



# Compendium for BA Head



**BHARAT SANCHAR NIGAM LIMITED**  
(A Govt. of India Enterprise)



# Compendium for BA Head

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पी.के. पुरवार  
अध्यक्ष एवं प्रबंध निदेशक  
**P.K. PURWAR**  
Chairman & Managing Director



### MESSAGE

I am very happy to release the "Compendium for BA Heads", which will be very useful for all our Business Area (BA) Heads for better appreciating their role, responsibilities, task to be done and milestones to be achieved. This document has been compiled by domain experts and curated by the dedicated team, aimed to equip our BA Heads with the skills, knowledge and vision necessary to steer their respective BAs towards new horizons of success, excellence and growth.

In this compendium, BA Heads will find insights and perspectives from all the five critical verticals i.e. Human Resources, Consumer Fixed Access, Consumer Mobility, Enterprise Business and Finance. All vertical Directors have put in efforts to refine this document to reflect the ever changing needs of the organization for success and effectiveness in the competitive market by ensuring better quality of service by optimum utilization of resources.

I am confident that the knowledge, ideas and strategies shared in this compendium will be helpful not only to BA heads but also their all team members. This compendium need to be refined on continuous basis which will require your contribution in terms of sharing your good work and initiatives taken which are innovative as well as growth oriented.

I put on record my appreciation for the CGM ALTTC and his team for coming up with this document that can be used by our BA Heads throughout BSNL for excelling in day to day work and developing leadership. As we launch this compendium, let us also reflect on the words of the great Peter Drucker: **"Management is doing things right; leadership is doing the right things."**

  
(Pravin Kumar Purwar)

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अरविन्द वडनेरकर  
निदेशक (एचआर)  
**ARVIND VADNERKAR**  
Director (HR)  
BSNL Board



**Message from Director (HR)**

It is with great pleasure and a sense of profound responsibility that I introduce this "Compendium for BA Heads", a valuable resource specially crafted to support and empower our esteemed Business Area Heads (BA Heads) at BSNL. In an ever-evolving and dynamic business landscape, the role of our BA Heads is pivotal in steering our organization towards sustained growth and excellence.

The telecommunications industry is undergoing a profound transformation, driven by rapid technological advancements, changing customer expectations, and a competitive landscape that is both demanding and dynamic. To thrive in this environment, our BA Heads must be equipped with the latest tools, strategies, and insights. This compendium serves as a valuable compass, helping our BA Heads navigate these challenges with confidence and agility.

I would like to express my gratitude to my esteemed colleagues, Director (ENT), Director (Finance), Director (CFA), and Director (CM), for their unwavering support and active participation in this transformative initiative. It is through our collective efforts that we have been able to empower our BA Heads with the skills and knowledge needed for success.

I extend my heartfelt appreciation to the CGM ALTTC and his team for their tireless efforts in bringing out this "Compendium for BA Heads". Entire Team's dedication to the professional development of our BA Heads has been exemplary, and it is reflected in the valuable insights and experiences shared in this compendium. As we move forward, let us continue to invest in our most valuable asset - our people and also in the words of late Mr. Stephen Covey - "Let's sharpen our saws".

22.9.2024  
(Arvind Vadnerkar)  
DIR (HR), BSNL

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विवेक बॉझल  
निदेशक (सी.एफ.ए.)  
बी.एस.एन.एल. बोर्ड  
VIVEK BANZAL  
Director (C.F.A.)  
B.S.N.L. Board



**Message from Director (CFA)**

I am happy to see the release of "**Compendium for BA Heads**" for Business Area (BA) Heads.

The Consumer Fixed Access team has the privilege of contributing to transformative journey, collaborating closely with our colleagues in Human Resources, Enterprise Business, Finance, and Consumer Mobility. This experience has reinforced the significance of cross-functional collaboration.

BSNL, as a cornerstone of India's telecommunications industry, has always held the vision of connecting every corner of our nation. In our pursuit of this noble mission, the Business Area Heads serve as the vanguard, overseeing the intricate tapestry of operations that enable us to deliver world-class services and connectivity to our customers.

This compendium has been meticulously assembled to offer comprehensive insights, guidance, and best practices to our BA Heads, aiding them in their quest to meet and exceed their goals. Within these pages, you will find a treasure trove of knowledge, from strategic planning to operational excellence, from team leadership to customer engagement and from financial acumen to compliances

I am confident, that this document will help BA Heads immensely in realizing their leadership potential and take their Business Area to grow to newer heights.

  
(Vivek Banzal)  
Director (CFA)

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संदीप गोविल  
निदेशक (सी.एम.)  
**SANDEEP GOVIL**  
Director (CM)  
BSNL Board



**Message from Director (CM)**

I am thrilled and excited to release "Compendium for BA Heads" for our leaders in Business Areas. This is a remarkable initiative that emphasizes the pivotal role of leadership in BSNL.

BSNL has long stood as a symbol of connectivity, with a mission to link every corner of our nation. In pursuit of this vision, our Business Area Heads act as the frontline guardians, overseeing the intricate network of consumer mobility operations that enable us to provide world-class services and connectivity to our customers.

This compendium represents a reservoir of knowledge, offering comprehensive insights, guidance, and best practices to our BA Heads, equipping them with the tools necessary to navigate their roles with precision and acumen.

As we unveil this compendium, I urge all our BA Heads to embrace its contents as a beacon of business wisdom, guiding your daily decisions and actions. May it not only be a source of knowledge but also a wellspring of inspiration to excel in your roles and elevate our organization to new echelons of excellence.

I hope that this document serves as your trusted guide, helping you navigate challenges with confidence and agility.

  
(Sandeep Govil)

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**वी. रमेश**  
निदेशक (उद्यम)  
**V. Ramesh**  
Director (Enterprise)



**MESSAGE**

I am delighted to introduce this invaluable compendium, thoughtfully curated to serve as an essential resource for our esteemed Business Area Heads (BA Heads) at BSNL. It is a testament to BSNL's commitment to nurturing leadership talent.

Our Business Area Heads are the architects, overseeing the intricate network of enterprise operations that empower us to deliver world-class connectivity and solutions to our enterprise customers. I have unwavering confidence in your dedication, passion, and ability to make a significant impact.

This compendium stands as a testament to our commitment to your success, providing you with the latest tools and insights to navigate these challenges with confidence and vision. May it not only impart knowledge but also inspire you to reach new heights in your roles, driving our organization to unprecedented success.

Together, we are poised for greatness, and I am confident that this document will serve as an invaluable resource for all BA Heads and EB business will flourish with leaps and bounds.

(V. Ramesh)

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**राजीव कुमार**

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एवं मुख्य वित्तीय अधिकारी  
**RAJIV KUMAR**  
Director (Finance), BSNL Board  
& Chief Financial Officer



**Message from Director Finance**

I am delighted to extend my warmest greetings to all of you as we embark on this important journey of knowledge and skill development through our training manual.

In today's dynamic and ever-evolving business landscape, financial acumen and expertise are indispensable. As Director Finance, I understand the critical role that finance plays in our organization's success. It is not just about numbers; it's about making informed decisions that impact the future of our company positively.

This training manual has been thoughtfully curated to provide you with comprehensive insights into various financial aspects, from budgeting and forecasting to financial analysis.

As we release this compendium, I encourage all our BA Heads to approach this training with dedication and enthusiasm. It is my fervent hope that you will find this manual immensely knowledgeable and inspirational to excel in your roles to carry our organization to new heights of success.

Once again, I extend my best wishes to all of you as you engross into this training manual. May it empower you to excel in your roles and help us collectively achieve our Company goals.

Warm Wishes,

Rajiv Kumar  
Director Finance

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# CFA Vertical



## Monitoring of achievements through CFA Dashboard:

- The CFA Dashboard is accessible at IP: **10.193.219.73** on CDR Platform. The user can register them-selves on the portal through its HRMS.
- **BSNL Teevra Web Portal** (IP : 10.132.37.10):
  - **BSNL TEEVRA Web Portal** is providing a full-fledged solution for all CFA services with a Vision to improve our:
    - Network Availability.
    - Proactive approach to identify issues.
    - Improve MTTR
    - Customer service round the clock.
  - The Target Population for the application is our **one network Team and OA/BA/Circle Operational Team**.
  - Access Privilege to OA, BA, Circle or Pan-India wise and accessible on CDR network only and to BSNL executives only. Partners would not have access to Web Portal.
  - The **TEEVRA DASHBOARD** shows BROADBAND DETAILS, NMS, NETWORK GLANCE, PMS, PORT VERIFY, FMS, REPORTS and MISCELLANEOUS including **Quick Action** (Network Glance) and **Quick Action** (PMS).

### ◆ **BROADBAND DETAILS:**

- Broadband Details provides all the details including Real-time data (SNR, Attenuation, Optical Power Level, Loop Length, Connected Status etc.) related to the telephone number in fraction of seconds.
- Works for ADSL Broadband, Bharat Fiber FTTH, TIP Bharat Fiber FTTH and Bharat Air Fiber.
- User can see the Details of number according to the access privilege.

◆ **NMS :**

- NMS provides the Real-time status of network elements on the go.
- We can get the current status of DSLAM, LMG, BSNL OLTs, BBNL OLTs, TIP OLTs, BAF, AGGR SWITCH and BNG.
- The Records can be segregated CIRCLE, BA and OA wise, as per the access privilege of User.

◆ **NETWORK GLANCE :**

- Network Glance provides the complete picture of the network elements.
- The Sampling Interval is 5 Minutes.
- Every OLT (BSNL, TIP, BBNL) is mapped with BBC.
- Quick Action is available at DASHBOARD page.
- The Records can be segregated CIRCLE, BA and OA wise, as per the privilege of User.

◆ **PMS :**

- PMS (Performance Monitoring System) is an in-house SNMP manager designed to monitor the performance of OLT/BAF in term of their availability and Traffic.
- With the PMS in TEEVRA we are monitoring the **OLT UPLINK** availability and **Traffic** and **PON availability** and **Traffic** in a graphical manner.
- Whenever any abnormality is observed, TEEVRA will send notification instantly mentioning the criticality of abnormality in the Quick Action which is available at DASHBOARD page.
- The SNMP need to be enabled in the OLT for this feature to work.

- ◆ **Reports** related to PMS Pending OLT list, TIP OLT Login Credential Pending List and TIP OLT Traffic can be generated, analyzed and action shall be taken accordingly.

- ◆ **MISCELLANEOUS: Bulk ONU Power Measurement** feature allows us to fetch the optical power levels and loop length of all the numbers working from the OLT for which the TIP has to update the login credentials of OLT.

- The Tabs available on CFA Dashboard are **Customer, Corporate Monitoring, Network elements & Customer fault, Sales & Marketing, ERP Reports & Other Portal Links.**

1. Under the **Customer** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/monthly by proper selection of input from the dropdown.

#### **A. Provisioning Tab:**

- **Daily Provisioning Report:** Monitoring of Provisioning of LL/BB/FTTH for each day in a month.
- **Bharat Fibre Provisioning Summary:** Monitoring of Summary of Gross FTTH provisioning during a specific period.
- **Provision Disconnection Summary:** Monitoring of Provisioning & Disconnections of LL/BB/FTTH/BAF during a specific period.
- **LL to FTTH Conversion Report:** Monitoring of conversion from LL to FTTH against LL disconnections in a month.
- **BBoWiFi to Airfibre Migration Report:** Monitoring of migration of BBoWiFi to Bharat Air Fibre.
- **Paperless Bharat Fibre Onboarding:** Monitoring of Paperless FTTH on-boarding (New) in a month.
- **SIP Trunks Report:** Monitoring of SIP Trunk /Concurrent channel provisioning up to a given date.
- **IN Achievement Report:** Monitoring of provisioning & Disconnection of IN Services like FHP, VPN, and UAN up to a given date of the month.
- **Daily OLTE Reports:** Monitoring of provisioning & Disconnection of OLTE BA/OA wise on any date of month.
- **Daily Air Fibre AP Reports:** Monitoring of provisioning & Disconnection of APs of Bharat Air Fibre on any date of the month.
- **OLTE Password Update Status:** Monitoring of password updating of OLTEs in TEEVRA App.
- **Monthly Performance:** Monitoring of Target v/s Achievement of



LL/BB/FTTH zone wise for a given month of the given year.

- **Daily Achievement Reports:** Monitoring of daily achievement of LL/BB/FTTH/BAF on any day and cumulative in the month.
- **Bring back Customer Report:** Monitoring of cumulative cases of bringing back disconnected numbers in a given month.
- **Daily Working Connections:** Monitoring of daily working connections of LL/BB/FTTH-Voice/FTTH-BB in a zone.
- **Daily Working Connections (U/R):** Monitoring of daily Urban & Rural working connections of LL/BB/FTTH-Voice/FTTH-BB in a zone.
- **Annual CFA Targets:** Monitoring of physical achievements Vs physical Annual targets.
- **Similarly, following reports can also be monitored on CFA Dashboard;**
  - Work From Home
  - Daily PMS Plan Change Report
  - One Click One Call
  - Monthly Churn Index Report
  - OLTE Mapped to BBC
  - BBC wise Connection Stats

## **B. Fault Tab:**

- Daily Pending Faults
- Partners Wise MTTR Report
- Daily OLTE Tickets Status
- Happy Code Report
- Cluster Report (Partner-FMS)
- Cluster Report (Clarity)
- Monthly Cluster (FMS) Repeat Fault
- Worst 30 BAs in Cluster (Partner-FMS)
- Top 50 BA/SSA in Cluster (Partner-FMS)
- Top 50 BA/SSA in Cluster (Clarity)

## **C. Traffic Tab:**

- Month-wise Traffic
- Periodic Circle/SSA
- LL Outgoing CDR MOU
- Daily Incoming MOU
- Toll free Congestion Report
- CPSG Toll free Traffic
- IP TAX Traffic
- NGN Incoming MOU

- NGN CDOT Local traffic
- CDOT Trunk traffic
- NGN ILD Traffic
- NGN TMG Traffic
- NGN Server Traffic
- NGN Trunk Traffic

**2.** Under the **Corporate Monitoring** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown.

- CMD Monitoring
- Partner Performance
- FMS Reports
- GPMS Stats
- Quarterly Reports
- Quarterly TRAI CCRR Report
- Daily Appeal Report
- Daily Collection Report
- Insta Pay Reports
- Daily Appeal Report
- MIS Reports
- NLD & ILD Reports

**3.** Under the **Network elements & Customer fault** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown.

- NGN N/W Element Status
- NGN Spare Cads/LMG
- Monthly Network Availability
- Periodic Network Availability
- SSTP Linkset Utilization
- SSTP services/query
- One Network
- GEO-Tagging/Rehabilitation
- CPAN Port Utilization

**4.** Under the **Sales & Marketing** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown.

- Freedom 75 Report
- Bundled Wi-Fi ONT Report
- Daily e-Pay Report
- Daily YUPP OTT Report
- Bharat Fiber Wallet

- Google Bundle Report
- Super Star 300
- Super Star 500
- Bharat Fiber Leads/Orders
- Pending OB Report (Monthly)
- Pending Pre-leads Report
- IT Pracharak Information

**5.** Under the **ERP REPORTS** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown.

- Weekly ERP Sales Report
- Daily CBP Payment Report

**6.** Under the **Other Portal Links** Tab, the following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown.

- Digital Adoption Report
- Cluster Performance Audit
- Cluster Portal
- Infra Portal
- HotStar Subscription
- BBNMS Portal
- VMS Portal
- RPOP Portal
- Zonal Portals

## **7. Suggested Steps to be taken by BA Heads**

- i. **Conversion of all Landline and Broadband connections into FTTH on a war footing** and closure of Exchanges (having less than 20 connections in Rural and less than 50 in Urban) immediately or close the switch part of Exchange if co-located BTS exists. It will save expenditure on building rent as well as reduction in AMC cost of Exchange equipment.
- ii. Implement 100% D-KYC for all new connections particularly FTTH-BB connections and ensure the download of "My BSNL APP" in customer mobile and its utility aspects are well explained to the customer. Proper execution of this activity is crucial for customer retention.
- iii. The Fortnightly or Monthly meetings should be conducted by BA heads to review the performance of TIPs/BharatNet Udyamis and resolution of their issues. The Minutes of such Meetings may also be released.



