> <p>NA: Technical loss data for all the network/organizational hierarchy</p> <p>MIS: Takes data from EA for generating various reports</p>	2014	3000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		<p>MBC: Billing and collection data for all the LT & HT consumers, both metered and unmetered</p> <p>MDAS: Energy input data for sub-station, feeder, DTR, HT and Boundary Meters.</p>		
10	GIS	<p>ZenGeo - Geographic Information System (GIS) maps the assets of KSEB in distribution network. It has been developed and implemented in 228 Electrical distribution sections covering 43 towns.</p> <p>GIS helps in maintaining network hierarchy. The assets are mapped and unique identification numbers are provided</p> <p>The following are the integration points</p> <p>Consolidated Consumer Data Base (CCDB) - For getting consumer details</p> <p>Meter Data Acquisition System(MDAS) – for getting metering data</p> <p>Network Analysis(NA) - Providing Network data</p> <p>Asset Management – will provide asset location and design ID</p> <p>CCC-ETFor locating a consumer in GIS</p> <p>Energy Audit - will provide network hierarchy data</p>	2014	3000
11	MDAS	<p>The main function is to make meter data available in the system from the field through GPRS communication of modem to server without any human intervention. Meter data acquired from the field include IP, billing, load survey, aggregation, tamper and outage. MDAS helps in real time monitoring of distribution parameters which enhances planning and decision making capability of the management.</p>	2014	3000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		<p>It has integration with following applications</p> <p>GIS: Network Detail, Organizational Hierarchy, Grasp SLD and mapping details</p> <p>NA: Load survey data for LFA</p> <p>MIS: Data for generating reports</p> <p>AM: Asset ID</p> <p>EA: Energy Auditing data</p> <p>MBC: HT billing details, modified billing data</p>		
12	Network Analysis	<p>Network analysis system studies the performance of electrical equipment in distribution network</p> <p>Network Analysis access GIS to fetch information on Network Hierarchy and Electrical information details</p>	2014	3000
13	Asset Management, Maintenance Management and Project Management	<p>The three major modules are</p> <ol style="list-style-type: none"> 1 Asset Management: - Maps all network and non-network assets - Asset register- list of Asset Base, current value of each asset, current condition and status of each asset. 2 Maintenance Management: - Maintenance scheduling & communicating to SCM as per OEM guidelines, Emergency/Break down maintenance work creation, recording of maintenance history. 3 Project Monitoring System: -Work execution, Work review & measurement, billing expenditure recording. <p>The integration points are</p> <p>GIS: Consumer mapping with network/organizational hierarchy</p> <p>SARAS: For financial detailing, issue of work order</p>	2016	10

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		<p>SCM: Material Planning, Procurement, Issue and Stores management, Work Planning & Approvals.</p> <p>CCC: For providing details of Customer complaints and rectifying them in time.</p> <p>MDAS: Provides reliability analysis feature based on failure type/mode and the frequency of failure of each network assets.</p> <p>The system was launched in 2015</p>		
14	Web Self Service	<p>WSS (Web Self Service) is a web based application that is used by consumers of KSEB to pay bills or register complaints.</p> <p>Users can access the WSS either with or without logging in to the application. The following are the features available to the users without logging in:</p> <ol style="list-style-type: none"> 1 Quick Pay – To pay bills by entering electrical section, consumer number and bill number. 2 Register complaint – Raise a complaint by filling in the online form. Complaints are then sent to the CCC-ET application for further tracking and closure. 3 User Guide – Provides users on information related to registration, profile updates, registering and unregistering consumers, bills (viewing, paying and accessing billing history) 4 Track complaint status by entering the complaint number 5 View Frequently Asked Questions (FAQs) 	2014	200000
15	IDAMS	<p>An enterprise-wide unified identity & access management solution supporting KSEB's user population spread across different locations.</p> <p>Novell Identity manager provides single sign on. It provides the system's</p>	2014	-

