CHAPTER III
MIS OPERATIONAL IN HPSEB

Present study has been conducted on existing Management Information System (MIS) operational in Himachal Pradesh State Electricity Board

3 Himachal Pradesh State Electricity Board (HPSEB): A Profile

3.1 Inception

The Himachal Pradesh state is geographically situated in the Western Himalayan region. On the South lies the boundary with the state of Haryana, on the North with Jammu and Kashmir, on the East with Tibet and on the West with Punjab, the area of H.P. State is about 55,673 sq. km spread over a mountainous topography with altitude ranging from 350 to 7000 meters above sea level. The organization of a power utility for the state was begun in August 1953 with the establishment of the 1st Electrical Division under the Public Work Department.

In August, 1964 the department of Power and Projects was formed. The organization under study was formally constituted on 1st September, 1971 in accordance with the Electricity (Supply) Act, 1948. Like other state Electricity Boards in the country, the HPSEB has been assigned with promoting the coordinated development of hydel power potential of state, generation, transmission and distribution of electricity to various categories of consumers in the most efficient and economic manner.

The major rivers of Himachal Pradesh are five i.e. Beas, Satluj, Yamuna, Ravi and Chenab. During summer due to snow melting followed by monsoon become raging torrents. The population of H.P. State is about 6077900 lacs which is mostly scattered and largely rural. The urban population is estimated to be about 10% of total population. The Himachal Pradesh State Electricity Board is servicing 1646468 consumers (as on 31.3.2004) of which 85.74% are domestic, 0.59% non-domestic, 1.93% Industrial, 11.01% NRS, 0.14% Govt. Irrigation and Water Supply schemes, 0.03% Public lightening, 0.51% Agricultural and 0.01% Bulk and 0.04% Temporary priding itself as having the highest house hold coverage in the country.
As on 31.03.2004, HPSEB has an installed capacity of 326.333 MW under the control of Himachal Pradesh, in addition to shares allocated to the H.P. state from other projects financed by Central Government and the partner states of Bhakra Beas Management. Himachal Pradesh has an identified potential of approximately 20.787 MW in its five rivers basin out of which 6042.7 MW only has been harnessed up-to 31.03.2004.

The flow of river water is seasonal. During the months of April to October the HPSEB experiences a surplus of energy generation while during the months of November to March, there would be a deficit. HPSEB engages in inter-state purchase and sale of power. HPSEB is therefore dependent on Central Government generation projects, other State Electricity Boards and National Thermal Power Corporation and other Generation companies for the marketing of its surplus power as well as to meet its deficit.

The sale to various categories of consumers and purchase of power forms a significant aspect in the operations and financial performance of HPSEB.

3.2 Organizational Structure

The organizational set up of HPSEB is organized along rank positions focused mainly on the technical functions. In accordance with the Electricity (supply) Act, 1948, the Himachal Pradesh State Electricity Board's top management is composed of seven members of the Board headed by the Chairman. Out of the seven Members, six are whole time Members including the Chairman and one is Ex-officio Member. The Chief Engineer (P&M) and Secretary assist the HPSEB management in the transacting of cases requiring decision at the Board level. Each whole time member is overall incharge and responsible in respect of the specific area of responsibility under his wing in the Board on functional basis. The hierarchy of organizational units below the members is based on managerial posts comprising Chief Engineers, Superintending Engineers, Executive Engineers, Asstt. Executive Engineers, Asstt. Engineers and Junior Engineers. The organisational chart is as below
Diagram 3.1
Organisation Structure of HPSEB

(Source: HPSEB Administration Report 2003-2004; p 7)
The Administration and Finance & Accounts wing are managed by the Board Secretary (HAS cadre, a Govt. appointee) and Chief Accounts Officer assisted by the routine office staff deployed at operational level.

The field offices are organized into zone, circles, divisions, subdivisions and sections for defined territorial boundaries and accountabilities. Total strength of employees in HPSEB as on 31-03-2004 is 32323 out of which class-I officers are 1122, class – II officers are 232, class III are 17761 and class IV are 13208. Operations of various functional units of the Board (circle officers, divisional officers, sub divisional officers) independently carry out their day-to-day functions. As operations of various functional units of Board are decentralized, data is dispersed across all the locations throughout the state. Data and Information generated at these offices is maintained and processed locally and only consolidated information sent to the higher level offices.

### 3.3 Functions of HPSEB

The various functions performed by the HPSEB are organized in the form of units. These units in HPSEB are known as "Wings". These are:

(a) Civil Wing
(b) Technical Wing
(c) Operation Wing
(d) Finance and Accounts Wing
(e) Administration Wing

**Civil Wing**

Civil wing is headed by Member (Civil). This Wing has been assigned the duties of survey and investigation, formulation of detailed project reports including design, construction planning and execution of hydel projects and responsible for construction of civil works related projects and project progress monitoring. This Wing performs these functions through the following organisational structure at its disposal.
Diagram 3.2
Organization Structure of Civil Wing

(From: Annual Administrative Report of HPSEB 2003-2004 and HPSEB)
There are five Chief Engineers reporting directly to the Member (civil). These are Chief Engineer (Project) Shimla, Chief Engineer (I & P) Sundernagar, Chief Engineer (Design) Sundernagar, Chief Engineer (Larji Project) Bhunter and Chief Engineer (Arbitration) Shimla.

The Chief Engineer Projects (Shimla) supervises one Directorate, two Circle offices and one senior architecture offices with different subdivision offices. The Chief Engineer (Design) Sundernagar supervises four offices (P & D) Civil – I Sundernagar, (P& D) Civil – II Sundernagar, (P & D) Civil – III Sundernagar and (P&D) Mechanical Sundernagar. The Chief (Larji) Bhunter supervises one Directorate and three circle offices. These circle offices act as administrative bodies over divisions, sub-divisions and section offices.

(b) **Technical Wing**

Member (Technical) is overall incharge of Technical wing and responsible for planning, design and construction of electrical works of new hydroelectric projects and setting up of state load dispatch center, planning, design and construction of transmission projects and load forecasting. The organization structure of this wing is as below:
Diagram 3.3
Organization Structure of Technical Wing


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There are four groups reporting to the Member (Technical). These are chief engineer offices for Generation (Sundernagar), Transmission (Hamirpur), System Planning (Shimla) and Power System planning. The Chief Engineer Generation has one directorate and five circle offices that supervise Division offices and sub-division offices. The Chief Engineer transmission has two Directorates and three circle offices that supervise division offices and sub-division offices.

(c) Operation Wing

Operation Wing is headed by Member (Operation) of HPSEB and responsible for distribution of power to various classes of consumers excluding the bulk sale outside the State. The billing and revenue collection for sale of power within the State is entirely the function of this Wing. Broadly main functions of this wing are

- Executing Deposit works
- Construction of Sub-transmission.
- Central Purchasing
- Store management
- Distribution of Electricity
- Customer services
- Urban Electrification
- Electricity of Industrial/ Tourist Complexes
- Non-Conventional Energy sources

The structure of the operation wing is given below
Diagram 3.4
Organization Structure of Operation Wing

There are five Chief Engineers to perform distinct activities and report directly to the Member (operations) as under:

i. Chief Engineer (commercial) (Shimla)
ii. Chief Engineer (Operation) South (Shimla)
iii. Chief Engineer (Operation) North (Dharmshala)
iv. Chief Engineer (Material Management) Shimla
v. Chief Engineer (Central Zone) Mandi

The Chief Engineer commercial offices supervise the two Directorates of system operation. The Chief engineer operations, south (Shimla) has six circle offices that supervises division offices and subdivision offices. The Chief Engineer (operations) North has four Circle offices that supervise division offices and subdivision offices. The Chief Engineer (C Zone) Mandi has five circle offices.