- iv. Special focus should be there on addition of OLTEs as per the Target assigned and efforts may be done to have  $\geq 5$  OLTEs per SDCA and Red OLTEs (having FTTH-BB connection  $< 10$  in OLTE installed  $> 6$  months) should be monitored either to increase loading or to weed out such OLTEs by terminating agreement with the TIPs after appointing new TIP to take over the working FTTH-BB in such Red OLTEs.
- v. The TIPs/Partners may be encouraged to have exclusive maintenance teams and map each and every FTTH-BB with the team members so that the fault booked by customer is immediately notified to the team member to attend the fault promptly.
- vi. TIP/ Partners may be encouraged to have their dedicated team for Marketing of FTTH so that maximum leads can be generated.
- vii. TIP/ Partners may be encouraged to regularly participate in the Exhibitions/ Mela in their area and promote BSNL services.
- viii. The monthly revenue share invoices of TIPs/ BharatNet Udyamis as per the agreed % age of revenue share must be processed and settled timely (within 03 days of invoice publishing) so as the Partners get their due payments on time enabling them to encash and disburse salary to their teams and further plan integration of OLTEs in the Network.
- ix. The Partners may also be encouraged to educate customers to book online fault complaint for expeditious fault redressal using **MyBSNL App** or IVRS 18004444 and Partner wise MTTR may be monitored and discussed with Partners in the Fortnightly/Monthly meetings by BA Heads in case of MTTR on higher side so as TIP takes corrective actions. It will help reduce churning Index thereby increase Net growth of FTTH-BB.
- x. The customers coming to BSNL CSC for Disconnection of FTTH/LL/ BB may be dealt by Retention officer, who may try his best to retain the customer by solving his grievance related to services/ fault/Billing by coordinating with other officers.
- xi. The % Disc v/s Prov in any month should not generally exceed 18-25% or in worst case it should not exceed Circle/Zone average.
- xii. It may be ensured that the benefit of Incentive to BharatNet Udyamis is extended only on FTTH-BB connection on-boarded in Rural GPs/Villages. In this regard, BBCs should be suitably advised to ensure it while approving UC (Utilization Certificate).
- xiii. In order to keep the BharatNet Udyamis motivated, there

incentive invoices are expeditiously processed and paid either in bank Account of BharatNet Udyamis or in Wallet as per the request of partner.

- xiv. TIP/ Partners/BNUs shall be impressed to provide identical BSNL T Shirts / uniform to their employees and ensure neat & clean dress up.
- xv. Make BA DSLAM FREE. Close all DSLAMS and migrate to NGN or FTTH.
- xvi. Most of the Copper Network is outsourced as per the Cluster Outsourcing policy notified by BSNL HQ in Year 2019. The said policy has been amended by BSNL HQ in FY 2021-22 to include outsourcing of Primary Cable maintenance also along with the outsourcing of Customer Access network, thereby having single maintenance agency from MDF to Customer premises. So, the performance of Cluster Partners may be reviewed time to time with regard to SLA parameters including MTTR and efforts may be made to maintain QoS parameters within benchmarks.
- xvii. The spare jumpers from MDF may be got removed for reduced fault rate. The MDF record may be kept updated in Clarity.
- xviii. Implement “GO TO FIELD STRATEGY”. All staff of GMTD office should visit customers once in a month.
- xix. Monitor daily performance of each employee. Daily Performance Sheet (DPS) should be prepared.
- xx. BA Heads should move to Borders (Farthest area of BA) to have feel of fields regularly.
- xxi. Issue minutes of visits also.
- xxii. Solve daily problems. Do not pile up problems.

## 8. Maintain QoS Parameters

Sr. No	Parameters	Targets	
		FTTH-BB	ADSL-BB
1	Fault Rate (%)	≤ 2%	≤ 4%
2	Fault Clearance within 10 Hrs. (Calendar Hours/Days) (in %)	≥ 80%	≥ 80%
3	Repeat Fault rate (in %)	≤ 5%	≤ 5%

4	Provisioning within 3 days (Calendar Hours/Days) (%)	≥ 90%	≥ 90%
5	MTTR in Hrs.	≤ 8 Hrs. to 4 Hrs. Urban & 6 Hrs. Rural	≤ 8 Hrs. to 4 Hrs. Urban & 6 Hrs. Rural
<b>Clarity target for LL Operational Parameters</b>			
Parameters		Target	
Fault Rate (%)		≤ 5%	
Repeat Fault Rate (%)		≤ 15%	
Repeat Fault (unique count) Rate %		≤ 10%	
MTTR (Hrs.)		8 Hrs	
LL Provisioning within 3 days (%)		≥ 80%	
Fault Clearance within 24 Hrs. (%)		≥ 90%	
<b>Clarity target for LL CMD Monitoring Parameters</b>			
Fault Clearance within 4 Hrs. (Urban) (%)		≥ 60%	
Fault Clearance within 6Hrs (Rural) (%)		≥ 50%	
Provisioning within 24 Hrs. (%)		≥ 75%	

- Ensure that all faults will be booked at BSNL portal (Use "MyBSNL APP")

## 9. The Most Important Apps which need to be installed in every Field Team mobile

### 1. "Teevra" --- in Employees' Mobile

#### Features of the App

- Can access the details and current status of ADSL-BB/ FTTH-BB connection
- Access to DSLAM NMS, OLT NMS, TIP's OLT NMS
- Status in one click of all vendor's OLT as well as BSNL OLT.
- Status in one click of all the elements right from the BNG,MNG,RPR,OCLAN, TIP OLT, BSNL OLT, BBNL OLT , DSLAM and LMGs existing in the SSA in one click.

### 2. "My BSNL App" – In Customer's Mobile, ( BSNL team shall also have for their service connection to indicate user experience.)

#### Features of the App

- Single app to deal with following services

- LandLine
- Broadband
- FTTH
- GSM (Prepaid & Postpaid)
- Common Available Options for users
  - Bill Payment for all services
  - Digital Bill
  - Booking of new Connections
  - Complaints booking about Technical as well as financial issue.
  - Usage check for LL/BB/FTTH/GSM Postpaid
- Options available for LL/BB/FTTH users
  - Change of plan
  - Conversion of LL/BB to FTTH
- Options available for Mobile Users
  - Information about prepaid number like Plan, Balance, Exp Date, Grace Period and Last recharge.
  - Information about all available Popular and available Pre-paid Packs.
  - Choose your Mobile number out of two options Choice (Free) and Fancy (Paid).

## 10. (A) Implementation of "ONE NETWORK" (MUST BE 24x7)

- A Technical team of all domains for Network management to take care of all network Elements.
- The "One NOC" Team must regularly monitor the Network Elements like BTS/ LMG/ OLTE/CPAN/ STM systems ... etc. from the terminals / EMS/ NMS provided at NOC.
- In case any Network element goes faulty, based on the Alarm generated, the NOC will analyze the fault by checking status of other elements working at the same place/ route/parenting station. The NOC will assess the reason of fault and direct the concerned field team to attend it.
- ONE NOC team may also post the status/ health of important Network elements regularly on the BA/OA WhatsApp Group for information to all.
- Use one map for faster geographical identification.

## (B) Implementation of Partner Support Group "PSG"

- Idea to provide Support to Partners (TIPs/Bharatnet Udyamis / Channel Partners) at centralized place at BA HQ.
- Dedicated team (PSG) supports to BSNL Partners.





- Common Toll-Free number for Partner Support to reach out to PSG (Partner Support Group) via Unique PIN for BA.
- PSG may also give initial trainings to **NEW** TIP/BU/Bharat Fiber Franchisees about:---
  - General working of FMS and DKYC through Sanchar Aadhar app.
  - Maintaining Power Budget while using splitter judiciously in OFC Network to grab maximum customers.
  - General OLTE Fault trouble shooting at primary stage by Lamp status. Fiber Loop Break Testing.
  - BA Head must spent at least one hour every week in one network center.

## 11. Computer and IT

- BA Head shall make use of IT tools to communicate with employees and general public. Proper upkeep of BA/ SSA/ Circle Portal, BA Intranet Portal with regular updation, use of Social Media viz. WhatsApp, developing required APPs etc. needs monitoring.

## 12. Grabbing of New Business Opportunities

- **New SIP Trunk business**/Conversion of PRI to SIP Trunk with enhanced features. Attractive tariff announced by BSNL HQ for SIP Trunk may be popularized.
- Annual/Quarterly/Monthly Targets in terms of numbers are assigned to Circles by BSNL HQ which are further distributed to BAs by the concerned Circle.
- **Out Bound Dialing (OBD) business** Annual/Quarterly/Monthly Targets in terms of amounts are assigned to Circle by BSNL HQ which are further distributed to BAs by the concerned Circle. Target audience for this business are Municipal Offices/ DISCOMs/Hospitals/Universities/ Institutes/ State and or Central Government Departments etc.
- For acquiring OBD, attractive incentive schemes are also launched by BSNL HQ to appoint partners on revenue share basis.

## 13. Battery/Power Plant:

- BSNL HQ has implemented **Oorja Portal** where details of Battery & Power Plant Make, Model, Capacity, date of installation, DC Load current, services working at the location etc. have been captured by the site in-charges in respect of each and every Exchange/BTS/Node B etc. This data shall be

utilized by the BSNL HQ for working out quantity and capacity of Battery and Power Plant as per norms for procurement against life expired Batteries & Power Plants. So, utmost care is required to be taken by the site in-charge to **populate correct and actual details** in respect of each asset on Oorja Portal and details are regularly updated whenever there is any genuine change.

- If there are two old Battery systems working in Parallel in any Exchange/Node and both have few weak/ faulty cells and not giving desired power back up, then it is always better to cannibalize one Battery set and other may be made of all good cell taking cells from cannibalized set. This one Battery set of all good cells will have more back up than the two battery sets in parallel.
- Power Plant Control card must be in good working condition, else batteries may get damaged early.

## 14. Transmission System

- Infra team and TX team should attend faults up to 10 PM and start from 6 AM to provide best services. Sufficient manpower should be deployed.
- Develop the FIBERVEER: All JEs/ JTOs should be trained in TX for first line maintenance to reduce down time of network elements due to Tx faults.
- Using single fiber SFP to commission TIP OLTs where we have shortage of fiber.
- Utilize all existing resources of Transmission equivalents to roll out OLT etc.
- SDE TX / JTX of BA will be mentor to JEs and provide training to JEs of his area. Daily one hour they should do TX job
- Network Availability should be => 99%
- Check down CPAN System (B1/ B2/ A1/ A2) regularly
- Ensure that all the CPAN and MNG-PAN Nodes are working through redundant paths. The redundancy configuration and switch over shall be verified quarterly.
- OFC Faults must be restored on high priority, if there is an underground OFC fault and not possible to restore on same day, please lay an overhead OF cable to restore the services. Don't forget to recover it after restoration underground OFC fault.
- Ensure that all fibers of 12F/24F/96F/288F cable must be joined (it is observed that Vendor's team joint only working fibers to restore services)
- Speed issue reported by customer must be analyzed

thoroughly.

- GM/DGM/AGM/SDE must join the CPAN WhatsApp Group. Nodal of Transmission must check the CPAN status regularly and publish in the group.
- All faults must be booked in **TransNet** and permanent solution shall be devised for frequently occurring faults to save time/resources & network health.
- **PRAJJWAL APP** must be downloaded in GM / DGM / AGM / SDE / JTO mobile and member of Vendor team who is restoring the OFC faults.

## **15. Root Cause Analysis (RCA) of FTTH-BB Speed Issue reported by Customer :**

- Involve NIB & NOC along with TIPs and Transmission
- Regular monitoring of loading of all backbone links to OLT (through Teevra Desktop Portal).
- Monitoring of all nodes on 24X7 from one network center.

## **16. Re-Assessment of all Tender Values**

### **17. Asset Formation :**

- Material Management in SAP is the key.
- Every Single item procured by BSNL must have an Asset
- Always consume the materials in concern Expenditure Head
  - In OPEX – when utilized for Maintenance purpose
  - In CAPEX- when utilized for Project/Planned work
- Capital Expenditure must be capitalized, resulting Asset formation
- There should be a separate Asset ID for an equipment
- WIP should be NIL to avoid borrowing cost
- Life Expired Asset should decommission followed by scrapping.

### **18. Exchange Earth**

- Exchange earth value to be checked every six month.
- The connection from the earth and equipment should be checked fortnightly.

**19. Electric Bill Payments:** The outstanding in the bills should be sorted out timely with the concerned electricity provider. The verification of bills in

Oorja App and other activities to be streamlined for minimizing penalties. Efforts for waiving penalties can be made in Lok Adalats also.

**20. Safety and Security of Lead Acid Batteries:** In theft prone areas proper locking, CCTV, protecting the batteries in iron cage etc. measures is to be taken.

### **21. Operation Samundra Manthan:**

- Identification of all eligible Asset & Inventory
- Focused action for its timely disposal
- Large quantity of Copper Cables in inventory, with very high revenue potential shall be disposed-off.
- Idle/ Unused Copper cables can be recovered, particularly those which are laid in ducts.



# CM Vertical

**A) CNMC App** : Monitor following items on daily basis

- Availability of BTS
- Down BTS area wise
- Down BTS days wise; 1days, More than 3days, More than 7 days

**B) BA/OA Wise Ranks** calculated by Corporate office monthly

- Monitor BA-wise Rank Parameters
- Monitor OA-wise Rank Parameters

**C) Sales & Marketing and Revenue** :

- **SIM Sale** OA-wise; daily, weekly, and monthly against the target
- **Revenue** OA-Wise: C-TOPUP by each franchisee weekly, fortnightly, and monthly.
- BA Head has to take several initiatives for improving BSNL product visibility & increasing sale using Digital Marketing.
- **QoA**: Quality of Acquisition for each month to be checked. Analysis to be done for poor QoA.
- **Low revenue sites**: Analysis may be done on low revenue sites and corrective action to be taken and further marketing activities to be conducted.
- **Franchisee Meetings**: To be conducted on monthly basis.
- **Port out Analysis**: BTS wise analysis to be done and corrective action to be taken. Check whether call center contacting the customers who have sent port out SMS.
- CAF Maintenance:
- Tracking on RM and FoS movement to be done. No of FoS available as per standards to be verified.
- Training on latest plans/procedures to be given to RM/FoS/franchisee staff.
- Insta Pay must be promoted aggressively for all franchisee/RD/DSA to purchase C-Top up balance. It helps in better rotation of money of franchisee.

**D) 4G Saturation Project** :

## **1. Site Survey and Hiring :**

- Co-ordination between CM wing and the outdoor field staff for survey of all sites.
- Daily monitoring of the progress of proper site finalization, hiring, demarcation as required of sites.
- Meeting the local authorities for coordination and timely hiring of sites.
- Approving and coordinating for making all payments of challan of local bodies/forest for hiring of sites/ demarcation and other expenses related to the hiring of land.

## **2. Media (OFC/ Mini Link/ VSAT ) Planning and Rollout**

:

- i. Planning the media type for the sites finalized as per the norms and limits approved by coordinating with local OFC teams and the BharatNet teams.
- ii. Approving the estimates, tenders etc. for Hiring of sites, OFC laying etc. as required.
- iii. Contract management and monitoring the execution of OFC laying in the sites.
- iv. Planning, Coordination, monitoring for providing appropriate media backhaul for the site up to the aggregation point.
- v. Monitoring and coordinating with the Electricity board/Nigam for provision of Electricity in the sites finalized.
- vi. Approving and coordinating for making all payments related to the electricity connection for the site.
- vii. Coordinating with circle teams and the contractor teams for rollout of foundation and other works of the IAAS contractor.
- viii. Coordination with the civil wing and other wings as required for quality monitoring of the works of IAAS.
- ix. Coordination with the circle teams and the Contractor for the rollout of the 4G Radio part and rollout of the site.
- x. Coordination with BA teams for the required certifications of the

works completed for payments to the Contractors.