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
		user repository which will enable users to be created, deleted or updated centrally. It also provides single sign on capability across linked applications.		
16	MIS	<p>MIS module access data across applications to generate various reports</p> <ol style="list-style-type: none"> 1 Customer Care DB for fetching customer data 2 Energy Audit to find the AT&C loss 3 SARAS for Financial details 4 SCM for material details 5 AM for assets with status details 6 MM for maintenance job details 7 Customer care cell for getting consumer complaints 8 HRIS employee related information <p>The system is in development phase</p>	Yet to be launched	<>
17	TrAMS	<p>TrAMS is the application used by transmission wing and has following modules</p> <ul style="list-style-type: none"> — asset management system which maintains information on substation wise asset details — Asset commissioning and maintenance — Station operating system statistics — Interruption analysis — Load flow statistics 	2015	520
18	SATHGAMAYA	An application for tracking different court cases and status of each of them	2008	-
19	SMART	Safety Management and Reporting Tool for tracking the accidents being reported in work place. It has facility for generating various reports	2016	1000

SL#	Name of the application	Application Functionalities	Year of Establishment	Number of Users
20	ProMos	For monitoring the progress of Centrally Aided Projects	2017	Launched in Pilot location
21	eOffice	Electronic flow of tapals, and files. It is an in-house developed application integrated with SARAS.	2014	It is in rolling out phase

5 Appendices

Appendix A: List of Meetings Undertaken

To develop this deliverable, KPMG has conducted a series of consultations with different stakeholders to gather the current business process and procedures which need to be considered for ERP implementation.

SL No.	Meeting Date	Name of Officials met	Discussion Points
1	19-Nov-16	IT Unit Trivandrum Mr. Satya Rajan, EE Mr. Radha Krishnan, AEE	Sharing of survey questionnaires on <ul style="list-style-type: none"> • Application Architecture • Data Architecture • Technology Architecture
2	25-Nov-16	Ms. Sabida Salam, AEE Mr. Ajayakumar, AEE	Discussion on Survey questionnaires
3	26-Nov-16	Mr. Radha Krishnan, AEE	Sharing of questionnaire on Business architecture questionnaire
4	23-Dec-16	Ms. Sabida Salam, AEE	Inception report submission
5	3-Jan-17	Mr. Kesava Das, CE, IT & CR	Inception report review
6	12-Jan-17	Mr. Mohankumar, DCE Distribution	Overview of Distribution SBU
7	13-Jan-17	Mr. Anil, TA to Director Generation	Overview of Generation SBU
8	16-Jan-17	Mr. Baby, Transmission Division	Overview of Transmission SBU
9	23-Jan-17	Ms. Jayalekshmy, IT Wing	overview of the CCC-ET Application
10	23-Jan-17	Mr. Haroon Sait, IT Wing	Walkthrough of Energise application
11	24-Jan-17		Overview of LT collection
12	24-Jan-17	Ms. Jayalekshmy, IT Wing	Walkthrough of Web Self Service
13	25-Jan-17	Mr. Aravind, IT Wing	Walkthrough of Energy Audit application

SL No.	Meeting Date of	Name of Officials met	Discussion Points
14	25-Jan-17	Mr. Retheesh Rajan, IT Wing	Walkthrough of GIS application
15	25-Jan-17	Mr. Aravind, IT Wing	Walkthrough of Meter Data Acquisition System
16	25-Jan-17	Mr. Ajaya Kumar, IT Wing	Walkthrough of Outage Management System
17	26, 27 – Jan - 17, 1st, and 3rd February 2017	Shri. Madhavan Namboothiri, HRM Section, KSEBL Shri. Justin Joy, IT Computerisation, KSEBL Shri. Sunil, HRD, KSEBL	Discussion on HRM Process
18	31-Jan-17	Mr.Santhosh, Assistant Engineer, Sreekariyam Section office	Discussion on Supply chain management system with
19	3-Feb-17	Mr. Biju, CFA & CFO Mr. Abdul Nasser	Discussion on Financial Process
20	3-Feb-17	Sri. Anil Kumar – Assistant Executive Engineer - SCM Sri. Biju – SCM Division Smt. Jyothy – SCM Division Smt. Deepa – SCM Division	Discussion on Supply Chain Management
21	8-Feb-17	Shri. Unnais, Accounting Unit Shri. Gangadharan E, Accounting Unit Shri. Sabida Salam, IT Wing	Discussion on Accounting and Finance Management
22	13-Feb-17	Ms. Jayalakshmy, IT Wing	Discussion on MIS application
23	18-Feb-17, 24-Feb-17	Mr.Suresh Kumar, IT Wing	Walkthrough of Orumanet