(d) Finance and Accounts Wing

Finance and accounting activity of the Board is being carried out by the Finance and Accounts Wing headed by Member (F & A) of the Board. This wing is responsible for maintaining various books of accounts of the Board, generate periodical statements of accounts and carry out audit related activities. Activities of Finance & Accounts Wing can be broadly categorized as under:

- Treasury
- Financial Planning and budgeting
- General Accounting
- Personnel Accounting
- Customer Accounting
- Fixed Assets Accounting
- Internal Audit

The Finance & Accounts Wing performs the functions of maintaining accounts of the HPSEB, preparation of annual accounts and budget of the board and exercises checks over the accounts maintained in the field offices, financial planning, funds managements, financial control, financial forecast and reporting of receipts and disbursement of the HPSEB. The structure of this wing is shown below:
Diagram 3.5
Organisation Structure Of Finance & Accounts Wing

(Source: Annual Administrative Report of HPSEB 2003-2004 and HPSEB)
It consists of a chief Accounts officer directly supervising a Deputy Chief Accounts Officer and Deputy Chief Auditors. The two Deputies supervise six accounts officers each in their respective units.

(e) **Administration wing**

The administrative work of the board is carried out by the administration wing and Member (Administration) is overall incharge. This wing is responsible for following functions of HPSEB.

- Maintenance of Level I & II Employees Records, Statistical Data on HPSEB Manpower and Manpower forecasts.
- Monitoring of Safety and Medical programs.
- Labour and Industrial Relations
- Public Relations and Media Release.
- Sanction for Land Acquisition programs.
- Labour and Industrial Relations
- Provision of vigilance and security services.
- Attendance to legal matters and labour disputes affecting HPSEB.
- Administration of Salary and Benefits programs
- Human and Resource Development plans and programs.

The organization structure of this wing is shown below:
Diagram 3.6
Organization Structure Of Administration Wing

(Source: Annual Administrative Report of HPSEB 2003-2004 and HPSEB)
The Secretary of the board exercises overall supervision over the following offices: gazetted establishments, public relations, labour and welfare, general posts (non-gazetted), land acquisition (Shimla), technical establishments (non-gazetted), legal matters, vigilance and inquiry, land acquisition (Mandi). The Secretary acts as a link between the Board and Chief Engineers as well as other heads of departments in respects of personal matters.

The Board is a big organisation and performs multi faceted functions scattered across the state. But how the information flows from one office/unit to another including corporate office (Shimla), is organized and managed through a management information system.

3.4 Existing MIS in HPSEB

MIS is used as a tool to take a decision based on the information collected by various methods. It plays a vital role in augmenting the speed of decision making. All the information is thus collected and analysed. In HPSEB, data is generated at various locations and is processed and maintained locally. Only the consolidated information travel up the line except daily generation data from generating stations, inventory detail on major items, payment slips for bank reconciliation. Within each location activities are divided into various departments. In HPSEB the MIS functions at different levels. The MIS functional in HPSEB is routed either via the commercial department or the planning and monitoring cell. All the non-technical systems of HPSEB are decentralized in nature with individual divisional offices doing major processing work like maintenance of establishment related information, detailed information regarding the on going works and maintenance of accounts. Circle offices are the administrative bodies over the divisional offices and the sub-divisional offices function under divisional office. Each circle office head is chief engineer and has number of divisional officers under this office. The functions of circle office are consolidation of reports coming from divisional offices i.e. preparation of annual plans, and distribution of funds. Divisional office receives data and information from sub-divisional offices and field offices. Some are as where data is being maintained and processed centrally are: daily generation data from generating stations, details for bank reconciliation from sub-divisional officers and divisional officers and data required
by investigation and design circles from field offices – like flood discharge data. Different levels of management operational in HPSEB needs different information as reports for taking the effective decisions and to monitor the overall performance of the board. The MIS operational at the HPSEB has been categorized into three parts.

3.4.1 MIS for Top-level Management

3.4.2 MIS for Middle & Operational level Management

3.4.1 MIS for Top-Level Management

This level is catalyst for strategic planning, vision and mission of any organisation. Top-level management work as differentiated with technical/functional work encompasses the basic function of planning, organizing, leading and controlling to secure results through and with other people. The main functional responsibilities of HPSEB top-level management are HPSEB goals and objectives, government and legislative contacts, business planning; organizational strategies, decision-making and approvals on all matters beyond delegated authority of individual members. The top-level MIS has been defined as the information report to be sent to the board including the members and the chairman. The structure of top-level management operational in HPSEB is shown in this diagram.

Diagram 3.7
Structure Of Top Level Management

(Source: Organisation chart from administrative report of HPSEB (2003-2004))
In accordance with the electricity (supply) Act, 1948, the top-level management of HPSEB consists of seven Members including the Chairman. Out of the seven Members, six are whole time Members including the Chairman and one is ex-officio Member. The top-level management is the supreme decision making authority of the HPSEB. Apart from this, each one of the whole Time Members is overall incharge in respect of the assigned specific area of responsibilities in HPSEB on functional basis. The main functional responsibilities of HPSEB whole time Members are imposition of Government and Board rules and regulation and specific policies of respective wings, evaluation of responsibilities and performance of respective wing, budget, manpower and physical resources requirements of the wing, control and monitoring overall planning, operational plan, execution, and remission of revenue and financial disbursement beyond the limit delegated to chief engineers and chief account offices, attendance to personnel matters of the wing relating to class I and II officers. The functions of HPSEB are organized in the form of units known as 'wing' each headed by a whole time Member. These are:

Member (Civil)
Member (Technical)
Member (Operation)
Member (Finance and Accounts)
Member (Administration)

Member (Civil)

There are five circle offices headed by chief engineers reporting to the Member (civil). Organizational chart for this wing headed by Member (civil) is shown below:
**Diagram 3.8**

**Organization Structure of Member (Civil)**

(MEMBER (CIVIL))

- **CE (P) SML**
- **CE (I&P) SNR**
- **CE (D) SNR**
- **CE (LARJI) BHUNTER**
- **CE (C&A)**

**SE (W)**

- **MTC DIVN SML**
- **SE (PCC) D/SALA**

**SE (W)**

- **KHAULICON DV. SHAHPUR**
- **UHLCD I J/NAGAR**
- **UHLCD II J/NAGAR**

**SE (BCC) BHABANAGAR**

- **BCD1 BHABANGR**
- **INVEST. DVN R/PEO**

**SE (PCC) JEORI**

- **KESHANG CD R/PEO**
- **GHANIM CD JEORI**

**SENIOR ARCHIT.**

- **ARCHITECT-1**
- **ARCHITECT-11**

**SE (P) CIR-I SNR**

**SE (P&D) (CIVIL)-I SNR**

**SE (S&I) CIR. II CHAMBA**

- **HD CHAMBA**
- **CCD P/PUR**

**SE (PLG.) CIR. ROHRU**

- **BCD-I B/NAGAR**
- **HOLI CIR. BHARMAUR**

**SE (P&D) (CIVIL)-II SNR**

**SE (P&D) (MECH) SNR**

**SE (W)**

**SE (CC) SHIMLA**

**DIR (PLG) MANDI**

**SE (S&I) CIR-I SNR**

**SELARJI CON CIR-I SARABAI**

- **LARJI-CD-I LARJI**
- **LARJI-CD-II LARJI**
- **LARJI-CD-IV SARABAI**
- **LARJI-CD-VI LARJI**

**SELARJI C.CIR-II SARABAI**

- **LARJI-CD-III PANDOH**
- **LARJI-CD-VII THALOUT**

(Source: Annual Administrative Report of HPSEB)
There are chief engineer offices for projects (Shimla), Larji Project, Investigation and Planning (Sundernagar), Design (Sundernagar) and Chief Engineer (C&A).

The reports or informations related to functions of this wing are proposed and maintained by this office for taking effective decision.

**Member (Technical)**

There are four circle offices headed by chief engineers reporting to the member (technical). Member (Technical) is overall incharge of this wing. The organization chart of this office is as below.
Diagram 3.9
Organization Structure Of Member (Technical)

MEMBER (TECH.)