### **E) Suggested Steps to be taken by BA Heads**

- Co-ordinate with circle CM team for proper cost benefit analysis and assessment for potential site before planning and finalizing site on IP.
- Review of low traffic IP site to relocate / surrender lock in period expired sites.
- Ensuring SLAs on leased in IP sides and leased out BSNL sites.
- Exploring new Tenancy for leasing out BSNL sites
- Develop TARANGVEER: all JEs / JTOs should be trained in BTS Maintenance
- Precious halted sites needs to be made live at any cost. Hardware, owner issues needs to be solved.
- Less loaded sites to be shifted at coverage holes.
- BTS sites needs to be shifted over fiber immediately to make our self 4G ready. Regular monitoring of SCTP alarms, BTS alarms and packet loss at BTS and BSC/RNC.
- Linearly OFC connected BTS sites should be made to work on ring. OFC cuts usually takes time to repair so backup microwave link should be made ready at critically important sites.
- Hub sites should have media on ring, DG should be working, battery backup should be good, and this improves network availability and MTTR.
- At residential societies where we don't have BSNL's DG, agreement should be done with societies to avail their DG supply.
- DG fuel refilling is planned in advance and at the start of month diesel is refilled to avoid diesel shortage towards the end of month due to funds CRUNCH. Important spare cards are kept at sub division level for earliest possible fault restoration.



- Field engineer are trained to attend transmission level 1 trouble shooting at their own level. They carry spare patch cords, LAN cables and optical power meter in their tool kit.
- BTS site hygiene cleaning is done regularly, this increase equipment life and reduced fault rates. Cleaning is completed at all site before and after monsoon.

## **F) Activities to be performed on daily basis**

- i. A first-line maintenance approach may be used;
  - a) Most of the BTS fault should be rectified at SDO/JTO level.
  - b) Regular cleaning of the BTS and checking of the earthing should be monitored by the SDO or JTO in the area.
  - c) Initially, BTS faults should be attended by the SDO/JTO's team and handed over to the concern wing in case of an OFC, media, or hardware issue.
- ii. Critical BTS (high traffic BTS) must be 100% available, and sufficient power backup and media redundancy (OFC+ Mini Link) must be provided to critical sites.
- iii. Hub sites must have sufficient power backup.
- iv. Every six months, all joints of jumpers must be covered by weather proof tape (after the winter and before the rainy season).
- v. Feeder cables must be checked every six months to keep the VSWR parameter within limits.
- vi. Regular cleaning of BTS equipment is required, and the fan unit must be checked regularly.
- vii. Packet loss is frequent, which could be minimized by cleaning cards, and rusty RJ-45s may be replaced in an interval of 2 years.
- viii. All CPAN and OFC Rings must be monitored 24x7.
- ix. Handover analysis reports must be monitored.
  - x. The far-end of IP sites may be relocated to a stable far-end to ensure 100% availability of IP sites.
  - xi. The availability of spare hardware must be ensured.
- xii. Simultaneous sale emphasis may be given to those BTS that have good availability but less traffic, and sales camps must be

organized there for one week.

- xiii. For critical and hub sites, solar power may be considered.
- xiv. Basic-level training (reset of system/jack in/jack out) may be given to all staff present in the field.
- xv. All field staff must be equipped with basic tools (millimeter, screwdriver set, crimping tool, etc.).
- xvi. A record of the absolute radio frequency carrier number (ARFCN),, angle, and tilt must be maintained.
- xvii. A link budget for all Mini links must be available. (Frequency, Angle, Height, VLAN, and IPs from both ends must be available.)
- xviii. It's a common practice of vendors that they install Mini link and make payments through the system. Bandwidth must be open to its full capacity. (In the field, normally Mini links are being underutilized.)
- xix. Sufficient riggers and vehicles must be available.
- xx. Sufficient band width preferably 100 Mbps in transmission media may be opened in existing 2G/3G NOKIA/ ZTE BTS.
- xxi. Whenever a new site is radiated, all the neighboring sites hand over's may be re-defined in OMCR for smooth hand over of calls.

## **Key activities for BA Heads in CM sales and Marketing**

### **1. Regular review of activities of Franchisee manager (FM), Retailer Managers (RM ), Retailer manager Coordinator (RMC)**

#### **A. Key Activities of FM:**

- To get prioritized list of retailers from FoS for franchisees from SancharSoft.
- Monthly target setting for franchisee (target for sale of SIM, sale of Recharge, # retailers billed and # FoS)
- Collect data on Franchisee Performance for # of activations, # of CAF received/ pending.
- Compile RM Feedback on issues raised by retailers regarding FoS and franchisee.
- Collect POS Material (pamphlets of new schemes, marketing material, etc.)
- Complete understanding of latest offers and schemes running for franchisees and retailers.
- Collect feedback from FoS on what retailers want and important competitor hot schemes.
- Follow up on targets set for franchisee and provide timely reminders.

#### **B. Key Activities of RM:**

- Review of last visits made in area – targeting high priority BSNL retailers as already defined by BSNL and retailers not stocking BSNL products.
- Collect POS Material (Glow signs, other marketing pamphlets etc.)
- Complete understanding of latest offers and schemes running for retailers.
- Collect information from retailers on key questions (Feedback Form)
- Commission and discounts being provided by franchisee.
- Identify the retailers not selling BSNL products and not having CTOPUP SIMs and get them on-boarded.
- Input to FM/RMC for adding new retailer information in SancharSoft.
- Help update old retailer information on SancharSoft.

### **2. Promoting BSNL Self Care App : Ensuring download of "BSNL Self-care" app in customer mobile and its utility aspects are well explained to the customer such as-**

- a. Bill Payment for Postpaid connection.
- b. Recharges for pre-paid connection.



- c. Information about prepaid number like Plan, Balance, Exp Date, Usage details, Grace Period and Last recharge etc.
- d. Information about all Popular and available plans (prepaid/postpaid).

### **3. Customer & Channel Partner Management:**

- a. SIM Sale and other Target related work: Annual/Quarterly/Monthly Targets in terms of numbers are assigned to Circles by BSNL HQ which are further distributed to BAs by the concerned Circle. These Targets are to be further distributed among Channel Partners.
- b. Outbound Calls for New Subscriber Welcome call, Customer retention, Customer issue resolution, feedbacks & satisfaction surveys etc.
- c. Creation, management & Review of Channel Management Team viz. Franchisee managers, Retailer Manager Coordinators, Retailer manager, FOS etc.
- d. Periodical communication with Channel Partners:
  - Meetings: The Fortnightly or Monthly meetings may be conducted by BA heads to review the performance of Channel partners and action based on CM Sales and Distribution Policy - 2018 and its revisions thereof.
  - Issue resolution: Resolution of various issues raised by Channel partners.
  - Payment related: Processing & timely settlement of the due payments of Channel partners.

### **4. Review & analysis of QoA of SIM sales:**

Sales brings the required revenue for the business. The sale can be (related to CM) SIM Sale and Recharges. The percentage of SIMS that remains active on the end date of 3rd month, following the month in which the SIMs were activated is taken as QoA % (3rd month Retention %).

W.e.f. 1st July 2023, change in commission structure has been introduced to improve QoA with Linkage of Commission with QoA and Volume of Sales. Thus simplification of commission structure. Further, Sales Commission is Instant and Deferred and included Incentive are linked to Benchmarks e.g. *400 SIMs/month for Franchisee, 30 SIMs per month for Retailer and Circle wise QoA.*

Therefore, review & analysis of QoA of SIM sales to be done so as to meet the target set by Circle Team which in turn is assigned to Circles

by BSNL HQ. Necessary marketing related work/actions may be taken to improve QoA.

**5. Monitoring of inventory management and sales through Sancharsoft:**

Sancharsoft is Web based SIM Inventory Management Application for management of O&M and Sales & Distribution Channels. The Sancharsoft & stock register giving details of material sold to the Franchisee to be properly maintained and monitored on regular basis by BA Sales Head. It should be ensured that all sales made by BSNL to franchisee/ channel partners is recorded in BSNL specified IT system and ensuring that BSNL Product stocks are available in sufficient quantity in required denominations well in advance. SancharSoft is modular, having role based access control and rights, provides full functionality of Sales and Distribution Channels.

**6. Customer Onboarding:** Monitoring and review of Customer Onboarding through paper/DKYC / eKYC are carried out as per existing guidelines.

**7. SFAS:** Utilization of SFAS app by concerned staff engaged in S&M related work.

- To capture the correct Geo location of all the POS in SFAS app.
- This activity to be done by RM/ FOS through the SFAS app by visiting the POS.
- If geo location of POS is available, BTS wise retailer mapping, is done by vendor.
- Correct geo locations of all POS required, so that BTS wise retailer mapping on GIS completed through SFAS app.

**8. Monitoring the achievements through dashboards.** Sales and MIS reports available at intranet WEB SITE for all the circles. Following reports can be monitored for any day/ weekly/ fortnightly/ monthly by proper selection of input from the dropdown:-

**(i) SALES DASHBOARD**

- SIM Sales for the PAST 18 Months
- SIM Sale Day wise Report
- CTOPUP SALE Dashboard Report
- CTOPUP Sales for the PAST 18 Months
- CTOPUP Sale Day wise
- FRANCHISEE CTOPUP LEDGER Report
- SALES THROUGH VARIOUS CHANNELS
- VAS REVENUE REPORT
- INCENTIVES to Channel Partners Report
- ACTIVE POS COUNT Month-wise
- FRANCHISEE Category Month-wise



- CTOPOP Transactions (SIMSWAP & VANITY)
- CAF Penalty Yearly Report
- CAF Penalty Month-wise Report

**(ii) POS Summary**

- Circle Wise POS Count Report
- SSA Wise POS Count Report

**(iii) Activation Reports**

- Circle Wise Activation Reports
- SSA Wise Activation Reports
- Circle Wise FANCY Activation Count
- Circle Wise POSTPAID Activation Count
- ALL Circles MNP PORT-IN Status
- Total Sales report
- Circle Wise Sales Reports
- SSA Wise Sales Reports
- Circle Wise CTOPOP Sales Report
- SSA Wise CTOPOP Sales Report
- Monthly Circles Performance Reports
- Commission Payment Summary
- FOS POS-Wise Statistics Report
- CYMN Activation Report
- Fancy No. Activation Report
- Auction Report

**9. BSNL Branding and Marketing related activities** viz. Media presence, Banners, Posters, Mela activities, sponsorships etc. Utilising Social media /Digital marketing creatives issued by Corporate Office and creating a Social Media Marketing (SMM) team to execute a SMM Strategy that engage to current and potential customers through Social Media Platforms. Creating visibility at every retailer PoS and regular communications of new schemes to POS should be ensured.

**BA Heads have to focus on: -**

- Network Availability (>99%) and MTTR (<120 mins)
- BTS fault more than 24 hours should be monitored and pursued on daily basis. Target for BTS fault more than 24 hours is zero.
- All power plant modules to remain in functional state. All instances of faulty power plant module to be reported and pursued for repair promptly.
- BA head to monitor prolonged power disconnection more than 12 hours and pursue with concerned authority and Electrical wing to restore.
- Efforts to be made to bring maximum BTS site on rings.

- Media fluctuation should be addressed.
- BTS site hygiene to be ensured.
- BTS maintenance staff should be available on rotational duty and to be available on Sunday and Holiday as well.
- BTS in the BA with poor availability should be identified and issue addressed, especial focus on improvement of BTS Repeat Faults and fault rate.
- Battery supplied and its installation related.

## 1.1 TRAI Guidelines for 2G Voice Services:

2G Voice	THE STANDARDS OF QUALITY OF SERVICE OF BASIC TELEPHONE SERVICE (WIRELINE) AND CELLULAR MOBILE TELEPHONE SERVICE REGULATIONS, 2009 (20 March 2009)			
Quality of Service parameters in respect of which compliance reports are to be submitted to the Authority				
Serial Number	Name of Parameter	Benchmark	Averaged over a period	Remarks
<b>A</b>	<b>Network Service Quality Parameters:</b>			
(i)	Network Availability			
	a) BTSs Accumulated downtime (not available for service)	≤ 2%	One Month	
	(b) Worst affected BTSs due to downtime	≤ 2%	One Month	
(ii)	Connection Establishment (Accessibility)			
	(a) Call Set-up Success Rate (within licensee's own network)	≥95%	One Month	
	b) SDCCH/ Paging Channel Congestion	≤ 1%	One Month	
	is the TCH Congestion	≤ 2%	One Month	
(iii)	Connection Maintenance (Retainability)			
	(a) Call Drop Rate	≤ 2%	One Month	



	(b) Worst affected cells having more than 3% TCH drop (call drop) rate	≤ 3%	One Month	
	is the connections with good voice quality	≥95%	One Month	
(iv)	Point of Interconnection (POI) Congestion ( on individual POI)	≤ 0.5 %	One Month	
<b>B</b>	<b>Customer Service Quality Parameters:</b>			
(i)	Metering and billing credibility – post paid	Not more than 0.1% of bills issued should be disputed over a billing cycle	One Billing Cycle	
(ii)	Metering and billing credibility -- pre-paid	Not more than 1 complaint per 1000 customers i.e. 0.1% complaints for metering, charging, credit, and validity	One Quarter	
(iii)	(a) Resolution of billing/ charging complaints	≥ 98% in 4 Weeks and 100% within 6 Week	One Quarter	Amendment 21 Aug 2014: Previously 100% within 4 weeks
	(b) Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	One Quarter	
(iv)	Response Time to the customer for assistance			
	(a) Accessibility of call center/ customer care	≥ 95%	One Quarter	
	(b)Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥95%	One Quarter	Amendment 21 Aug 2014: Previously 60 Sec and ≥90%
(v)	Termination/ closure of service	≤ 7 days	One Quarter	
(vi)	Time taken for refund of deposits after closures	100% within 60 days	One Quarter	

**Quality of Service parameter in respect of which compliance is to be monitored by the service provider**

1	Service Coverage	For In-door coverage the signal strength at street level shall be $\geq -75$ dBm and In-vehicle shall be $\geq -85$ dBm.
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**1.2 TRAI Guidelines for 3G Voice Services :**

3G Voice	THE STANDARDS OF QUALITY OF SERVICE OF BASIC TELEPHONE SERVICE (WIRELINE) AND CELLULAR MOBILE TELEPHONE SERVICE (AMENDMENT) REGULATIONS, 2012 (07May 2012)	
	Amendments to 2G QoS Parameters	
1	Node Bs Accumulated downtime (not available for service):	Same as 2G methodology and Benchmark
2	Worst affected BTSs and Node Bs due to downtime	Same as 2G methodology and Benchmark
3	Call Set-up Success Rate	This parameter is same for 2G Networks as well as 3G Networks. However, the network elements involved in both the networks are different. Call Set-up Success Rate is defined as the ratio of Established Calls to Call Attempts. For establishing a call in 3G Networks, User Equipment (UE) accesses the Universal Terrestrial Radio Access Network (UTRAN) and establishes an RRC connection. Once RRC connection is established the Non Access Stratum (NAS) messages are exchanged between the UE and the Core Network (CN). The last step of the call setup is the establishment of a Radio Access Bearer (RAB) between the CN and the UE. However, any RAB abnormal release after RAB Assignment Response or Alerting/Connect message is to be considered as a dropped call.
4	SDCCH/Paging Channel and RRC Congestion:	This is same as signaling channel congestion in 2G Networks. The existing parameter provides for assessment of the SDCCH congestion in GSM network and Paging Channel congestion in CDMA network. This parameter has been amended to include RRC Congestion in 3G Networks.
5	TCH and Circuit Switched RAB Congestion	Circuit Switched RAB congestion is similar to Traffic Channel Congestion.
6	Call Drop and Circuit Switched Voice Drop Rate	RAB abnormal release after RAB Assignment Response or Alerting/Connect message is to be considered as a dropped call.
7	Worst affected cells having more than 3% TCH drop (call drop) and	Worst affected cell shaving more than 3% CSV Drop Rate