SL No.	Meeting Date	Name of Officials met	Discussion Points
24	3-Mar-17	Shri. Pushpa, Executive Engineer, SCM Wing Shri. Beju, Asst. Executive Engineer, SCM Wing	Supply Chain Management
25	10-Mar-17	Shri. Satyarajan, Ex.Engr, IT Unit Shri. Radhakrishnan, AEE, IT Unit Shri. Sabia Salam, AEE, IT Unit	Discussion on Functional group formation
26	13-Mar-17	Dr. Ellangovan, IAS, CMD Members of governing committees	Introductory meeting with Governing committees chaired by CMD
27	15-Mar-17	Shri. Krishnakumar, Senior Superintendent, IT Unit	Discussion on Load Despatch permit issuance management system
28	18-Mar-17	Shri. Krishnakumar, Senior Superintendent, IT Unit	Discussion on Project Monitoring system for Centrally Aided Projects
29	20-Mar-17	Members of Distribution Functional Group	Initial discussion to understand the overview of distribution sbu and to identify the processes
30	22-Mar-17	Members of Generation Functional Group	Initial discussion to understand the overview of generation sbu and to identify the processes
31	23-Mar-17	Members of Transmission Functional Group	Initial discussion to understand the overview of transmission sbu and to identify the processes
32	24-Mar-17	Members of Corporate committees	Overview discussion on corporate function
33	25-Mar-17	Members of Distribution Functional Group	Process and procedure discussion
34	27-Mar-17	Members of Corporate committees	Subcommittees formation

SL No.	Meeting Date	Name of Officials met	Discussion Points
35	27-Mar-17	Corporate subcommittee – Distribution	Discussion on information requirement of distribution section at corporate
36	28-Mar-17	Corporate subcommittee – Internal Audit	Overview of processes and procedures of internal audit division
37	28-Mar-17	Corporate subcommittee – Special officer Revenue	Energy bill demand generation and collection processes of HT & EHT customers
38	29-Mar-17	Corporate subcommittee – Human Resource Management	Discussion on Process and procedures followed in CE(HRM) division
39	29-Mar-17	Corporate subcommittee – TRAC & Commercial	Discussion on TRAC's functions - Aggregate Revenue Requirement (ARR), Expected Revenue from Charges (ERR) preparation Purchase of power
40	30-Mar-17	Corporate subcommittee – Vigilance Division	Discussion on process and procedures of Anti Power Theft Squad and Technical Vigilance wing
41	30-Mar-17	Corporate subcommittee – CAPS	Process and procedure mapping of Centrally Aided Projects division
42	30-Mar-17	Corporate subcommittee – Safety	Discussion on processes of accident reporting and assessment analysis
43	31-Mar-17	Corporate subcommittee – Personnel Office	Discussion on processes of Accident compensation, Industrial Relations, Welfare fund
44	31-Mar-17	Corporate subcommittee – Legal Cell	Overview discussion of legal cell processes
45	1-Apr-17	Corporate subcommittee – REES	Discussion on process of Renewable Energy and Energy Savings
46	3-Apr-17	Corporate subcommittee – Secretary Administration office	Discussion on major functions of board administration wing
47	3-Apr-17	Corporate subcommittee – Finance	Overview discussion on financial procedures and processes

SL No.	Meeting Date	of	Name of Officials met	Discussion Points
48	4-Apr-17		Corporate subcommittee – Generation (Civil)	Process discussion on activities followed
49	5-Apr-17		Corporate subcommittee – Generation Electrical Design	Discussion on new projects
50	5-Apr-17		Corporate subcommittee – Company Secretary	Overview discussion on process
51	5-Apr-17		Orumanet Technical Team	Technical discussion with Orumanet Development team
52	7-Apr-17		Chief Financial Adviser Office	Process overview discussion
53	10-APR-17		SARAS Technical Team	Technical discussion with SARAS Development team

Appendix B: List of Documentations Reviewed

Following are the lists the documentation provided to KPMG as a reference to the current process and procedures.

1. KSEBL HR Manual -2012
2. Finance and Accounting Manual 2011
3. Annual Administration Report 2016
4. Supply Chain Management process report
5. Documents on Application Architecture provided by technical team



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