CE (GEN) SNR
SE (W)
DIR (D) PH (E) SNR
DIR (D) ELECT. LA-RJIMANDI
SE GEN CIR NAHAN
*REGIRPH DIVN. GIRI
*REANSHRA PHDIVN CHIRGAON
SE GEN CIR PALAMPUR
*REBINWAPH DIV UTRALLA
*RE BASSI PH DIVN. JNGR
*REGAJ PH DIVN.GHAROH
*REBANER PH DIVN. JIA
SE GEN CIR BHABANGR
*REBHABA PH BHABA NGR
*XEN(C) MTC PHB/NGR
*REGANMPH DIVN. JEORI
*XENELECT. MTC. BHABA

CE (T) H/PUR
SE (W)
DIR (D) PH (E) TRANS. H/PUR
DIR (D) S/STN. H/PUR
SE TRAN CIR SML
*XENTD SML
*XENTDBLP
*XENTD NAHAN
*XENTD SOLAN
*XENTD NALAGARI
*XEN TD BHABA
*XEN 220KV MTCKUNIHAR
*XEN 220KV MTC KOTLA
SE TRAN CIR H/PUR
*XEN TD BUNI (MANDI)
*XEN TD UNA
*XENTD HAMIRPUR
*XEN TD JASSORE
*220KV MTC DIV. JASSORE

CE (SP) SML
DIR (PLG) PH & T SML
DIR (PLG) PS SML
DIR (D) P&D REC DALHOUSIE
DIR INTERSTATE SML
SE SLDC SML

CE PSP SML
DIR (PS) SML

Member (Operation)

Member (Operation) is overall incharge of operation wing. There are five circle offices each headed by chief engineer working under Member (Operation). The organization chart for this office is as shown below:

Diagram 3.10
Organization Structure Of Member (Operation)

This wing performs the various functions and reports/information related to their functions are proposed and maintained by this office.

**Member (Finance and Accounts)**

Member (Finance and Accounts) is overall incharge of finance and accounts wing. Chief accounts office directly reports to the member (Finance & accounts). The organization chart of this office is show below:

**Diagram 3.11**

**Organization Structure of Member (Finance And Accounts)**

Member (Administration)

Member (administration) is overall incharge of the administrative wing. The administrative and personnel functions of the HPSEB are being carried out by the secretary's office under the administrative wing of the HPSEB. The organizational chart for this wing is as below:

Diagram 3.12
Organization Structure of Member Administration

3.4.2 MIS for Middle Level Management and Operational Level Management

Tactical decisions are taken by the middle level management and it controls the operation in HPSEB. The role of the middle management and operational management in HPSEB is to translate the vision of the top-level management into
a pragmatic business activity. Middle level management and operational management are concerned with the current and future performance of their division, the type of information middle level management and operational level management in HPSEB require to formulate tactical and operation plans and objectives, to implement strategy and to make operational decisions. The structure of different level of management is shown below:

Diagram 3.13
Middle & Lower Management Levels in HPSEB

Various reports maintained by existing MIS operational in HPSEB for Top level, Middle level and Lower level management. The information supplied to the board is mainly in respect of the financial and operating performance of HPSEB including generation, transmission, distribution and the status on the various on going projects/works of a capital nature undertaken by HPSEB. Operational or lower level management of HPSEB receive information on a daily or weekly basis. Operational manager uses these informations for implementing operational plans, make short term decisions and conduct day-to-day activities.

The information flows from bottom to top in existing management information system (MIS) in HPSEB for different levels of management as shown below.
Data and information, collected at the section offices and substation are reported to the sub-divisonal offices. Each sub-division is headed by Sub-division officer. Data is processed locally at the sub-divisonal offices and forwarded to the divisional office. Each divisional office is headed by Executive Engineer. Circle office headed by superintendent engineer receives the information in the consolidated form from different divisional offices. This circle office further processes and analyses the information and in consolidated form, it is sent to zone office headed by chief engineer. Then information in the consolidated form are reported to the wing whose overall incharge is whole-time member and to the top-level management including chairman of the board.

Different types of reports/informations are generated for the Top-level Management, Middle level and Lower level management and these reports are used for taking the decision and for monitoring the overall performance of the HPSEB.

3.5 Management Information System(MIS) for Distributed System of HPSEB

As our study is confined to Distribution System (operation wing) of HPSEB entrusted with the task of operating and maintaining distribution System at the Board and to provide uninterrupted power supply to the various categories of consumers and consumer billings there of. Management hierarchy of Operation unit i.e. Distribution system is as below.
Diagram 3.14
Different Level of Management in Distribution System of HPSEB

In order to carry out the activities and role and responsibility of the Board's Distribution system, its work has been distributed among the various levels i.e. Member(operation) office, zone, circles, divisions, subdivision and sections given below.

**Member (Operation) Office**

The operation office headed by Member (op) is responsible for imposition of Boards rules and regulations and specific policies of operation wing, man power and physical resources requirements of the wing, operation plan, overall planning, budget, execution, control and monitoring and evaluation of responsibilities and performance, attendance to personnel matters of the wing relating class I and II officers, and remission of revenue and financial disbursement beyond the limit delegated to chief Engineers/ chief Accounts officer.
Zonal Office (Operation)

Zonal office is headed by chief engineer and functions as an administrative body. Information compiled at circle offices are sent to zonal offices where information are further processed and sent to member (operation) and Board management for taking the effective decisions related to operation system of HPSEB.

Circle Office (Operation)

A circle office is headed by Superintending Engineer and divided into three Sections on the basis of their functions.

(a) Accounts Section.

This section is responsible for compilation and consolidation of budgets received from all divisional offices under it, monthly accounts compilation, bill passing, dealing with inter unit transfer cases, and disposal of audit queries, inspection reports on the accounts of field units and circle offices and payroll for circle office staff.

(b) Establishment Section

This section is responsible for maintaining the service particulars of all the staff at the circle office. Tenders are floated and purchase orders are raised by this office. A list of vendors registered with the Board is provided by this office as guidelines for vendor selection.

(c) Drawing Branch

This branch is responsible for formulation of annual plan for the circle which plans the basis for preparation of the budget for the circle, maintenance of division on office wise data on demand/consumption and scheme wise progress monitoring in terms of physical progress.

Division Office (Operations)

A division office normally has 4 – 6 sub-divisions under it, out of which one is for maintenance and the rest are operations. A divisional office is functionally divided into three parts.

(a) Establishment Section:

This section is responsible for maintaining the personnel information like leave, promotions service and posting etc of all staff at the division office, its subdivision offices and section offices
b) **Account Section**

The account section deals with the preparation of playbills of employees, maintenance of cash books/ bank books, compilation of accounts and preparation of budget for the divisions.

c) **Drawing Branch**

Drawing branch is responsible to monitor and maintain all the information relating to the transmission below 33 kv and distribution network including consumer services. This branch compiles all the implementation regarding work in progress, information on new consumers and pending application for new connections.

**Sub-division office**

Sub-division office is the functional front of the HPSEB and is responsible for interacting with the consumers of the Board. Main functions performed by sub-division office (operation) are as follows.

- Releasing new connections
- Taking meter readings LT and Industrial Consumers.
- Bill preparation and billing for LT and small to medium level industrial consumers, through meter ledger clerks.
- Bill distribution to above listed consumers of HPSEB.
- Revenue collection from consumers and remitting it to the banks.
- Maintenance of consumer ledgers.
- Directing section offices in its work like service connections / disconnection, estimate preparation for new connections.

**Section Office (Operations)**

Section offices are the basic unit of operation system. Section offices are the actual executing units of the operations circle and these carry out the physical work of maintaining distribution networks, providing consumers connections and maintenance of the same. Actual data is collected at section offices and supplied to the Sub-divisional offices. Section offices are headed by junior Engineer and this is the operational level.