	Circuit Switched Voice Drop Rate:	
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### 1.3 TRAI Quality of Service parameters for wireless data services

#### 1.3 TRAI Quality of Service parameters for wireless data services

Sr No	Name of Parameter	Benchmarks	Average over a period	
1	Service Activation /Provisioning	Within 4 Hrs. with 95% success rate.	One Month	
2	Successful data transmission download attempts	>80%	One Month	
3	Successful data transmission upload attempts	>75%	One Month	
4	Minimum download speed	To be measured for each plan by the service provider and reported to TRAI	One Month	
5	Average Throughput for Packet data	>75% of the subscribed speed.	One Month	
6	Latency	Data <250ms	One Month	
7	PDP Context Activation Success Rate	≥95%	One Month	
8	Drop rate	≤5%	One Month	

### 1.4 New EMF Norms w.e.f 01.09.2012

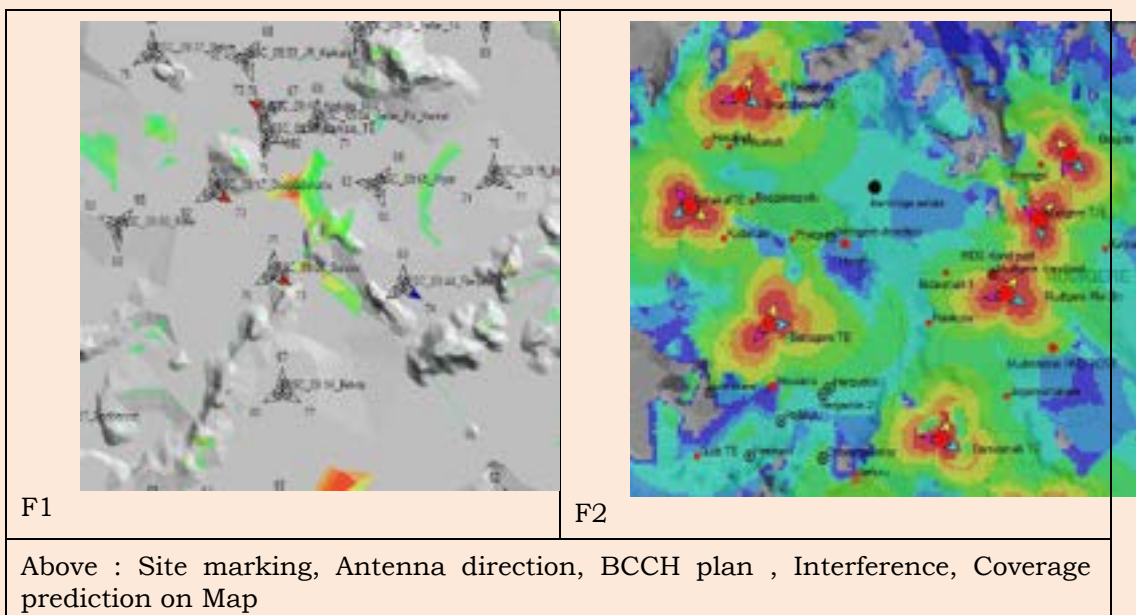
Measurement Method (Limits)	Frequency Range	E-Field strength (V/m)	H-Field strength (A/m)	Power Density W/Sq.m
	400Mz-2000MHz	0.434 x Sqrt (f)	0.0011 x Sqrt (f)	f/2000
BSNL LOWEST FREQUENCY	871.26	12.81043	0.03247	0.43563

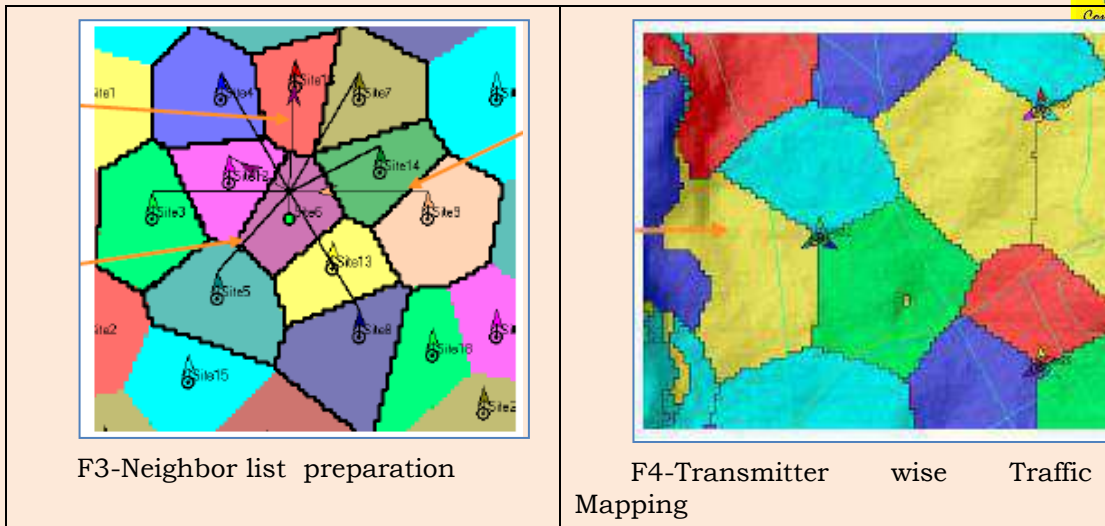


Measurement Method (Limits)	Frequency Range	E-Field strength (V/m)	H-Field strength (A/m)	Power Density W/Sq.m
	2GHz to 300GHz	19.29	0.05	1

### 1.5 List of Documents to be maintained at SSA/Circle Level

- i) All Network element Location and Connectivity Details
  - a) BTS/Node B to BSC/RNC to MSC/MGW Connectivity Details
  - b) BTS/ Node B media and built-up station details
  - c) LAC and RAC details on MAP
  - d) BSC/ RNC wise BTS Marking on Digital Maps – useful in resolving KPI issues.
- ii) Documentation of BTS /Node B Site RF, Infra and Network Details
  1. Maintenance of the below-mentioned details always helps us in attending to network issues, report preparation, and timed submission.
  2. All BTS/node B’s RF-related data like site latitude and longitude (up to six decimal point accuracy in Google Earth latitude and longitude), accurate height of each antenna, azimuth, and electrical and mechanical tilt details on a digital map will help us in deciding the correct antenna azimuth for maximum coverage, frequency interference location, neighbor list preparation, and subscriber complaint clearing.





**Figure 1:** This type of mapping is helpful in avoiding co-channel and adjacent channel interference situations. The availability of this data with O&M teams and OMCRs is useful in frequency planning during any type of network modification or new site addition work. Other benefits include subscriber complaint attendance and marketing purposes.

**Figure 2:** In hilly areas, azimuth prediction mapping is very effective for determining maximum coverage; use this feature of the planning tool whenever a new site is planned to increase coverage area.

**Figure 3:** With this feature of a planning tool, we are never going to miss any neighbor cell in the neighbor list, provided site azimuth and radiating sector information are correctly updated in the system.

**Figure 4:** This feature can be used in many ways; two of them are

- i. Traffic mapping will help us priorities our work with regard to new site planning, marketing activities, etc.
  - ii. Frequency usage details and to remove CO and adjacent frequency issues.
3. MP/MLA Constituency-wise Site Count, Coverage Details
  4. Coverage report: based on the census report on villages (required for TRAI, TERM, Lok Sabha questions, and BSNL Co reporting).
  5. Drive Test Logs on digital maps and in PPT format, along with each drive test observation, recommendation, action taken, and result report

6. Voice and Data Traffic Charts, BSC/RNC/BTS/Node B-wise
7. EMF Data Base
8. Maintain a spare part list and AMC monitoring chart for faulty unit replacement, PM, and CM work.
9. Record keeping.
10. Infra-alarm extension status for each site.
11. Free cooling implementation status
12. Details of sites working on renewable energy sources
13. Master data base for all sites in Excel format.
14. Maintain contact details Core, OMR, built-up stations, vendors, etc.
15. Maintain a complaint register.
16. List of tools (media testers, DT tool, power meter, etc.)
17. Copy of the site maintenance guide and equipment description from the vendor

## 1.6 Site Information Display and Record keeping

- a) Visitor log book: Keep a log book at each site to record the date of visit, name, location, Designation and purpose of visit.
- b) Display the O&M Staff Contact Number along with key O&M-related personnel contact numbers
- c) Maintenance of Equipment Docs and Log Books:
  - i. Equipment details: vendor-supplied product description or maintenance document
  - ii. Media Details (Ring Status, B Link, AMC)
  - iii. Capacity-up gradation details
- d) Display Earthing Values
- e) Display Fire Extinguisher check data
- f) Ensure proper labeling of RF Cables and other units.

## 1.7 Daily Routine Works at Office

- a) Check for current alarms –
  - i. Give reset –if alarm status continues
  - ii. Plan for replacement – For under AMC units ask for replacement; make note of date and time of Docket booking.
- b) Check for 2<sup>nd</sup> E1 / High BER cases etc. – Escalate and take corrective action.
- c) Take note of Total Voice and Data traffic at BSC, RNC, BTSs and Node Bs.
- d) From Traffic and KPI trend report, list out repeat KPI issue, Overloaded sites
  - i. Prepare/Update action plan list (Preferable in a Spread sheet).
  - ii. Maintain a material requirement list
- e) Site Visit planning
  - i. Make a list of sites to visit
  - ii. For these sites Collect KPI trend report, Current alarms, Complaints Collect Cards for any fault replacement
  - iii. Collect site database collection sheets- (for updation).

iv. Collect site Check list, HW, Tools.

## Some BTS/Node B Daily and Monthly Maintenance task schedule

Interval	Maintenance Type	Maintenance Item	Operation Guide	Reference Standards
Every day	Maintenance of equipment room environment	Alarms on equipment room environment	Check whether power supply alarms, fire alarms, or smoke alarms are reported.	No power supply alarms, fire alarms, or smoke alarms are reported.
		Anti-theft nets, doors, and windows	Check whether the antitheft nets, doors, and windows are intact.	The anti-theft nets, doors, and windows are intact.
		Indoor air conditioner	Check the running state of the air conditioner.	The humidity is between 40% and 65%.
Each time site maintenance is performed	Maintenance of equipment room environment	Checking the temperature in the equipment room	Record the temperature read on the thermometer in the equipment room.	-5°C to 45°C
		Checking the Humidity in the equipment room	Record the humidity read on the hygrometer in the equipment room.	5%–95% RH
Every six months	Maintaining the Antenna System	Checking the tower	Check the conditions of the tower, connections of mechanical bolts, and the anti-rust and anti-corrosion conditions.	There is no damage to the tower or sinking of the base, the mechanical bolts are properly connected, and the tower is not rusted or corroded.
Maintaining the Antenna System	Check all the antenna and feeder equipment after a storm, Cyclone, an earthquake, or other exceptional cases.			





## 1.8 Site Visit Check List :

1	Check working of all Fan units and air inlet / filters to the cabinet are clean
2	Check RF connectors, Power cable loose connectivity - heated connectors are indication of loos connection, this may result reduced coverage and poor KPIs
3	Check for Earthing cable continuity, and proper connection to Earthing points and measure earth values at least once in 6 month.
4	Check room temperature -AC working condition, Free Cooling possibilities.
5	Check for any Visual alarms - Take corrective action , if no change in alarm status then replace the hardware - Report to vendor send card for repair
6	Update - Visitor log book, Equipment up gradation details if any
7	Collect/Update site infra details record - Maintain a standard format.
8	Measure BTS load - note/Record
9	Collect information on power availability in site and Battery backup details
10	Check Aviation lamp status -record
11	Check Lightning arrestor condition - record
12	Make note of Tower Condition
13	If required update - BTS/Node B info Display Sheet
14	Check status of EMF warning and Caution Boards
15	Check Labeling of RF Cable and other wirings
16	Carryout Power Calibration for below conditions
	> Check log book if 6 month is over ,measure again
	> If Site traffic trend is downwards
	> In case of customer Complaints
	At the time of Hardware replacement
17	Check for cable Swap
	> if KPIs are worst
	> Any Customer Complaint
	> Whenever new cables are laid
18	Check for Clock issue
19	Check for any KPI issue , try to reduce it to zero if possible ( Not only to below TRAI limit)
20	Sample survey of service and service Demand

# Enterprise Vertical

### **Enterprise Vertical Brief:**

- Main Functions under Enterprise Vertical:
- Enterprise Business (EB-I / EB-II/ BP-Ent Units)
- Core Network Planning (CNP Unit)
- Core Network Operations (CNO Unit)
- Leased Circuit – Service Delivery / Service Assurance (SD/SA) – (LC Unit)
- Radio & Satellite Planning & Operations (Radio Unit)
- Material Procurement for all verticals (MM Unit)
- Procurement of International Bandwidth (ILD Unit)
- Government Projects such as CANI (Chennai Andaman & Nicobar Island), KLI (Kochi Lakshadweep Island), NFS (Network for Spectrum)
- Telecom Factory

### **Enterprise Business Sales:**

- Enterprise customers are served through dedicated Enterprise business units for Platinum and Gold/ Silver category thereby fulfilling all their telecom/networking requirement on Pan India basis under single window concept.
- Platinum customers are served through 12 Enterprise Business Platinum units located at Ahmedabad, Bangalore, Chennai, CN TX North Delhi (EB NCR-I and EB NCR-II), CN TX South, Gurgaon, Hyderabad, Inmarsat, Kolkata, Mumbai, Pune. Business related to these Platinum units is monitored by EB-I unit of BSNL Corporate Office.
- BSNL services to gold and silver category of customers who are served through respective Enterprise Business units located in different territorial Telecom Circles on PAN India basis. Platinum customers, which are not located in the jurisdiction of platinum offices, are also being focused by these Gold business units. Business related to these Gold units is monitored by EB-II unit of BSNL Corporate Office.
- Enterprise business (EB) teams mainly focus on EB product category in core segment consisting of MPLS, P2P, ILL, MNS, Dark Fiber Leasing, ASA-AUA, and Multicasting for Cable Operators, SD-WAN, INMARSAT,

and VSAT etc. Enterprise customers are also provided one stop networking solution by BSNL befitting all it's telecom / networking need / requirement like SaaS, SeCaaS, etc. Voluminous business from other BSNL services of CFA/CM vertical like PABX/IDC/Bulk Push SMS/ Landline/ Mobile/ CUG/ M2M/ IoT/ PRI/ Toll free/ SIP etc. are also acquired by EB teams from enterprise customers.

- Formulation of Sales Strategies for Enterprise customers across industry.
- Formulation and launch of New EB Products
- Formulation of tariff for EB Products
- Providing customized solutions with regards to Enterprise Business requirements sales pitches, sales closure, client interface etc.
- Business Acquisition through Participation in Tenders and SWOT analysis.

## **Enterprise Business Products:**

### **1. MPLS VPN: -**

MPLS VPN is a technology that allows a Service Provider like BSNL to have complete control over parameters that are critical to offering its customers service guarantees with regard to bandwidth throughputs, latencies and availability. The technology enables secure Virtual Private Networks (VPN) to be built and allows scalability.

MPLS VPN is a premium connectivity product for enterprises, normally delivered over fiber, which provides uncondensed, symmetrical bandwidth with full-duplex traffic across multiple sites in a full-mesh topology. It is considered a private network with no exposure to the Internet. Through this connection, an Enterprise can transport all types of network traffic such as voice, video and data seamlessly amongst its branches without the packets touching the Internet.

An MPLS VPN connection offers better uptime, security, flexibility, performance and monitoring abilities along with reliable connectivity without operational overheads to the customer. It allows organizations /

institutions to have a reliable, high quality network connection across multiple sites with guaranteed upload and download speed, uptime and resilience, resulting in a service above and beyond what traditional P2P leased lines provide.

#### **Features of MPLS VPN:**

- Dedicated bandwidth on the last mile
- Superior QoS offering to emulate P2P in terms of throughput via cloud
- Cost-effective
- Highly secure connectivity with pan-India presence
- SLA (Service level agreement) offered
- Low latency
- Symmetrical speed

#### **Specifications of MPLS VPN:**

- MPLS port charges based on required BW. No distance-based charges unlike P2P.
- Wide range of bandwidth options – 64kbps to 10Gbps.
- SLA Commitment: All MPLS VPN connections support industry-backed SLAs (Service Level Commitment) so that business owners can be assured of reliability and certain service levels.
- Ring protection (for fiber last mile, if customer so desires).
- Symmetric Speeds & Dedicated Bandwidth: An ILL connection provides fixed bandwidth and symmetric speeds.
- Class-of-service options (Gold, Silver & Bronze) available at different price points.

#### **Value-Added feature set of MPLS VPN – Choices on offer**

- Layer 3 or Layer 2 VPN.
- Full-mesh or Hub-and-Spoke topology.
- Static or Dynamic routing.
- Unicast or Multicast (for specialized applications such as Content Delivery - mainly suitable for Cable TV operators).
- Plain QoS or Differentiated QoS
- All of the VAS features are included in the base price are offered at highly discounted rates!



- Option of extending the same VRF to global locations also available
- MPLS services are available in three categories based on committed bandwidth as: -
  1. MPLS (Basic)
  2. MPLS (QOS-Silver)
  3. MPLS (QOS-Gold)

### Maintenance Support

- 24 x 7 NOC support, Primary NOC at Bangalore and Disaster Recovery (DR) NOC at Pune
- Toll Free No. 1800 425 1957, Email (helpdesk@bsnl.in) Fax on 080-2580 6666

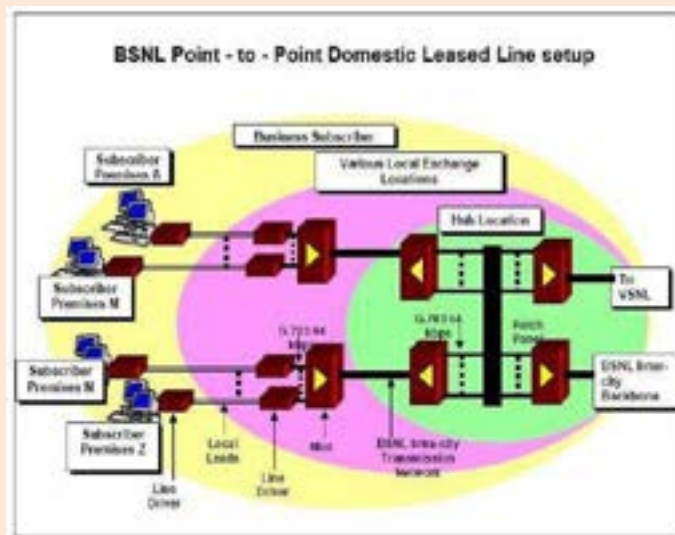
### 2. Point to Point leased lines:

Point-to-Point connection is a dedicated communication link between two geographically distant sites. BSNL's state of the art OFC network is spread across India connecting even the remotest locations. BSNL's existing infrastructure allows connectivity between two end-points vide nearby PoPs of BSNL.

Point-to-Point connectivity is an OSI Layer 2 Network Service, allowing the flexibility of network design as per requirement of the customer. The network routing information is also obscured to BSNL, which adds additional layer of privacy of network traffic to the customers.

### Features of Point-to-Point leased line:

- Point-to-point communication is highly reliable, highly secured, scalable, low latency, high Bandwidth and high quality of service (QoS) because communication channel is not shared.
- P2Ps offers wide range of Bandwidth from 9.6Kbps to 10Gbps.



- Point-to-point connections use specific interfaces, such as G.703, Ethernet or others, depending on the type and the medium used.
- In order to provide point-to-point connections with high availability and low error rates, the connections can be automatically or manually switched to alternate routes.
- 24/7 Enterprise Call Centre to redress service issues.

### **3. Internet leased lines (ILL):**

An Internet leased line is a premium **Always-on** Internet connectivity product, normally delivered over fiber and based on leased line access (i.e., dedicated access). Leased lines provide the last mile access from the user premises to BSNL equipment. ILL provides uncondensed, symmetrical bandwidth with full-duplex traffic. It is also known as an Ethernet leased line, dedicated line (No shared Bandwidth), data circuit or private line.

A scalable access method - Bandwidth speeds starting from 2 Mbps to any required bandwidth up 100 Gbps connectivity can be deployed. Since the access is "always on", it is possible to associate a pool of permanent IP addresses with a particular leased line. Using IP addresses provided by BSNL, it becomes possible to deploy a variety of services such as mail, FTP, WWW, DNS, and proxy, to name the most common requirements of organizations. In other words, leased lines enable hosting of services of all types, and provide a platform for enterprise intranets and extranets, apart from what we may term as "entry level" services such as messaging, which still account for over 70 percent of all Internet access.

An Internet Leased Line connection offers better scalability, performance and monitoring abilities along with reliable connectivity to cut down the unnecessary expenses. It allows data hungry organizations / institutions to have a reliable, high quality internet connection with guaranteed upload and download speed, uptime and resilience, resulting in a service above and beyond what standard broadband provides.

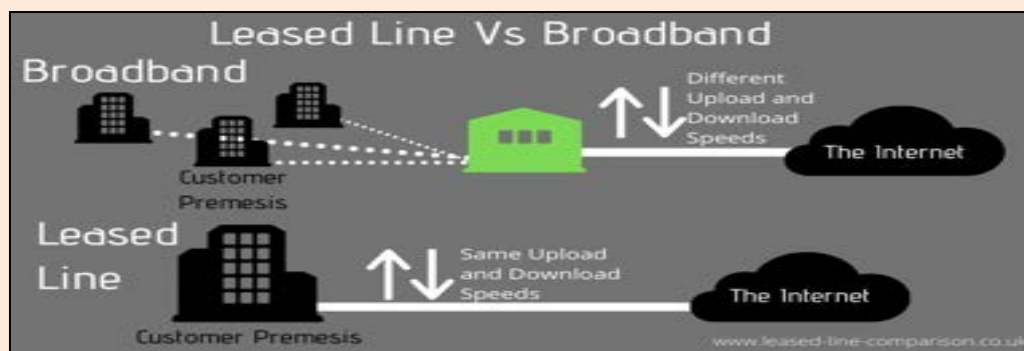
#### **Features of Internet leased line:**

- Faster connection speed.
- Easy access to cloud computing.

- Cost-effective.
- High security.
- SLA (Service level agreement).
- Low latency.
- Symmetrical speed.
- Ring Protection.

### Specifications of Internet Leased Line:

- BSNL is providing ILL services for all bandwidths in three categories i.e. 1:1 ILL, 1:2 ILL and 1:4 ILL
- SLA Commitment: An ILL connection usually comes with industry-backed SLAs (Service Level Commitment) so that business owners can be assured of reliability and certain service levels.
- Ring protection (for fiber last mile, if customer so desires).
- Symmetric Speeds & Dedicated Bandwidth: An ILL connection provides fixed bandwidth and symmetric speeds.



## 4. Managed Network Services:

BSNL Managed Network Services is a fully managed Secured Data services, providing a truly one-stop and a complete experience that significantly reduces risks and complexities involved in implementing and maintaining a robust IP network. It brings together all of a business' communications needs in an integrated offering. With the promise of an integrated platform with one-stop convenience and fully managed experience, BSNL Managed Network Services is an All-in-One comprehensive bundle of hardware, connectivity packages and managed services.

It is a solution that simply, affordable and reliably supports your business.

## Managed Network Services VS Unmanaged

### Network Services

- Comprehensive Service Package-
- No CAPEX
- No risk of technical obsolescence
- Scalable according to changing business needs
- One helpdesk number to call for troubleshooting and fault resolution
- Integrated customer report (Web Based) giving a complete view of your network



### Specifications of MNS:

- BSNL present MNS Services may be used as follows
- MNS Services with Router + Modem / Converter + SLA
- MNS Services with Modem / Converter + SLA (Without Router)
- MNS Services with Router + SLA (Without Modem / Converter)
- MNS Services with SLA only (W/o Router & Modem / Converter)
- Each of these services are available in two SLA types, Gold (99%) & Platinum (99.5%)

### Benefits:

- End-to-end Turnkey Implementation (including CPE)
- Proactive management through state-of-the-art NOC
- Periodic reporting facilitating trend analysis
- Capability to provide VPN connectivity from any part of the country.
- Managed Firewall as well as IP Sec

## 5. BSNL Software defined Wide Area Network (BSNL SD-WAN):

SD-WAN addresses the current IT challenges. This new approach to network connectivity can lower operational costs and improve resource usage for multisite deployments. Network administrators can use bandwidth more efficiently and can help ensure high levels of performance for critical applications without sacrificing security or data privacy.

## Features:

- Supports Multiple Connections – (MPLS, Internet, LTE, ETC)
- Dynamic Path Selection – Allows for load sharing across WAN connections.
- Provides simple interface for managing WAN- Support zero-touch provisioning at a branch, easy to set up as a home Wi-Fi.
- Supports VPNs- As well as other third-party service, such as WAN optimization, Controller, Firewalls, Gateways, etc.
- Secure, IP based overlay network.
- Independent underlay network that operates over any type of wired or wireless access network.

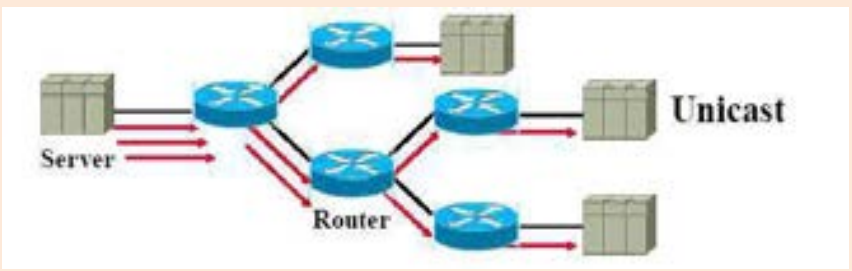
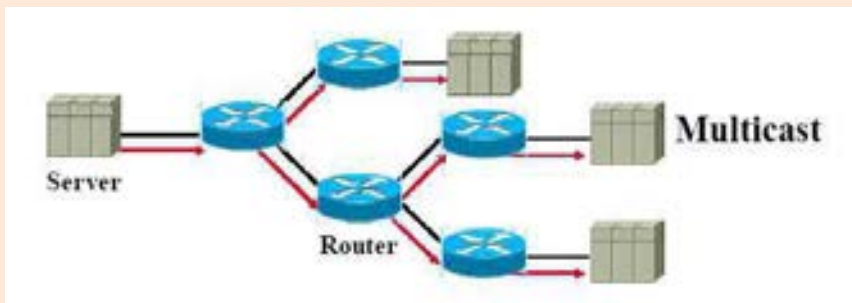


## 6. MPLS Multicasting services for cable TV operators:

Many a time, it is necessary for users to send a same copy of the information to multiple recipients. In the normal IP routing, one source IP communicates with one destination IP in unicast mode i.e., one-to-one. If we want a packet to be distributed to various nodes, the distribution is done by copying the packet @ one for each end node in the traditional unicast mode. Obviously, over the common path, there will be multiple copies of the same packet and the sender is forced to send multiple copies and so his bandwidth requirement will be n times more (where n is the number of destination nodes). IP multicast envisages to remove these multiple copies and optimise on the transmission bandwidth by using special techniques whereby a single copy is transmitted till the last router and in that router, multiple copies are made to be distributed to the end users. By using IP Multicast feature, broadcast to many IP destinations can be achieved i.e., one to many by special form of IP routing. The chief difference is that the network does the heavy work and the sender can save on the source bandwidth. The reverse channel is typically provisioned at a lesser bandwidth.

This is mostly suitable for the content distribution like MSOs, stock tickers, video conferencing, real time sharing of information amongst multiple users, typically from a single source to multiple destinations. One copy of the message moves out from the source; the network replicates the message to all interested recipients. Additional protocols and routing tables are used to implement this feature in a network.

The diagrammatic representation is as below:

<p><b>Unicast:</b> Effort is bigger for the customer to send information to other clients. This is basically for the point-to-point communication on MPLS VPN. Widely used by Banks and offices. There is no extra load on the operator.</p>	
<p><b>Multicast:</b> The time &amp; effort from the customer is very less, as MPLS network multiplies the IP Packets and sends to preconfigured destinations. The resources from BSNL will be used more including trouble shooting. Widely used for IPTV, Video Calls, TV Channels etc.</p>	



## Technical details:

- When multicast is enabled in a network, a point in the network is selected to be a kind of Central Point. Initially, a logical tree structure is created for the MPLS VPN customers in the network with this IP multicast feature. The network is mapped in a tree-like structure and the Central Point can be considered as the tree trunk (closest to the root). Technically, this point is called the Rendezvous Point (RP). All Nodes in the network that are enabled for multicast, communicate with the RP. Whenever any node wants a particular stream, it subscribes for the said stream with the RP. Now a source can send a message to the RP (one copy) and this RP forwards the messages on different tree branches ensuring that replication takes place along the path in a way that one copy of the messages reaches all the interested receivers.
- Maintaining which set of receivers are interested in what source is a part of multicast operation. This is achieved by the receiver informing the RP that it is interested to become a part of a multicast group. Multicast groups are identified by a Class D IP address i.e. 224.0.0.0 to 239.255.255.255. In case there are no interested receivers along a particular branch, the message is not transmitted on that link. A network enabled for multicast can take one copy of the message at the source and make copies of the same along the path from source to interested receivers.
- The critical operations are: tree building, information dissemination, subscription, termination and regular operation.

## Protocols Used:

- **IGMP** – Internet Group Management Protocol: This protocol allows for exchange of messages among receivers and Nodes in a group in which they are interested to be a part.
- **RP** – Rendezvous Point: The fixing of RP can be achieved in 3 ways as below: -
  1. **Static:** The network administrator statically configures RP in all routers that are part of a multicast domain.
  2. **Auto-RP:** This protocol elects the RP.

3. **BSR:** This protocol elects the RP (an open standard)
- **PIM** – Protocol Independent Multicast: This protocol is the most widespread in multicast networks today and there are two modes as below: -
1. **Sparse Mode:** The sparse mode is more efficient than dense. In sparse mode the receiver explicitly informs the upstream on its interest in particular groups/ sources.
  2. **Dense Mode:** Dense mode uses the concept of flood the network and then pruning the unsubscribed nodes.

#### **Requirements from the customer:**

1. Customer should have a full-fledged CE router with support for IGMP and PIM protocols.
2. PIMv2 Sparse Mode is preferred. Dense mode can be considered only for low BW applications.
3. Multicast VPN is an extension of Layer 3 VPN. Customer must have a clear IP addressing scheme segregating LAN and WAN.
4. For the special application of Multicast, the reverse path bandwidth will be restricted to 1% of the total bandwidth.

#### **Readiness of BSNL MPLS Network:**

All standard protocols are supported and the bespoke network design can be finalized by the MPLS NOC team in consultation with the customer. BW ranging from 64Kbps to 10 Gbps (shortly to increase up to 100Gbps) can be readily provided all over the BSNL MPLS network.