Different reports/ information are generated and maintained by operation system (distribution system) of HPSEB. The flow of information in the operation System (i.e distributed system) is below
Figure 3.2
Flow Chart of Information with respect To Operation System of HPSEB

<table>
<thead>
<tr>
<th>Member Cooperation</th>
<th>Zonal Office (Chief Engineer)</th>
<th>Circle Office S.E</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section Office (J.E)</td>
<td>Sub-division (S.D.O)</td>
<td>Division Office XEN</td>
</tr>
</tbody>
</table>

Reports/ Information generated and maintained by operation system of HPSEB. The various reports/ Information related to the operation system of HPSEB are generated and maintained by the respective offices of operation wing and help to take decision related to different aspects. Broadly these reports are grouped into three categories.

A) Technical Reports
B) Financial Reports
C) General Reports

A) Technical Reports
The different technical reports generated and maintained in operations systems of HPSEB are:

a) Distribution Losses – Circle Wise
The difference between energy received and distributed to consumers is known as distribution loss of energy. Distribution Losses report indicates the calculation of the cost of generation, Transmission and distribution of energy. This report is generated monthly and compiled annually by the operation system of HPSEB. The flow of information for calculating the distribution loss is as below:
Substation Attendants supply the data to Junior Engineer (Sub-station) about the energy received at the substation. Junior Engineer (section) is responsible for distribution of energy to various consumers. At the substation and section meters are installed to note the reading of energy received and distributed to consumers. Junior Engineer (substation) and Junior Engineer (section) prepare the reports and send to Sub Division Officer, head of subdivision. The reports received from different Junior Engineers (sub-station) and Junior Engineer (section) working under sub-division are processed at the subdivision office by Sub Division Officer and report is sent to Executive Engineer, head of division. Then further reports received from different sub-divisions are processed by Executive Engineer and report is sent to Superintendent Engineer, head of circle office. Then Superintendent Engineer processes reports received from different Executive Engineers working under circle. The information selected from all divisions under the circle office headed by Superintendent Engineer is processed and a report is generated which details distribution losses circle wise. Then report in consolidated form is sent to Chief Engineer which indicate the distribution loss at the circle level. Then reports received from different circles by Chief Engineer are compiled and sent to member (operation) and Board's Management for taking the effective decision which help to reduce the distribution losses. It is compiled circle wise.
b) Status of Capacitor installed at the Premises of different consumers.

Capacitors are installed for the improvement of voltage only at the premises of industrial consumers and not for other consumers. This report is generated monthly and compiled annually. The flow of information for generating the report on status of capacitor installed at the premises of industrial consumers is as below:

The information regarding the working of capacitor installed at the premises of industrial consumer is checked by line staff which include Foreman, Additional J.E., Lineman, Assistant Lineman and T-mate and they submit the report to Junior Engineer (Section). Then Junior Engineer sends report to Sub Division Officer regarding the status of capacitor installed under his section. Then Sub Division Officer processes the reports received from different Junior Engineer (section) working under sub-division and sends to Executive Engineer, who receive this report from different sub-divisions working under that division. Then reports are further processed and sent to Superintendent Engineer. Under one circle office there are different divisions headed by Executive Engineer, reports received by different Executive Engineers is further processed and sent to Chief Engineer in consolidated form. Each Chief Engineer sends the report of his zone to Member (Operation) for necessary action.
c) **Statement Showing working of Capacitors**

This report shows the working of capacitors installed at the premises of industrial consumers and generated monthly. The flow of information for this report is as below:

The line staff used to check the working of capacitor installed at the consumer premises and report to Junior Engineer (section). Junior Engineer prepares the report and sends to sub division office headed by Sub-division officer. There are many Junior Engineers working under Sub-division and report received from different Junior Engineers (section) is processed and sent to Division office headed by Executive Engineer. Many sub-division officers are working under one division and reports received from different sub-division officers are processed and sent to Superintendent Engineer who heads the circle office. The reports received from different Superintendent Engineers is processed and sent into consolidated form to zonal office headed by Chief Engineer. This report is generated for each zone by Chief Engineer and sent to member operation for effective decision.

d) **11 Kv tripping upto 10 km per month**

Tripping means when fault occurred and supply is not regular. This report is generated monthly and compiled annually. The flow of information for this report is as below:
Tripping is noted at the substation by Substation Attendant and informed to the Junior Engineer (Substation). Junior Engineer (Substation) sends report to Subdivisional Officer (Sub division) for making the alternate arrangement and the cause of tripping. The reports received from different substation are processed by Sub-division officer and sent to Executive Engineer (XEN), the head of division. The reports received from different subdivisions are processed by Sub-division officer and sent to Superintendent Engineer who heads the circle office. The reports received from different divisions is compiled and processed and then sent to Chief Engineer by Superintendent Engineer. The reports received from different circles is processed at Zone office headed by Chief Engineer and sent into consolidated form to Member (OP), which gives details of the cause of tripping and action taken to maintain the regular supply of electricity.

e) **Reduction in T & D Losses**

Electricity is transmitted from one sub station (11 Kv and above) to another and then distributed (33 Kv below) to different consumers. The difference between energy transmitted and distribution is known as T & D losses. This report is
Transmission distribution losses are reported by Junior Engineer who headed the Section and Substation and Junior Engineer (section) sends report of T&D losses to Sub-division Officer where T & D losses will be tallied and then report is sent to XEN who headed the divisional office. The reports received from different Sub-divisional Offices are processed by Executive Engineer and sent to Superintendent Engineer who headed the circle office. The reports received from different circles by Chief Engineer, the head of Zone are further processed and sent into consolidated or to member (Operation) and Board’s Management for taking the effective decision to reduce the T & D losses in future.

f) Shortening of LT lines and de-augmentation of Transformers

This report detail the shortening of low transmission lines and de-augmentation of transformer installed at distribution centre for improving the voltage supply. More lengthy transmission lines, more loss of energy due to
transmission for distribution. If length is short and installed more transformers then loss due to distribution of energy can be reduced.

Figure 3.8

Junior Engineer at Substation and Junior Engineer (section) report to Sub-division Officer regarding the status of loss due to transmission for distribution of energy and status of shortening of L T lines and de-augmentation of transformers. Reports received from different Junior Engineers (substations) and Junior Engineer (section) working under sub-division headed by Sub-division officer are processed and sent to Executive Engineer. The reports received from different Sub-division Officers working under division headed by Executive Engineer are further processed and sent to Superintendent Engineer. The reports received from different XEN working under Superintendent Engineer are processed at circle office and sent into consolidated or to Chief Engineer who headed the zone and to Member (Operation) for taking the decision so that losses can be reduced.

(g) Number of 11 Kv tripping per month

Tripping means when fault occurred and supply is not regular. This report is generated monthly and compiled annually. The flow of information for this report is as below:
Tripping is noted at the substation by Substation Attendant and informed to Junior Engineer (Substation). Then Junior Engineer (Substation) sends report to Sub-division Officer (sub division) for making the alternate arrangement and the cause of tripping. The report received from different substations is processed and sent to Executive Engineer, the head of division. The report received from different substations headed by Sub-division Officer is processed and sent to Superintendent Engineer who headed the circle office. The reports received from different divisions is compiled and processed and then sent to chief Engineer. The reports received from different circles is processed at Zonal office headed by Chief Engineer and sent into consolidated or to Member (OP) which give details of the cause of tripping and action taken to maintain the regular supply of electricity and tripping per month.

(h) Status of Damaged Transformers

This report indicates the status of distribution & Power transformers damaged installed at substation and under section and generated monthly. Power Transformers are used from HT to H.T transfer the power while distribution Transforms are used from HT to LT and report is generated monthly. The flow of information for this report is as below:
For distribution transformers, the report regarding the status of transformer damaged is submitted by line staff to Junior Engineer at Section Office and then Junior Engineer sends to Sub-division Officer and report regarding the status of Power Transformers is submitted by Substation Attendant to Junior Engineer and then Junior Engineer sends it to Sub-division Officer. The reports received for Junior Engineer (substation) and Junior Engineer (Section) working under that subdivision is processed and sent to Executive Engineer who headed the divisional office Under division. There are different Sub-division Officers and reports received from Sub-division Officer are processed by Executive Engineer and sent to Superintendent Engineer, the head of circle office. The reports received from different divisions at circle office is processed by Superintendent Engineer and sent into consolidated form to Chief Engineer, the head of Zonal office.