#### **7. Dark Fiber Leasing:**

The OFC network has been laid with aim to basically interconnect intercity transmission centers in case of long-distance network and telephone exchanges/ BTS in case of access & back-haul network. The BSNL's internal requirement of fiber pairs over the years has increased many folds. Therefore, the fiber monetization is limited based upon the ring; mesh & star connectivity's. This poses a major challenge of bulk availability of spare fibers in many sectors. The spare fiber availability is therefore sector specific for which fiber can be spared. Moreover 6F, 12F& 24F (low count optical fibre cables) having total length of around 6.43 Lakh Kilometers

have around 94% share in the network and cannot be considered for monetization plan. High count OF Cables (48F & above), which are only 41,433 Kms i.e. around 6% of the total route kilometer of network & around 24% of the fibre length kilometers can be monetized effectively & efficiently. BSNL is putting all out efforts for leasing out additional fibre to TSPs/ ISPs retail customers/ Govt Agencies etc. to generate additional revenue for growth of BSNL.

## **8. ASA-AUA:**

BSNL is empaneled with UIDAI as Authentication Service Agency (ASA) and Authentication User Agency (AUA) for providing Aadhaar based authentication and e-KYC services. BSNL is connected with UIDAI's Central Identities Data Repository (CIDR) through dedicated network links for providing secure and prompt authentication services. BSNL's ASA or AUA-KUA services are available to Government departments, PSUs as well as to registered private organizations. BSNL has installed hardware (routers, server, etc.), at IDC Hyderabad & IDC Bengaluru to provide the ASA services.

## **9. INMARSAT Services:**

DoT asked BSNL for provisioning of Satellite phone services in India and directed BSNL to take up the matter with M/s Inmarsat or any other satellite operator to establish a GMPCS gateway in India for provisioning of satellite-based telephony services.

Accordingly, BSNL has obtained license under Sui – Generis Category for provisioning and operation of Satellite based Services using Gateway installed in India on 25th August 2014. BSNL also signed agreement with Inmarsat as technology partner for setting up the Gateway in Indian for offering of INMARSAT Satellite Based Services

Inmarsat was set up in 1979 by the International Maritime Organization (IMO) to develop a satellite communications network for protecting lives at sea. Inmarsat is the world leader in global mobile satellite communications and provides seamless connectivity across the globe.

BSNL provides a bouquet of Inmarsat Services to Indian Customers either

through Gateway Installed in India or through Inmarsat Foreign Gateway.

These services are:

- a) Global Satellite Phone Service (GSPS) (L-Band)
- b) Inmarsat-C Service (GMDSS Service) (L-Band)
- c) Data Services
  - Broadband Global Access Network (BGAN) (L-Band)
  - Fleet Broadband (FBB) (L-Band)
  - Swift Broadband (SBB) (L-Band)
- e) Global Xpress service (Ka-Band) under IFMC authorization.

## **10. Global Satellite Phone Service:**

Satellite gateway for provisioning of Global Satellite Phone Service (GSPS) was installed and commissioned at ALTTC Ghaziabad in India in 2017 and the Gateway is integrated with BSNL existing Mobile Switching Centre (Ericsson make) at Meerut for provisioning of Prepaid and Post-paid Mobile Satellite based Services named GSPS.

BSNL's GSPS also called satellite phone service, provides voice communication and messaging from any part of the globe. However, presently, the services will be available within India only. It is a ubiquitous service, hence can be used from all part of the country including territorial water. It is being provided through world's most advanced satellite communications network working on Inmarsat I-4 F2 satellite located at 63.90° East to cover Indian Territory with 3 Regional Beams (RB) and 17 Narrow Beams. GSPS operates over Inmarsat – 4 satellite (I4) Constellation using an enhanced GMR-2 air interface (GMS-2+). GSPS operates over L-Band. Global satellite phone service (GSPS) is a Global Voice and SMS (Text) Satellite Communication services. BSNL India Satellite Gateway (ALTTC, Ghaziabad) is integrated with Inmarsat Global Network at Burum/Fucino. It is suitable for persons working in remote areas or disaster affected areas – defence, border security organizations, disaster management bodies, trekkers, fishermen, maritime applications.

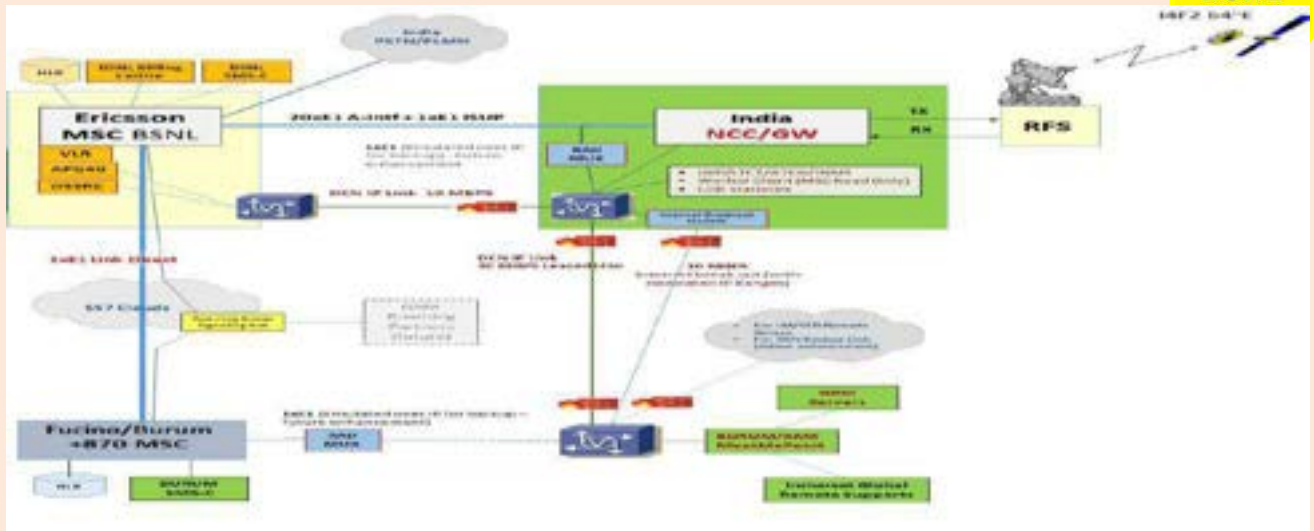
## **Technical Features:**

- BSNL's GSPS system provides telecommunication services to predominately mobile users through an enhanced GMR-2 air interface (GMR-2+) over the Inmarsat-4 (I-4) satellite like Telephony Voice, SMS, Supplementary services etc. The coverage is accessible to GSPS users at or above 20-degree antenna elevation angle. The gateway to satellite frequencies are in C band whereas Satellite to user terminal L band is used.
- The GSPS system is intended to provide a modernized, resource efficient and extensible platform for long term support of telecommunication services optimized for the characteristics of the I-4 satellite.
- The GSPS system supports Satellite Phone Services served by a single Network Control Center- National Gateway (NGW) located at Ghaziabad.
- The service covers the entire geographical area of India with restrictions in certain areas as per guidelines of Government of India.

## **About GSPS Handset:**

- A. ISAT Phone-2 will be supplied by BSNL to customers on first come first serve basis
- B. The more sky you can see the stronger the signal should be from the satellite. If open sky makes up about 70% of your view when you look up, then the signal should be strong. Searching satellite will appear on the screen. When your phone is connected to the satellite, the screen will display ready for service. The top left of the screen will display Inmarsat.

The schematic diagram of the GSPS gateway establishment and various connections are as under:



**Contact point:**

- Users are requested to contact BSNL Customer Care Node (CCN) located at O/o PGM (INMARSAT) Satellite Building, Advance Level Telecom Training Centre (ALTTC), Raj Nagar, Ghaziabad, Uttar Pradesh-201001. The contact details of CCN are given below: -
  - Phone: 0120-2755380,0120-2755175
  - E-Mail: [bsnlinmarsat1@gmail.com](mailto:bsnlinmarsat1@gmail.com).
  - In case of any further query, you can contact Sh. Ashish Tayal, GM (INMARSAT) - 9013132496.

**11. INMARSAT-C (GMDSS Service) Global Maritime Distress and Safety System:**

- BSNL is the only Service Provider of GMDSS services in India. Inmarsat-C or Sat-C services are safety services being used for safety and rescue operations of the distressed ships, boats, and aircraft. The terminal used is broadly called **Sat-C** terminal.
- The services are being provided by BSNL through Gateway installed at ALTTC Ghaziabad India. C & L band frequencies are used to provide the service. Gateway to Satellite C-Band is used whereas Satellite to Sat-C terminal L-Band is used. The services is provided globally by Inmarsat through different satellites based on the regions. **This service is mandatorily to be provisioned on the ship before sailing in sea.**



- An Inmarsat-C mobile earth station (MES) is a small and power-efficient terminal which provides global communications, is inexpensive to purchase and simple to install and use. The Inmarsat-C network can be used to send and receive text or data messages only.
- The Inmarsat-C network is a digital network whereby messages containing text, numeric data or other information are converted to a digital format before being transmitted over the system. The technique used for sending a message is known as store-and-forward messaging.
- It is not possible to use this network for any voice communication.

**INMARSAT Data Services:** The service is categorized as below in view of the usages of the service on Land, Sea and Air.

- **Broadband Global Access Network (BGAN)** - L-band data service on Land.
- **Fleet Broadband (FBB)** - L-band data service in sea.
  - Fleet Broadband is maritime satellite internet, telephony, SMS texting, and ISDN network for ocean-going vessels using portable domed terminal antennas.
  - These antennas, and corresponding indoor controllers, are used to connect phones and laptop computers from sailing vessels with the rest of the world. All Fleet Broadband antennas require line-of-sight to one of three geosynchronous orbit satellites thus allowing the terminal to be used anywhere, including on land.
  - The Fleet Broadband service was modeled after terrestrial Internet services where IP (Internet Protocol)-based traffic dominated over ISDN and other earlier communication protocols. In the long-term, IP traffic is becoming more and more dominant as is being standardized for data, and voice and text communication.
- **Swift Broadband (SBB)** - L-band data service in air.
- **Machine-to-machine M2M services-** Low bit rate data service  
These are low through put data services with maximum speed upto 512 Kbps. The service is provided through Inmarsat I5F4 Satellite at 83°

East. The frequency band in use between gateway to Satellite is C-Band whereas Satellite to BGAN/FBB/SBB terminal L-Band. BSNL does not have Gateway for L-band data services in India and the services are provided by BSNL from Inmarsat Foreign Gateways.

Machine-to-machine (M2M) services provides affordable two-way data connectivity for messaging, tracking and monitoring of fixed or mobile assets – anywhere across the globe.

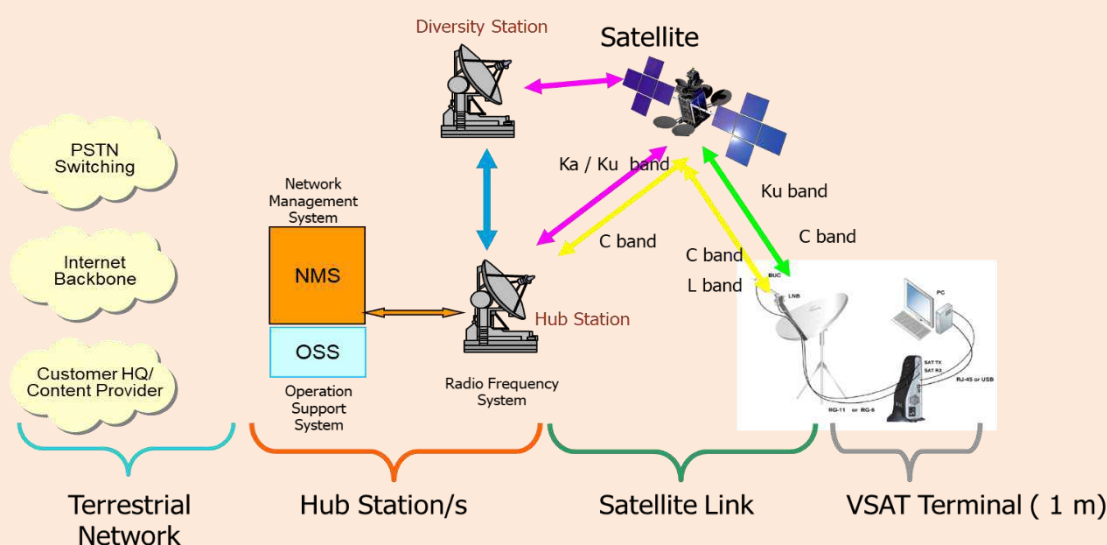
- **Global Xpress:** Global Xpress namely GX service is Inmarsat high throughput data services. BSNL has installed a gateway at ALTTC Ghaziabad for provisioning of the GX services. The services are being provided by BSNL in maritime zones under IFMC authorisation issued by DoT to BSNL. The services are provided in Ka-Ka Band. With Inmarsat GX service a high throughput upto 50 Mbps can be provided. This is pure data service. Voice service can be used through VOIP. The service is provided through Inmarsat I5F4 Satellite at 83° East. The frequency band used between gateway to Satellite and Satellite to terminal is Ka band. The service can be provided in sea, air and land as well.
- **Important Customers of Inmarsat Services:** Indian Navy (IN), Indian Coast Guard (ICG), IAF, Shipping Corporation of India (SCI), Private Shipping Companies, NDRA/NDRF, ONGC, IOC, State Government Departments like Fisheries, Police Authorities etc.  
The BA/OA Heads may explore and market the Inmarsat Services to grab more business in their area of operations.

## 12. VSAT:

A very small aperture terminal (VSAT) is a small-sized earth station, aligned towards a designated Satellite for up-linking and down-linking communication signals used to transmit/receive data, voice and video signals over a satellite communication network, excluding broadcast television. A VSAT is essentially a data transmission technology that uses a telecommunication ground station. Anywhere connectivity is made possible even at those locations, which cannot be connected through

conventional media like copper cable, optical fibre, radio, microwave and any other wire-line / wireless links.

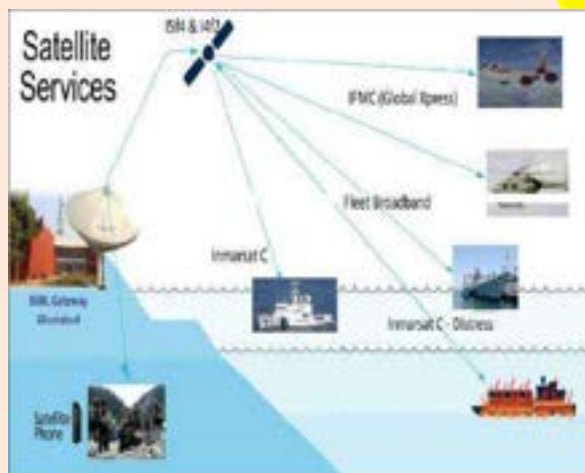
BSNL is one of the licensed VSAT service provider in India. A VSAT is a small station, usually around three meters tall, and it receives and transmits data with the help of a satellite. In general, BSNL provides VSAT service to the customer for their data transmission requirement from one place to another, internet connectivity and VOIP service. BSNL also uses VSAT service for backhaul connectivity to its remotely located stations.



- **Gateways & Satellites used:** BSNL is providing VSAT services on Ku-band through IPSTAR (Thaicom-4) and ISRO (GSAT 8, GSAT 11 & GSAT 19) Satellites.
- The services are provided through following gateways:
  - IPSTAR Thaicom-4 - Sikandrabad (UP) & Yeur (Maharashtra)
  - ISRO GSAT 8 - Bangalore
  - ISRO GSAT 11 - Ahmedabad, Bangalore, Sikandrabad (UP), Ranchi
  - ISRO GSAT 19 - Bangalore

## FEATURES OF BSNL VSAT:

- IP based VSAT Broad Band service
- Trans / Receive Data rates of 128Kbps and above up to 100Mbps
- 10/100 Mbps Ethernet Interface
- Voice Telephony with add on ATA (Analog Telephone Adaptor)
- Sleek and Compact IDU (Table mountable), occupies very little space
- Supports all IP v4 protocols
- Shared and customized Bandwidth for customer's requirements.
- VPNs can be created with VSAT Network, MLLN nodes, MPLS nodes of BSNL.
- Supports Video Conferencing, built in GRE Tunneling, Transparent to IP Sec protocols.
- Dynamic control of power to combat the rain attenuation



## TECHNOLOGY OF BSNL VSAT SYSTEM:

- Frequency band - Ku band (Uplink: 14GHz, Down link: 11GHz)
- Outbound Link – DVB-S2X
- Inbound Link - MFTDMA
- Modulation – up to 32APSK
- Coding – ACM
- Symbol rate-Up to 235Msps

## CLIENTELE:

VSAT Services are being provided to the remote Islands of Andaman and Nicobar and Lakshdweep. Though CANI and KLI Submarine OFC has been laid now between these islands and main land yet the Satellite services are being used as an alternate/diverse media to maintain the telecom services connectivity with these remote islands.

Large customer base of BSNL consist of Nationalized Banks, Private Banks, Defence, Central and State Govt. networks, Oil exploration companies,

Power generation companies, Disaster management agencies, Hospitals, PSUs, etc. BSNL has provided broadband internet connectivity to 1407 nos of GPs through VSAT media. Under 4G Saturation Project also, about 1800 villages are planned to be provided with 4G services through VSAT backhaul media.

### **Contact point for VSAT Services:**

PGM (EB& SAT), BSNL, 4th Floor, Sanchar Complex, WMS Compound, 47th Cross, 9th Main, 5th Block, Jayanagar, Bangalore-560011, Karnataka State.

## **13. Internet Data Center (IDC) Services:**

### **⇨ Co-Location services**

- Dedicated Colocation services and cloud hosting services in India
- BSNL's Internet Data Center Managed Colocation goes a step beyond traditional colocation, completely freeing you from the management of your data centre. Our engineers and technicians monitor the infrastructure, dealing with issues as needed. The availability of 24×7 support, and the guarantees you get on security and availability, make managed colocation a particularly attractive option if your need is to focus your IT efforts beyond infrastructure.
- If you wish to manage your own installation, and additional physical security is your prime requirement, you have caged Space as a service option. You get a mesh wall around the racks, plus dedicated connectivity infrastructure. Our facilities are equipped and capable on every front, from security to connectivity to reliability.

### **⇨ Hosted Services**

- Outstanding Managed hosting and cloud hosting in India.
- BSNL Internet Data Center Dedicated Hosting Services.
- BSNL Internet Data Center Shared Hosting Services.

### **⇨ Managed Services**

- Cloud Migration, Virtualization and cloud computing service providers in India.

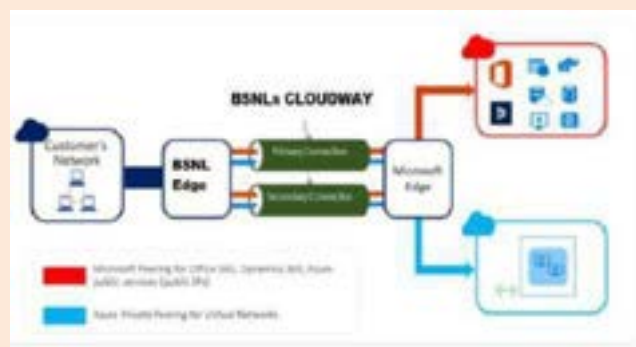
- BSNL IDC Managed Local Load Balancing Services.
- BSNL IDC Application Acceleration Services.
- BSNL IDC Standalone Database Services.
- IDC Database Clustering Services.

⇨ **BSNL IDC Monitoring Services**

- Advanced server monitoring services
- BSNL IDC capacity management services
- BSNL IDC server virtualization services

**BSNL’s CLOUDWAY with Microsoft:**

“BSNL’s CLOUDWAY with Microsoft” lets customers extend their on-premises networks into the Microsoft cloud over a dedicated private connection facilitated by BSNL. With BSNL’s CLOUEWAY with



Microsoft, customers can establish connections to Microsoft cloud services, such as Microsoft Azure, Office 365, and CRM Online through Layer 3 connection (MPLS-VPN) between a customers’ branch offices and datacenters. The Microsoft cloud can be interconnected to a customers’ WAN to make it look just like any other branch office. BSNL’s CLOUDWAY with Microsoft connections do not go over the public Internet. This allows connections to offer more reliability, faster speeds, lower latencies, and higher security than typical connections over the Internet.

**Key features of BSNL’s CLOUDWAY with Microsoft:**

- Private and secure connections to Azure
- Lower latency & increased speed
- Built-in redundancy at every peering location for higher reliability
- SLA up time up to 99.5 %
- Bandwidth up to 10 Gbps supported

**Nodal for these Services:** Mumbai Platinum unit is the Nodal for the Product.





## **Tariff and Discounting for Enterprise Products: BP-Ent. BSNL CO**

### **nodal.**

- These tariff for products is confidential in nature and therefore should not be disclosed /referred/mentioned/annexed in any communication including the Customers.
- Copy of the tariff is shared with CGMs and GM (EB) Circles from time to time.
- Accordingly, the demand notes/ bills are to be issued with mentioning of the offer price only.

<b>S. No. Tariff and discounting powers delegated issuance order nos. and dates</b>
<b>1. MPLS</b>
<p><b>Tariffs:</b></p> <ol style="list-style-type: none"> <li>1) <b>MPLS-VPN services</b> – Tariff order no.- 120-4/2016-BP-Ent/MPLS-VPN/284 dated 16.11.2018</li> <li>2) <b>MPLS-Multicasting for cable TV operations- Revision/Modifications</b> - Tariff order no.- BSNLCO-BPE/12(12)/1/2020-BP-Ent dated 09.10.2020</li> <li>3) <b>MPLS-VPN and IP-VPN services of BSNL for bandwidths of 100 Gbps, 200 Gbps and 400 Gbps</b> - Tariff order no.- BSNLCO-BPE/12(13)/1/2020-BP-Ent/1 dated 18.11.2021</li> </ol> <p><b>Discounting powers Delegation to:</b></p> <ol style="list-style-type: none"> <li>1) <b>Delegation of Discounting powers of MPLS-VPN services</b> vide letter no.- 120-4/2016-BP-Ent/MPLS-VPN/305 dated 19.11.2018</li> <li>2) <b>BSNL’s MPLS-VPN services –Rationalization of discount for MPLS services within circle/city</b> vide letter no.- BSNLCO-BPE/12(12)/1/2020-BP-Ent/1 dated 29.06.2021</li> </ol>
<b>2. Point – to – Point (P2P)</b>
<p><b>Tariffs:</b></p> <ol style="list-style-type: none"> <li>1) <b>Lease line circuits for sub 2 mbps</b> – Tariff order no.- 4-3/2005-R&amp;C dated 05.01.2006.</li> <li>2) <b>MLLN</b>– Tariff order no.- 120-4/2016-BP-Ent/MLLN-Modem/294 dated 16.11.2018</li> <li>3) <b>Lease line circuits (2 Mbps and above)</b> – Tariff order no.- 112-1/2014-BP-Ent dated 08.08.2014</li> <li>4) <b>Lease Line tariff for STM-16 and STM 64 bandwidth</b> – Tariff order no.- 112-1/2014-BP-Ent dated 08.10.2014</li> <li>5) <b>Tariff for 100 Gbps P2P leased circuits</b> – Tariff order no.- 112-1/2014-BP-Ent dated 03.12.2015</li> <li>6) <b>Tariff for aggregate/bulk Bandwidth of Domestic Lease Line circuits (DLC) or Point to Point Leased lines for TSPs/ISPs/MSOs/LCOs</b> – Tariff order no.- BSNLCO-BPE / 12 (15) / 1/ 2020-BP-Ent/P2P Bulk BW/3 dated 09.02.2022</li> </ol>

**S. No. Tariff and discounting powers delegated issuance order nos. and dates**

- 7) **Revision in charging Methodology i.r.o Domestic Lease Line** – Oder no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/P2P(charging)/11 dated 21.02.2022

**Discounting powers Delegation to:**

- 1) Field units vide letter no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/Normal P2P BW/1 dated 09.02.2022
- 2) TSPs/ISPs/MSOs/LCOs vide letter no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/TSP P2P BW/2 dated 09.02.2022
- 3) For aggregate/bulk Bandwidth of Domestic Lease Line circuits (DLC) or Point to Point Leased lines for TSPs/ISPs/MSOs/LCOs vide letter no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/P2P Bulk BW disc /4 dated 09.02.2022
- 4) Delegation of discounting powers of MLLN modem vide letter no.- 120-4/2016-BP-Ent/MLLN-Modem/311 dated 19.11.2018

**3. Internet Leased Line (ILL)**

**Tariffs:**

- 1) **Internet Lease Line (ILL) services of BSNL (for Sub 2 Mbps bandwidths)** - Tariff order no.- 112-05/2010-BP-Ent dated 02.12.2015.
- 2) **Internet Lease Line (ILL) (2 Mbps and above bandwidths)**- Tariff order no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/ILL/5 dated 09.02.2022
- 3) **ILL services over GPON media** – Tariff order no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/ILL(GPON)/9 dated 09.02.2022 and its clarifications issued vide letter nos.- BSNLCO-BPE/12(14)/1/2020-BP-Ent dated 01.11.2022 and 24.01.2023
- 4) **Tariff and discounting policy for Anti-DDOS services** - Tariff order no.- 112-5/2010/BP-Ent dated 29.08.2019.
- 5) **ILL rates for M/s CSC e-Governance service /India Ltd.** – Tariff order no.- BSNLCO-BPE/12(14)/1/2020-BP-Ent dated 01.02.2021 and its clarification issued vide letter no.- BSNLCO-BPE/12(14)/1/2020-BP-Ent dated 18.08.2021
- 6) **PDOs under PM WANI project** – Tariff order no.- BSNLCO-BPE/12/2/2020-BP-Ent dated 07.04.2022

**Discounting powers Delegation to:**

- 1) Field units vide letter no.-BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/ILL disc/6 dated 09.02.2022
- 2) TSPs/ISPs/MSOs/LCOs vide letter no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/ILL disc/7 dated 09.02.2022
- 3) Special delegation to CGM GJ, CGM PB, CGM MH for Pune BA, CGM HR for Gurugram and Faridabad BAs and CGM UP(W) for Noida and Ghaziabad BAs vide letter no.- BSNLCO-BPE /12 (15) /1/ 2020-BP-Ent/ILL (special) disc/8 dated 09.02.2022
- 4) Discounting power to field units for below 2 Mbps bandwidth issued vide letter no.- 112-5/2010-BP-Ent dated 12.01.2018

<p><b>4. Managed Network Services (MNS)</b></p> <p><b>Tariff:</b>  <b>“Managed Network Services” Add-On Tariff for BSNL and MTNL – Tariff order no.- BSNLCO-BPE/12(16)/1/2020-BP-Ent dated 26.09.2022</b></p> <p><b>Discounting powers Delegation to:</b>  Discounting power delegation to field units vide letter no.- BSNLCO-BPE/12(16)/1/2020-BP-Ent/disc. dated 26.09.2022</p>
<p><b>5. Dark Fiber</b></p> <p><b>To Govt. license holder TSPs/ISPs /IPs /MSOs/LCOs - order no.- 122-1/2017-BP-Ent (Part 1) dated 22.10.2019</b></p>
<p><b>6. ASA services</b></p> <p><b>Sub-AUA/KUA and Mobile Number Updation (MOU) services for AUAs/KUAs and revision of Tariff for KSA (eKYC) vide tariff order no.- 111-2/2013-BP-Ent dated 31.10.2017</b></p>
<p><b>7. KU Band VSAT BW services on IPSTAR</b></p> <p><b>Tariff:</b>  <b>KU Band VSAT bandwidth for services on IPSTAR satellite and VSAT equipment lease/purchase charges on migration to HTS VSAST system vide Tariff order no.- BSNLCO-BPE/12(20)/1/2021-BP-Ent dated 18.03.2021</b></p> <p><b>Discounting powers Delegation to:</b>  Order no.- BSNLCO-BPE/12(20)/1/2021-BP-Ent dated 18.03.2021</p>
<p><b>8. KU Band VSAT on GSAT-8 satellite</b></p> <p><b>Satellite BW charges of KU band VSAT tariff – for services on GSAT-8 satellite vide Tariff order no.- 105-2/2011-BP-Ent dated 15.02.2018</b></p>
<p><b>9. IDR satellite link services</b></p> <p><b>leased circuits provided on IDR (Intermediate Data Rate) satellite links vide Tariff order no.- 105-1/2012-BP-Ent dated 07.06.2018</b></p>
<p><b>10. IDC services</b></p> <p><b>Tariff:</b></p> <ol style="list-style-type: none"> <li>1) <b>IDC services being provided from Internet Data Centres set up on revenue share basis with M/s Dimension Data – tariff order vide no.- 111-06/2012-BP-Ent dated 19.02.2016</b></li> <li>2) <b>IDC services being provided from Internet Data centres setup on revenue sharing basis with M/s CtrlS Data centers Ltd. – tariff order vide letter no.- 111-1/2015-BP-Ent dated 10.07.2015</b></li> </ol> <p><b>Discounting powers Delegation to:</b></p> <ol style="list-style-type: none"> <li>1) <b>IDC services being provided from Internet Data Centre set up on revenue share basis with M/s Dimension Data - order vide no.- 111-06/2012-BP-Ent dated 13.05.2014</b></li> <li>2) <b>IDC services being provided from Internet Data Centre set up on revenue share basis with M/s CtrlS Data centers Ltd. - order vide no.- 111-1/2015-BP-Ent dated 10.07.2015</b></li> </ol>

<b>11. VPNo3G</b>
Tariff issued vide letter no.- BSNLCO-BPE/13(11)/1/2020-BP-Ent dated 05.07.2021
<b>12. VPNoBB/FTTH</b>
<p><b>Tariffs:</b></p> <ol style="list-style-type: none"> <li>1) <b>VPNoBB</b> – Tariff order no.- 120-4/2016-BP-Ent/VPNoBB/288 dated 16.11.2018</li> <li>2) <b>Clarification regarding tariff for VPNoFTTH for 4 Mbps and above bandwidths</b> issued vide letter no.- BSNLCO-BPE/12(19)/1/2021-BP-Ent dated 05.08.2021</li> <li>3) <b>Tariff for higher bandwidths of VPNoBB/FTTH</b> vide tariff order no.- BSNLCO-BPE/12(19)/1/2021-BP-Ent dated 17.01.2022</li> <li>4) <b>Clarification i.r.o Tariff and discounting powers for lower bandwidths of VPNoFTTH services of BSNL</b> - order no.- BSNLCO-BPE/12(19)/1/2021-BP-Ent dated 28.09.2022</li> </ol> <p><b>Discounting powers delegation:</b></p> <p>Discounting powers to field units in respect of VPNoBB services issued vide letter no.- 120-4/2016-BP-Ent/VPNoBB/307 dated 19.11.2018</p>
<b>13. CANI BW</b>
<p><b>Tariff:</b></p> <p><b>“Top-up” rates for CANI BW-</b> tariff order no.-BSNLCO-BPE/12(15)/2/2020-BP-Ent/1 dated 13.11.2020</p> <p><b>Discounting powers Delegation to:</b></p> <ol style="list-style-type: none"> <li>1) <b>“Top-up” rates for CANI BW</b> – order no.- BSNLCO-BPE/12(15)/2/2020-BP-Ent/2 dated 13.11.2020</li> <li>2) <b>Revision of CANI bandwidth discounting powers under CANI project-</b> order no.- BSNLCO-BPE/12(15)/2/2020-BP-Ent/2 dated 09.12.2022</li> </ol>
<b>14. KLI BW</b>
<p><b>Tariff:</b></p> <p><b>“Top-up” rates for KLI BW created under LKI project-</b> tariff order no.- BSNLCO-BPE/12/1/2023-BP-Ent/1 dated 14.09.2023</p>
<b>15. Tender participation power delegation</b>
<b>To field units for participation in tender- order vide letter no.-</b> BSNLCO-BPE/12(15)/1/2020-BP-Ent dated 09.02.2022
<b>16. Matching tariff power delegation</b>
<b>To CGMs for Enterprise Business-</b> order no.- BSNLCO-BPE/11(12)/1/2020-BP-Ent dated 16.03.2023

## **Miscellaneous:**

### **Enterprise Business Mandatory Utilisation:**

- BSNL is the trusted Telecom solution provider for all types of telecom services across the country, earlier as an erstwhile Department of Telecom and later on as BSNL. Since BSNL's network is spread all across the country, it is strategically positioned to provide all telecom requirements of any organization at competitive prices / tariffs. Recognising the strategic importance of BSNL/MTNL, Union Cabinet has approved mandatory utilisation of BSNL/MTNL Network by various Central Ministries/Departments/CPSEs/Autonomous Bodies etc which was conveyed by Department of Expenditure, Ministry of Finance vide Memo No. 24(3)/E.Coord/2018 dated 04-09-2020 and subsequent OM issued by Department of Telecommunications F.No.19-1/2019-SU-I dated 12-10-2020.
- DO Letters from CMD BSNL were sent individually to Ministries / Departments under GoI requesting to endorse the Union Cabinet decision of mandatory utilization of BSNL/MTNL network. BSNL EB units at their respective State level approached Ministers of State and UT for endorsement of Union Cabinet decision and made efforts to acquire telecom business in their jurisdiction on nomination basis.
- Besides stiff competition in telecom industry; BSNL is preferred telecom service provider by most of the Government organizations for all service types on nomination basis with BSNL EB units.