Chief Engineer sends report regarding the status of damaged transformers to Member (Operation) of his zone and then to Board’s Management for taking the effective decision.

i) High damaged Rate of Transformers in subdivisions

This report indicates the high damaged rate of transformers in subdivision among all subdivisions in operation wing. The flow of information for this report is as below:
Junior Engineer at Section office will receive the information regarding the damaged transformer and send to Sub-division Officer who headed the subdivision. Substation Attendant informs Junior Engineer (Substation) regarding the damaged transformer and Junior Engineer prepares the reports and sends it to Sub-division Officer. Sub-division Officer processed the reports received from different Junior Engineers and prepares the report at sub-division level regarding the total transformer damaged in subdivision. Then this report is sent to Executive Engineer, the head of division. The reports received from different Subdivisions are compared and calculate the high rate of damaged transformer and then is sent to Superintendent Engineer who heads the Circle. The reports received from different divisions are compared and they calculate the high rate of damaged transformer at circle office and then report is sent to chief Engineer, the head of zonal office. The reports received from different circle offices are compared and find out the high rate of damaged transformers at subdivisions level and sent into consolidated form to Member (Operation) which indicate the name of subdivision and number of transformer damaged for taking the effective decision, so that damage rate can be reduce.

j) Substation Meters to be re-calibrated/ repaired

The meters are installed at the substations for noting the energy received and consumption of electricity. This report details the status of substation meters to be re-calibrated/ repaired and generated month wise. The repair /re-calibration of
meter is handled by Meter Testing and Replacement Cell headed by Executive Engineer (M & T) on the complaint received from Sub-division Officer, head of subdivision. The flow of information is as below:

**Figure 3.12**

Lineman (domestic) or meter reader report to the Junior Engineer (Section) regarding the faulty meters installed at the consumer premises. Junior Engineer sends the report to Sub-division Officer, head of sub-division. The reports received from different Junior Engineer (Section) are processed and sent complaint to meter testing and replacement cell headed by Executive Engineer (M & T) and Executive Engineer (Division) for Information. This cell is responsible for repairing and recalibration of faulty meter installed at substations. Then this cell sends the feed back to Sub-division Officer regarding the status of faulty meter. This report is generated at the subdivision level.

**k) Feeders with high Distribution Losses**

Feeders are tension lines such as 11 Kv or 22 Kv or 33 Kv lines. Power is transmitted from one Substation to another. The meters are installed at each substation for recording the energy transmitted and energy received and losses during transmission are measured at the substations as distribution losses. This report is generated month wise. The flow of information is as below:

**Figure 3.13**
Substation Attendant or Additional Junior Engineer are responsible to note the meter reading from the meter installed at different substation regarding the power received and transmitted to another substation and inform the Junior Engineer (Substation). Junior Engineer prepares the report of distribution loss of energy due to transmission and sent it to Sub-divisional Officer. The reports received from different Junior Engineer (Sub-station) working under that Sub-division is processed by Sub-division Officer and sent to Executive Engineer, the head of a division. The reports received from different Sub-division Officer are processed at division level and sent to Superintendent Engineer. The reports received from different Executive Engineer regarding the feeder with high distribution losses are processed at circle office headed by Superintending Engineer and report sent to Chief Engineer, the head of zone. Then different Chief Engineer sent the report to Member (OP) overall incharge of the wing regarding the feeders with high distribution losses. Member Operation sent the report to Board’s management for taking the effective decision so that distribution losses could be reduced.

1) Replacement of CT of higher ratio

It is up-to division level to replace the current transformer. if there is requirement of replacements then information sent to Chief Engineer (material Management) for the necessary action. This report is generated according to requirement and compiled annually. Transformer of higher ratio are installed at substation level and if there is requirement of replacement of current transformers of higher ratio due to some fault then information is sent to upto divisional level headed by Executive Engineer and inform the Chief Engineer (Material Management) for the necessary action. Information flow is as below

Figure 3.14
Substation Attendant or helper inform the status of current transformer to Junior Engineer (substation). If there is requirement of replacement due to some fault, then report is sent to Sub-divisional Officer. The reports received from different Sub-division Officer are processed by Executive Engineer and sent to Chief Engineer (Material Management) for necessary action and to Superintending Engineer, head of circle. Superintending Engineer sends report in consolidated form for information to Chief Engineer (Zone), Chief Engineer sends report of zone’s requirement to Chief Engineer (MM) and for information to Member (Operation).

m) Status of Transformers damaged within warranty period (new) during quarter.

This report contains the information regarding the damaged Transformers purchased new and installed at the distribution center/substation. If Transformer damaged within warranty period then facility provided by the supplier will be availed by preparing the report of damaged Transformers and for the information of Board’s Management. Two Types of Transformers are used in HPSEB i.e. Distribution Transformer and Power Transformer. Power Transformers are used from i.e HT to HT for transferring the power while distribution Transforms are used from HT to LT. This report is generated quarterly. The flow of information for generating this report is as below:-

**Figure No. 3.15**

![Diagram of information flow for generating Transformer damage report]
For Distribution Transformers, the report regarding the status of transformer damaged is submitted by line staff to Junior Engineer at Section office and then J.E. sent to S.D.O, head of subdivision and report regarding the status of Power Transformers is submitted by substation attendant to J.E and J.E(substation) sent the report to S.D.O. The reports received from J.E. (substation) and J.E. (section) working under that subdivision are processed by Sub-division officer and sent to Executive Engineer who headed the divisional office. Under division there are different sub-division officer and reports received from Sub-division officer are processed by Executive Engineer and sent to Superintendent Engineer, the head of circle office. The reports received from different Executive Engineer at circle office are processed and sent into consolidated form to Chief Engineer, the head of Zone .Chief Engineer (Zone) sent report to Chief Engineer (MM) for necessary action and report regarding the status of damaged Transformers to Member (Operation) and to Board's Management for taking the effective decision.

n) Status of Transformers damaged within warranty period (repaired)

This report give details of repaired Transformer get damaged within the warranty period. There are two types of transformer used i.e. Power Transformer and Distribution Transformer. Power Transformers are used from i.e. HT to HT for transferring the power while distribution Transforms are used from HT to LT. For availing the facility provided by the repair center within warranty period, this report is generated and also for the information of boards management. The flow of information for this report is as below
For Distribution Transformers, the report regarding the status of transformer damaged is submitted by line staff to Junior Engineer at Section office and then Junior Engineer sent to Sub-division Officer, head of subdivision and report regarding the status of Power Transformers is submitted by substation attendant to Junior Engineer and Junior Engineer (substation) sent the report to Sub-division Officer. The reports received from Junior Engineer (substation) and Junior Engineer (section) working under that subdivision are processed by Sub-division Officer and sent to Executive Engineer who headed the divisional office. Under division there are different sub-division officer and reports received from Sub-division officer are processed by Executive Engineer and sent to Superintendent Engineer, the head of circle office. The reports received from different Executive Engineer at circle office are processed and sent into consolidated form to Chief Engineer, the head of Zone.

Chief Engineer sent report to Chief Engineer (MM) for necessary action and regarding the status of damaged Transformers to Member (Operation) and to Board's Management for taking the effective decision.
o) Status of Transformer damaged within warranty period (new) during the years.

This report contains the information regarding the status of total damaged transformers purchased new within warranty period during the years. Two types of Transformers are used in HPSEB i.e. Distribution transformer and Power Transformer. Power Transformers are used from i.e. HT to HT for transferring the power while distribution Transforms are used from HT to LT. This report is generated yearly. The flow of information for this report is as below

**Figure 3.17**

For Distribution Transformers, the report regarding the status of transformer damaged is submitted by line staff to Junior Engineer at Section office and then Junior Engineer sent to Sub-division Officer, head of subdivision and report regarding the status of Power Transformers is submitted by Substation Attendant to Junior Engineer (substation). Junior Engineer (substation) sent the report to Sub-division Officer. The reports received from Junior Engineer (section) and Junior Engineer (substation) working under that subdivision are processed by Sub-division officer and sent to Executive Engineer who is head of division. Under division there are different Sub-division Officer and reports received from Sub-division officer are processed by Executive Engineer and sent to Superintendent Engineer, the head of circle office. The reports received from different Executive Engineer at circle office are processed and sent into consolidated form to Chief Engineer, the head of Zone. Chief Engineer sent report regarding the status of damaged Transformers to Member (Operation) and to Board’s Management for taking the effective decision.
p) Status of damage to Distribution Transformers

The distribution transformers are installed at the distribution center and one lineman is responsible to look after 4 or 5 transformers installed under the section. Distribution Transforms are used from HT to LT. This report details the status of damage to distribution transformers. The flow of information for this report is as below

Figure 3.18

For Distribution Transformers, the report regarding the status of transformer damaged is submitted by line staff to Junior Engineer at Section office and then Junior Engineer sent to Sub-division Officer, head of subdivision. The reports received from Junior Engineer (section) working under that subdivision are processed by Sub-division officer and sent to Executive Engineer who is head of division. Under division there are different sub-division officer and reports received from Sub-division officer are processed by Executive Engineer and sent to Superintendent Engineer, the head of circle office. The reports received from different Executive Engineer at circle office are processed and sent into consolidated form to Chief Engineer, the head of Zone. Chief Engineer sent report regarding the status of damaged Transformers to Member (Operation) and to Board’s Management for taking the effective decision.

q) Reduction in DS loss and damage to distribution transformers (in respect of a division selected previously in the circle)

In HPSEB, for watching the improvement in working of distribution transformers and reduction in distribution supply loss, each division is selected turn by turn in the circle, and a report is generated which shows the reduction in
DS loss and damage to distribution transformers. The flow of information for generating this report is as below.

**Flowchart 3.19**

![Flowchart](image)

Junior Engineer at Section office will receive the information from line staff regarding the damaged transformer and sent to Sub-division Officer who headed the subdivision. is processed and prepare the report at sub-division level regarding the total transformer damaged in subdivision. Then this report is sent to Executive Engineer, the head of division. The reports received from different subdivisions are compared and calculate the high rate of damaged transformer and then sent to Superintendent Engineer who headed the circle office. The reports received from different divisions are compared and calculate the high rate of damaged transformer at circle office and then report sent to chief Engineer, the head of zonal office. The reports received from different circle offices are compared and find out the high rate of damaged transformers at subdivisions level and sent into consolidated form to member (Operation) which indicate the name of subdivision and number of transformer damaged for taking the effective decision, so that damage rate can be reduce.

**B. Financial Reports**

a) **Progress of Recovery of Miscellaneous Advances outstanding against Board Employees.**

This report is generated at divisional level headed by XEN who is drawing and disbursing officer. Then a report of progress of recovery of miscellaneous advances outstanding against employees working under that division is sent to Financial & Accounts wing headed by member (F&A). The flow of information is as below.
XEN, the head of division is a drawing and disbursing officer who maintained the record of this report and sent report to Accounts Officer Loan cell. The reports is received from different divisions are processed and sent to Chief Accounts office, Shimla. Then report in consolidated from is sent to Member (F&A)for taking the effective decision.

b) Defaulting Amount

This report details the defaulting amount outstanding against power sold to conumers. This report is maintained at Subdivision level. The flow of information for this report is as below:

The report generated at subdivision and sent to XEN the head of division. The reports received from different subdivisions are processed by Executive Engineer and sent to Supeinrentendent Engineer, the head of circle office. Reports received from Executive Engineers are processed by Supreintending Engineer are sent to Chief Engineer (Zone) for taking the effective decision.

c) Advances to Supplier

This report details the advances to supplier This report contains the information regarding the payments done in advance for purchasing the material and equipments from approved supplier of HPSEB. This report is genereated monthly. The flow of information for this report is as below.
The requirement of equipments or other material starts from Junior Engineer (section) and Junior Engineer (substation). They submit the report of requirement of equipments to Sub-division Officer then Sub-division Officer process the requirements received and sent report to Executive Engineer, head of division. The Report received by Superintending Engineer from Executive Engineers are processed and sent to Chief Engineer (MM) for purchasing the required equipments. Than Chief Engineer (MM) place the order to supplier and sent reports to Chief Accounts Officer to pay the amount to supplier according the agreement. This report is generated by Chief Engineer (MM) and Finance Accounts Wing which details the status of advances to supplier.

**d) Power Sold Circle wise**

Energy sold to the different types of consumers and revenue generated. This report is generated at sub-division level and then sent to division and compiled at circle level month wise. This report indicates the power sold to different type of consumers and revenue generated. The information flow of this report is as below:
The billing of power sold to different types of consumer is done at sub-
divisional office and report generated is sent to XEN, the head of division. The
reports received from different subdivisions under that division is processed and
sent to Superintendent Engineer who headed the circle office. The reports received
from different divisions are processed and prepared which details the power sold
circle wise and sent to Chief Engineer, the head of zone. The reports received from
different circles at zonal office (operation) which give details of power sold at
different circles and revenue generated by selling the power to consumers.

d) Detection of theft of Energy

There is flying squad operating under Chief Engineer (Commercial)
responsible for detecting the cases of theft of energy. This can also be done at sub-
division level and then leakage of revenue is calculated on the basis of theft of
energy report. This report details the total number of connection checked, number
of suspected cases and nature of theft i.e tempering of meters, direct connections,
under billing and other reason of suspected cases. Amount is calculated on the
energy theft which is known as leakage of revenue. The flow of information for
this report is as below:
Three flying squad units are headed by Sr. Executive Engineer and working under Chief Engineer (Commercial) for carrying out surprise checks of various consumer's premises of the state. The reports are prepared by Sr. Executive Engineer (Flying Squad) and submitted to Chief Engineer (Commercial). The leakage of revenue is calculated at Chief Engineer's office and sent the report to member (OP) and Board management. In addition to Fly squad, Junior Engineer installation is posted in most of the operation divisions to carry out the extensive checking of consumer's connections. Junior Engineer (section) can also check the consumer connections and report to Sub-division Officer. The reports are processed and sent to Executive Engineer, the head of division and Junior Engineer installation submits reports to Executive Engineer. The reports received from different subdivisions and from Inspectors are processed and sent to Superintendent Engineer. The reports received from different Executive Engineer's working under Superintendent Engineer are processed and sent to Chief Engineer, the head of Zone. The reports received from different Superintendent Engineers are processed at Circle office and calculate the amount due to theft of energy and then sent to Member (Operation) and Board's management for taking the effective decision so that losses due to theft of energy can be minimized.

C. General Reports

a) Position of Plant equipment dismantled at redundant/ idle sub-stations.

This report indicates the equipment and machine damaged at substation level and generated month wise. This report indicates the status of plant equipment dismantled at redundant idle substations. The flow of information for this report is as below:

Figure 3.25
The report regarding the status of plants equipment is submitted by Junior Engineer (Substation) and Junior Engineer (Section) to Sub-division Officer, the head of subdivision. The reports received from different Junior Engineer (Substations) and Junior Engineer (Sections) are processed at sub-division office and sent to XEN (Executive Engineer) the head of division. The reports submitted by different sub-divisional officers are processed at divisional office and sent to Superintendent Engineer, the head of Circle office. The reports received from different Executive Engineer's are processed at Circle office and sent to Chief Engineer, the head of zone. Then report received from different Supreintending Engineer working under chief Engiener are processed and sent inot consolidated form to Member (Operation) for taking the effective decisions.

b) Release of new connections

This report detail the total number of new connections released month wise. For taking the new connection, consumer has to submitted the Agreement Form, certified Test Report and no-objection certified issued by competent authority. If area of new connection is under Municipal Corporation then it will be issued by Municipal Corporation and in case of rural area Patwari is authorized to issue the N.O.C. The consumer submitted the above listed document to sub-divisional officer. Then Sub-division Officer sent this report to Junior Engineer (Section) for checking the possibility and feasibility report to Sub-divisional officer.

![Diagram of the process](image)

If report is positive then order is issued by Sub-division Officer to Junior Engineer (section) for relasing the new connection to applicant consumer. The record of consumer is maintained at subdivisional level. The report is sends to
Executive Engineer which contains the number of new connections released at subdivisinal level. Then Executive Engineer compiled the reports received from different Sub-division Officer’s and sent to Superintendent Engineer, head of circle. The reports received from different Executive Engineer are compiled at circle office and sent to Chief Engineer, head of Zone. Chief Engineer sent report to Member (Operation) receive the reports from different Chief Engineer of respective zone and generate a report which give detail of total number of new connections released in HPSEB to different types of consumers and compiled annually.

c) Status of Pending Job orders

This report give details of pending job orders, defective (meters and metering equipment) and generated monthly. This report indicate the status of pending Job order. Consumer or Junior Engineer (Section) report to Sub-divisional offices regarding the pending Job. The flow of information is as below

![Figure No. 3.27](image)

The reports received from Junior Engineer (Section) are processed and sent back to Junior Engineer for preparing the detial report and estimate. The Junior Engineer (Section) prepare the detail report and estimate regarding the pending job and sent to sub-divisional offices. The sub-divisional officer processed the report and if feasible, then issue the Job order for executing the pending job in concerned section. The Sub-division Officer sent the report regarding the status of job order of their sub-division to Executive Engineer then Executive Engineer sent the report of division to Supreintending Engineer than Supreintending Engineer sent the report regarding the status of pending job order in the circle to Chief Engineer (Zone).
d) **Status of Checking Consumers premises.**

This report indicates the total numbers of connections checked, number of suspected (pilferage, misuse, theft) cases, nature of theft (tempering of meters, under billing, direct connection etc.) Theis report helps the Board to minimize the System losses due to pilferage of energy. There is flying squad operating under Chief Engineer (Commercial) responsible detecting the cases of theft of energy. This can also be done at sub-division level and then leakage of revenue is calculated on the basis of theft of energy report. The total number of connection checked, Number of suspected cases and nature of theft i.e tempering of meters, direct connections, under billing and other reason of suspected cases. Amount is calculated on the energy theft which is known as leakage of revenue. The flow of information for this report is as below:

![Diagram of information flow](image)

Three flying squad units each headed by Sr. Executive Engineer is working under Chief Engineer (Commercial) for carrying out surprise checks of various consumers of the state. The reports are prepared by Sr. Executive Engineer (Flying Squad) is submitted to Chief Engineer (Commercial). The leakage of revenue is calculated at Chief Engineer's office and sent the report to Member (OP) and Board Management. In addition to Fly squad, Junior Engineer installation is posted in most of the operation divisions to carry out the extensive checking of consumer's connections. Junior Engineer (section) can also check the consumer connections and report to Sub-division Officer the reports are processed and sent to Executive...
Engineer, the head of division. The reports received from different subdivisions and from Inspectors are processed and sent to Superintendent Engineer. The reports received from different Executive Engineer’s working Superintendent Engineer are processed and sent to Chief Engineer, the head of Zone. The reports received from different Superintendent Engineers are processed at Circle office and calculate the amount due to theft of energy and then sent to Member (Operation) and Board’s management for taking the effective decision so that losses due to theft of energy can be minimized.

e) Current Complaints per 1000 Consumers

This report is used to monitor consumer complaints. It indicates number of complaints received, referred to the field offices, disposed off pending. There is a report handling mechanism at the section office headed by Junior Engineer. The flow of information for handling the consumer complaints is as below:

![Figure 3.29](image)

There is a facility at the Section Office and sub-division office that consumer can registered their complaints telephonically. Secondly consumer comes personally to register their complaints. These complaints are recorded on the register maintained by the Section office complaint handling mechanism. This register record the address of Consumer, date of complaint.

The Junior Engiener checks the complaint registered every day and deploy the technical person such as lineman (Domestic) to check and repair the fault. The line staff deputed to repair the fault give information about the status of complaint.
and entered on the complaint register. If complaint is received to sub-divisional officer, he order the detail of complaint to Junior Engineer (Section) for handling the complaint. The Junior Engineer (Section) sent the report to Sub-divisional officer regarding current complaints of Section received from different types of consumers of HPSEB. Sub-division officer report the figure of complaints received Junior Engineer (Section) sent to Executive Engineer head of divisions. This report is maintained at divisional received from different sub-divisions level and actual data exist at Section Office. Executive Engineer sends the report to Chief Engineer and the reports received from different Executive Engineer’s are processed at Chief Engineer is office and sent to Member (operation)

f) Fatal Accidents

Any accident of consumer or employees of HPSEB occur due to electric current or working in offices of HPSEB. This report is generated monthly and circulated at member level. For such accidents, compensation is decided by Chief Electrical Inspectorate of the office of Chief electrical Inspectorate is a separate office outside the HPSEB and is Govt. Post headed by Executive Engineer (Electrical). Filed or the place where accident happen is reported by staff deployed at that place to Junior Engineer (Section) after giving the first aid. The flow of information is as under:

![Figure No. 3.30](image)
The information received from filed or the place of accident is verified by Junior Engineer (Section) and sent report telegramically to subdivision officer. The reports received from different Junior Engineer working under sub-divisions are processes and sent to Executive Engineer, head of division. The reports is received from different sub-division are processed and sent to superintendent Engineer, the head of circle. The reports received from different Executive Engineers working under circle are processesand and sent to Chief Engineer. Chief Engineer received information from different Superintendent Engineers working under circle are processes and sent to member (Operation). Member (operation) inform the Boards Management and telegramically to Land Acquisition officer cum-chairman workmen Compensation to decide the compensation under workmen's compensation Act, 1923 and inform the Member (Operation) to pay the decided compensation to the affected person as to his family. The report is compiled annually which details the number of accident and compensation paid in terms of money.

g) Work charged and daily labour

This report is generated monthly for taking the approval of salary of work charged and daily labour employed at field offices. The flow of information is as below:

![Diagram](image)

Requisition against work is prepared by Junior Engineer (Section) and sent to Sub-divisional officer. Requisition against work received from different Junior Engineers (Section) working under sub-division are processed and sent to Executive Engineer, the head of division. The Executive Engineer sanction or issue the mastrolls and sent back to sub-divisional officer working under division. Sub-divisional officer sent the masterroll or approval received from Executive Engineer to Junior Engineer (Section) for employing the daily labour to execute the field work. The report of approval is sent to Superintendent Engineer the head of circle the report generated at circle office on the information provided by different
division and sent to Chief Engineer then Chief Engineer sent report of a Zone to Member (Operation).

h) Inspection of Division and Subdivision

Executive Engineer is authorised to inspect the sub-divisions working under division. Superintendent Engineer, Chief Engineer inspect the division and sub division for the smooth functioning of office. This report is generated by the concerned officer who inspect the divisions or subdivisions. Working under that officer. The flow of the information is as below:

![Figure No. 3.32]

Executive Engineer sent the report of Sub-division inspected by him to Superintendent Engineer. The reports received from Executive Engineer and the divisions inspected by Superintendent Engineer are processed and sent to Chief Engineer, the head of zone. The reports submitted by different Superintendent Engineers and inspection done by Chief Engineer of divisions and sub-division are processed and sent to Member (operation).

i) Pending Arbitration Cases

Chief Engineer (Arbitration) is looking after the functions of arbitration exclusively and reports on arbitration cases are generated by this office.

Chief Engineer (Arbitration) is working under Member (Civil) The flow of information is as below:

![Figure No. 3.33]
The arbitration cases are reported by Junior Engineer (Section) to sub-divisional officer. The cases received from different Junior Engineers working under sub-division are reported by Subdivision Officer to Executive Engineer, the head of division. The cases received from different sub-division officers working under division are processed by Executive Engineer and sent to Supreintending Engineer (Circle). The reports received from divisions are processed by Supreintending Engineer and sent to Chief Engineer (Arbitration) for necessary action and report is generated by this office of pending arbitration cases.

j) Status of Pending Application and Test Reports

This report indicate the category wise details of pending applications, total load applied sanctioned load, and applications expected to materialize into connections. This report is generated monthly.

The flow of information is as below:

The consumer has to submitted the application (i.e Aggrement Form) Test Report and NOC for new connection to sub divisional officer. The record of all the applications for connections is maintained at the sub-divisions office. The sub-division officer sent the report on status of pending applications to Executive Engineer. The report received from different sub-division officer working under division are compiled and sent to Superintendent Engineer, the head of circle. The reports received from different Executive Engineers are compiled and sent to Chief Engineer, the head of zone. The reports received from different Superintendent Engineer working under zone are further compiled and sent to Member (OP) and Board’s management. This report is compiled annually.

k) Theft of Transformers

This report indicates the status of theft of transformers. This report indicate the number of transformers installed at different distribution centres. Line Staff is
the major source of information for report on theft of transformers. For this report information flow is as below:

Figure No. 3.35

One Lineman is responsible to look after 4 or 5 transformers installed at different distribution centers. If there is any case of theft, then lineman report to Junior Engineer (Section). The reports received from different linemens in field are processed and sent report to Sub-divisional officer. Sub-divisional Officer received reports from different sections working under Sub-divisions are processed and sent a report to Executive Engineer head of Division. The reports received from different Sub-divisional Officer working under Division are processed and sent to Superintendent Engineer. The Superintendent Engineer processed the reports submitted by different Executive Engineers and sent to Chief Engineer head of Zone. Then this report is generated zone wise and reported to Member (Operation) for taking the effective decision.

1) Position of Court Cases

This report indicates the status of total court cases pending in different courts. Legal Cell of HPSEB supervise the court cases.

The Legal unit of HPSEB works under Member (Administration) and is responsible to generated the report on position of court cases pending in different courts. The flow of information is as below:

Figure No. 3.36
Junior Engineers at Section or Substation report to Subdivisional officer if there is court case at their level or they have received any information from the court then Sub-divisional officer sent the report of courts cases to Executive Engineer. Executive Engineer received reports from different sub-divisional officer working under division are processed and sent to Superintendent Engineer. Then S.E. sent the report of total court cases lying in different courts in his circle to Chief Engineer. Then Chief Engineer send the detail of court cases under his zone to Secretary (Shimla) working under Member (Administration). There legal unit under Secretary (Shimla). The function of this unit is to renders advice on legal matters to various units of the Board. The writ petitions, complaints are processed/ examined and vetted by the legal unit including examination, preparation and finalisation of lower court matters. Then report is sent to Member (Administration) and Board’s mangement and Compiled annually.

m) **Status of material drawn against works/ lying un-utilised.**

This report indicates the status of material drawn from higher office’s store or purchased against works for various field works at sub-division as division level. This report is generated monthly.

For drawing the material against work, the estimate is prepared by concerned Junior Engineer and sent to sub-divisional officer. If it is in the perview of sub-divisional officer according to powers delegated to him by the board he will issue the order for purchasing material. If it is not in the perview of sub-divisional officer then requisition is sent to Executive engineer. The head of division and Store is maintained at divisional level. If sanction then sanction order is issued and sent back to concerned S.D.O and S.DO. sent to Junior Engineer. The material is issued from Store to concerned Junior Engineer by showing the sanction order. If required material is not available at divisional store then requisition is sent to Superintendent Engineer. The flow of information is as below:

**Figure No. 3.37**

```
  J.E  S.D.O  XEN  S.E.  C.E.
  (Section) (Subdivision) (Division) (Circle)
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Then Superintendent received the requisitions form different divisions are compiled and sent to Chief Engineer (Zone). Then Chief Engineer (Zone) sent the requisition to Chief Engineer (Material Management) for required material. Once the material drawn from store or central store, then the concerned Junior Engineer prepare the work close report and the status of material lying unutilized and sent to Sub-division Officer.

n) Status of Material Purchases against works/ lying un-utilised

If material is not available in store or central store, then estimate is prepared by concerned junior Engineer against work. This estimate is reported to Sub-divisions officer. HPSEB has fixed the financial power delegated to various officers. The flow of information for this report is as below:

**Figure No. 3.38**

![Diagram showing the flow of information](image)

It is in perview of sub-division officer, then he will sanction the estimated cost and issue the purchase order for purchasing the required material. If it is beyond his power, then report regarding purchasing and estimate sent to Executive Engineer. Again if it is in his power, then purchase order issued and S.D.O sent to concerned J.E. if it is not in his perview, then report sent to Superintendent Engineer. The reports received from different Executive Engineer are processed and he will sanction the estimated cost by issuing the purchase order. If it is beyond his power, then report is sent to Member (Operation).

3.6 Existing Computerisation in HPSEB

HPSEB has an existing computer cell which was created in 1991 under Chief Engineer (P&M) at its head office Kumarhouse, Shimla. This computer cell is responsible for computerisation in all the offices of the Board apart from catering to the Electronic Data Processing and Office Automation needs of HPSEB. Presently the computerised energy bills are served to 15725consumers in operation circle Shimla except Dhalli where office is equipped with computer system and
software has been installed and data entry is in progress. Further spot billing machine has been installed in Shimla town, Dhalli and Khalini on experimental basis. In future this facility may be extended in other operation circles. In addition to this, other operation circles serving computerised energy bills are operation circle (Solan), operation circle (Nahan), operation circle (Kangra), operation circle (Dalhousie), operation circle (Una), operation circle (Hamirpur) and operation circle (Mandi). The other operation circles where computerised billing system is ready to implement and data entry is in progress are operation circle (Kullu) and operation circle (Bilaspur). The total number of consumers served computerised energy bills by different operation circles of HPSEB are 96116 (as on 15-2-2005). This facility has been extended to industrial consumers of HPSEB. The total strength of industrial consumers is about 650. Thus computerised billing is more speedy process as compared to manual system and highlights the cases more prominently i.e. defective metering equipment, low power factor, variation in energy consumption, theft of energy, incorrect recording of consumption, unauthorised load, area of high consumption and complaint redressal.

HPSEB has planned to computerise its offices and functions in two phases. In the first phase target was to aware employees about the application and advantages of computerisation and computer by providing the necessary training and installing the computers in its offices. These computers were mostly used for typing and spread sheet activities. The first phase is over, now the second phase of computerisation is going on. Presently the following applications of HPSEB are being managed by the computer cell: Pay roll for Gazetted officers in Shimla and for the employees of head office Kumarhouse complex, Personal Information System, Cash and Fund Flow, CAD system in Design Units, Account compilation and bank Reconciliation.

The PIS is for administration which used to keep the complete record of employees, promotions and transfers etc. Cash and Fund flow system helps the management to know how much cash the organisation has at a particular time and detail of cash and fund inflows/outflows and their details. Informations provided by this statement highlight the issue of drawing limits, demand of loans and
appropriate instructions to concerned offices and banks. Computer Aided Design software is in working order at design unit Sundernager which is used for design activities. Accounts compilation application compiles all the information related to revenue and expenditure of the board and its detail. This statement is helpful for preparing Trial Balance, Balance Sheet and to keep track of revenue and expenditure of the Board.