### **Enterprise Business Cluster Approach:**

Corporate Office has taken many steps / initiatives as a special drive aimed at sales business enhancement such as Cluster approach, Business from big Data Centers and IT Hubs , Business of Significance, Time bound fiberisation of circuits for Up gradation, QoS and future business growth of BSNL.

### **Enterprise Business Tender Participation:**

- **Wining %age Bench Mark- 35%** (Ref. the CMD Action Points from Enterprise Vertical CMD Review vide lt. no BSNLCO-EBII/11(18)/1/2021-EB-II dated 17.08.2023)



- **BP-Ent. Letter Ref. for Power delegation to Circles/BAs as Ref Pt. 15 in above table.**
- All the necessary documentation like BSNL MoA, Balance Sheet & Profit & Loss A/c Certificate, Net worth certificate, GST Certificate, PAN, Power of Attorney, Service wise turnover certificates etc. Any other financial documents as required may be requested to the CA Branch.
- Tenders may be searched:
  - Tenders floated by BSNL customers through interaction and their company websites.
  - On certain specific websites like GEM portal, eprocure.gov.in (CPPP).
  - On local Newspapers, magazines, etc.

### **Enterprise Business – On line Booking by Customers/ Web care leads:**

- EB Customers can book their telecom requirements online option available at [www.bsnl.co.in](http://www.bsnl.co.in).
- Every Circle have deputed one nodal officer who distributes the leads generated to the concerned NAM / KAMs.

### **EB Portal:**

- EB Teams can login into EB portal through EB Portal tab under Application Menu at BSNL Intranet ([www.intranet.bsnl.co.in](http://www.intranet.bsnl.co.in)).
  - **EB Lead Management:** NAM/KAM feeds EB Lead details regarding the business at various stages of it's progress.
  - **EB Team and Customer Master:** Masters are there for creating various data related to EB Customers and EB Portal Users.
  - **Vendor Management:** For adding the details of empanelled SIs under CPNE etc.
  - **Tender Management:** Module for entering tender leads.
  - **Sales Visit:** Details of EB Customer Visits by NAM / KAMs are entered in the Sales Visit module.
  - **Various Sales Reports:** For analysis purposes various reports are available in the EB Portal.

### **Different NoC Reports (75% B/w Utilisation etc.): Upgradation / Congested Circuits**



- Detailed list of Leased Circuits having 75% bandwidth crossed, is taken from NOC Bangalore on quarterly basis.
- It is further mapped with other LC & tagged data and Circle-wise details are prepared.
- These details are circulated to the field units for further consultation with the Customers for bandwidth upgradation / augmentation etc.
- This helps in generation of additional revenue for BSNL by way of upgradation and settlement of SLA penalties due to latency etc.
- However, Circles / Field units can ask for customized reports from NoC as per the field requirements.

**EB Customer Private Network Establishment Guidelines (CPNE): (Refer: BSNL CO. Letter No-BSNLCO-EBII/15(11)/1/2020-EB-II, 02.09.2020 / 18.09.2020 / 04.11.2020, 18.07.2022 and dated 19.10.2022)**

- One of the major activities for providing “Total Network Solutions to the Enterprise Customers” is procurement of networking equipment & its integration in the network. Since such projects are time bound, it may not be possible to follow normal procurement procedure for procurement of equipment and service required to establish the networks on account of the various reasons such as:
  - Projects being time bound and are to be completed within the timeframe specified by the customer.
  - Enormous delay will be encountered for finalization of the tender and we may end up selecting the lowest bidder who may not be a reputed vendor or the equipment he offers may not be meeting the requirement of the customers.
  - The procurement process for such equipment needs to be looked into on a different perspective. Here the customer is going to pay the cost of the equipment. BSNL is adding margin over it, i.e., Customer pays for it’s own network establishment (Private Wide Area Network and complete networking solution) on turnkey basis.
  - The components involved in the network design are decided according to the requirements of the customer and the equipment are available with limited vendors.

- In view of above, Circles/Field Units have been empowered by BSNL CO for empanelment of System Integrators under CPNE guidelines as National / Circle/ Circle-Silver SIs.
- While keeping full regard to basic principles of procurement of products and services, these guidelines are to be applied Customer-wise and project based i.e., on case-to-case bases and not for procurement of the material for general planning purpose for multi projects.
- CPNE guidelines are meant for EB Customers only and not applicable for “Last Mile Connectivity” which requires laying of OFC, RF modems etc. for BSNL's own Infrastructure. **(Ref.- BSNLCO-EBII/15(11)/1/2020-EB-II, 18.09.2020)**
- Once an SI is empanelled in National Category in any of the Circle, it can get empanelled in any other Circle with a prescribed consent letter.
- For, tender cases for customer’s private network establishment, SI should submit EMD/PBG for SI part on Back-to-Back basis.
- ISP are not allowed to become SI. If any SI after registration becomes ISP, his SI empanelment should be cancelled. Accordingly, previously empanelled SIs also to be reviewed on regular basis.
- All the empanelled System Integrators (SIs under CPNE guidelines) are to register at NIC's e-tender portal (<https://etenders.gov.in/eprocure/app>) **(Ref.- BSNLCO-EBII/15(11)/1/2020-EB-II, 18.07.2022 & 19.10.2022)**
- Circles should apply due diligence as per the business requirements on case-to-case basis for applicability choice amongst CPNE Guidelines and various other BSNL Policies like.
  - MNS Policy.
  - Application Service Providers (ASPs) for software provisioning.
  - ASPs related to Bulk Push SMS and other services.
  - Empanelment for Smart City related works
  - Vehicle Tracking / Fleet Management (M2M Services)
  - WiFi-EOI for empanelment of SI for turnkey solutions of CFA Vertical.
  - PABX Agreement/Policy, etc.
- Validity of the empanelment agreement shall be initially for Five years and renewal for two years, based on performance.

**EB Channel Partner Policy (CPP): (Refer: BSNL CO. Letter No- BSNL/EB-II/CPP-2017/, dated 08.03.2017 / 20.03.2018 / 22.03.2019)**

- For engaging an enterprise customer, several visits and regular pursuance is needed. BSNL tends to lose business at times needing more persuasion of leads constantly; this gap needs to be filled. Channel Partners are in all the three categories of business i.e. Platinum, Gold and Silver covering products and services from all the three verticals.
- **Selection Criteria:** The interested partner of any stream EB/ CM/ CFA who wants to be an empanelled Channel Partner would need to show his intention/ consent and to agree to general business rules.
- The draft Consent Letter/ Undertaking (Copy available on BSNL Intranet & www.bsnl.co.in) to be taken from the eligible applicants, which however may be amended/ appended/ redrafted as per the Circle needs.
- The empanelment process is simple for all the eligible partners with no additional PBG or qualifications etc. keeping the Existing Jurisdictional discipline of areas and products of the vendor's of all the three verticals.

**For CM/ CFA Products:**

- Franchisees, RD, DSA of CFA and CM Verticals to operate within their prescribed jurisdiction as per respective S&M Policy.

**For EB Products:**

- SIs, MNS Partners, PABX Franchisees and IDC Partners etc. of EB.
- No jurisdictional restriction of booking business for National Level SIs.
- Circle Level SIs would book business for the respective Circle of their empanelment, however can book business operable in other Circles when a part of business lies in his home Circle.
- The leads/ business of Pan-India Platinum Customers attached to a particular Platinum Unit shall be dealt through such designated units only.
- The business brought by MNS/PABX/IDC Partners in their respective scope of business shall not be part of this policy.
- The business being done on revenue share model with the help of other partners/franchisees/service providers shall be part of above scheme only

if the service provider partner, agrees for prorate matching commission per above structure.

- The business done with TSP/ ISPs will not be part of this scheme.
- The Circle ECT would necessarily co-opt the officer from CM or CFA vertical if not a part of ECT for finalization/recommendation of rates for CM or CFA business as the case may be.
- The Business should be brought in the name of BSNL & Commission for EB Products shall be payable on Monthly/Quarterly/Half yearly/Annual basis etc. as per agreement made with the customer on the Net amount received (excluding all taxes).
- Landline and Broadband Leads of less than 20 connections or Sale of SIMs less than 20 from a single enterprise Customer in isolation shall not be entertained under the policy however if it is a part of bigger business would be included.
- Commission payable only under one commission policy of BSNL for a business.
  - **Leads Locking:** Channel Partners to intimate the Leads to the concerned Channel Manager in the initial stage itself to avoid any payment claim after completing the lead. Also, this will avoid duplication of business lead from different Channel Partners.
  - Although, bringing the lead, follow-up with the customer and final winning of business shall be the sole responsibility of the Channel Partner but never the less the financial quote and deal shall only be finalized by BSNL so BSNL's sales team would remain associated with the Channel Partner at appropriate juncture.
  - It will be the responsibility of the Channel Partners to get order from customer at the rates finalized by BSNL Circle and timely realization of payment is to be ensured before payment to the channel partner is released.

**Circle Ranking:**

EB sales performance of Field Units for enhancement of Enterprise Business is being regularly monitored by corporate office in respect of parameters like



Stage-IV, New First Time, New Existing Business, Retention Business, Private Business etc.

Circle/EB Unit-wise Rankings are issued based on the Circle/Platinum EB Unit achievements on monthly/Quarterly/Annually as per the BSNL CO Letter No- BSNLCO-EBII/11(18)/2/2020-EB-II, 05.04.2023, i.r.o. Gurgaon-Platinum Unit BSNLCO-EB-I/1/2020-EB-I, dated 25.07.2023 and Modification- BSNLCO-EBII/12(11)/1/2021-EB-II-Part(3), dated 04.08.2023.

S. No.	Parameter	Marks	Core Criteria Ach.	Bonus -w.r.t. %	Core Bonus Marks	Marks Criteria
1	New First Time Business	20	>50<=60		5	<u>% Ach</u>
			>60		10	<u>Marks</u>
2	New Exist Business	30	>60<=70		5	up to 100% Proportionate to % Ach
			>70		10	>100% <110% Multiplying factor 1
			>75<=85		5	>=110% <150% Multiplying factor 1.1
3	Retention Business	40	>85		10	>=150% <200% Multiplying factor 1.25
			>75<=85		5	>=200% Multiplying factor 1.50
4	Private Business	10	>40<=60		5	<i>Additional Bonus Marks: 50% of total Marks achieved if all assigned targets are met along with securing 10 marks against Core Bonus in respect of all the four parameters.</i>
			>60		10	

**Circles/Units are Classified into two categories based on their Stage-IV targets for FY 2023-24:**

**Group A Circles/Units:** Platinum Units - Stage-IV targets >=Rs.300 Crores & Gold Circles >Rs.110 Crores.

**Group B Circles/Units:** Platinum Units - Stage-IV targets < Rs.300 Crores & Gold Circles <= Rs.110 Crores.

**Quarterly Appreciation DOs from:**

**CMD BSNL:** 1st achiever of each group of Platinum units and 1st & 2nd achievers of each group of 'Gold' Circles.

**Dir (Ent):** 2nd achiever of each group of Platinum units and 3rd & 4th achievers of each group of 'Gold' Circles.

Display of Monthly Circle Rankings by PGM (EB-II) / GM (EB-I) for EB-II & EB-I Units respectively.

**Leased Circuits:**

**Service delivery & Service assurance Desirables**

- 90% of total circuit's pendency should be commissioned within 30 days.
- 75% of LC faults should be cleared within 6 hours and 95% within 24 hrs.
- Fault reason updation in Prabal Plus should be above 90%.
- Fault rate should be bought below 0.75%.

- No circuit fault pending in the category of more than 7 days.
- MTTR of leased circuits should be less than 6 Hrs with an aim to reduce it below 4 Hrs.
- All Copper circuits should be fiberized by Oct'23. Immediate prioritization of fiberization is imperative as the fault data conclusively reveals higher percentage of elevated copper end link fault rates, both in total and long duration faults (>7 days).
- Physical verification of all the circuits should be completed.
- Submission of circuit disconnection certificate to Corporate Office on monthly basis
- Fault clearance on daily basis to maintain the SLA as per agreement with different customers and to avoid penalties.
- All the Service Delivery & Service Assurance related ruling circulars are available on BSNL Intranet Dir (ENT) > ED (Core N/W) > Lease Circuit.
- LC cell of BSNL Corporate Office had created Google spreadsheet to maintain All India Contact list of all the employees involved in leased circuit activities. The All India Contact list holds critical significance and it should be updated immediately in case of transfer/ superannuation/ new employee. Link to the document is as following-  
[https://docs.google.com/spreadsheets/d/1\\_p6gTKJRabstBsz6o7uaCH0k4NYpFjLE3ofcsnQdO74/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1_p6gTKJRabstBsz6o7uaCH0k4NYpFjLE3ofcsnQdO74/edit?usp=sharing)
- LC cell of BSNL Corporate Office had created WhatsApp group having officers from all the territorial circles, CN Tx South, ITPC, CNO, CO ND, MTNL. It is imperative that all the employees up to circle level should join the WhatsApp group. Kindly contact **Sh. Alok Ranajn 9436168831**, for any required changes in member pertaining to your circle.
- Circles should submit the circuit disconnection during a month by 5<sup>th</sup> of next month
- Google form to submit BCA wise disconnection reasons  
<https://forms.gle/NG6QsuFA6osvhVJj9>
- Dashboard to see month wise the reason submission count  
<https://datastudio.google.com/s/nmLuzgqKJUM>



- Dashboard to see the disconnection reasons analysis  
[https://datastudio.google.com/s/uL\\_JQpU8s-I](https://datastudio.google.com/s/uL_JQpU8s-I)
- To update old input please use the email link received after entering the information earlier. Do not make a separate entry for same month twice.
- Updation of Circuit pendency reason by End A circle on weekly basis by every Monday
- Dashboard to see the analysis of circuit pendency reasons  
<https://datastudio.google.com/s/goOLNXIANuc>
- Google form link to update pendency reason count
- New ckts pending for less than 30 days -  
<https://forms.gle/jNt9CjXcfpKShySv7>
- New ckts pending for more than 30 days  
<https://forms.gle/pFqbHMyqhFP51ggW6>
- Upgrade ckts pending for less than 30 days  
<https://forms.gle/YfUSyAtybkJVLHRY9>
- Upgrade ckts pending for more than 30 days  
<https://forms.gle/YEdddNPfkq4v1wQg7>

**Policy enablers for meeting Service Delivery & Service Assurance desirables:**

**1. OFC/ Copper/ RF end link commissioned by telecom circle -**

The CAPEX & media is defined in the approved proposal of EB team. Accordingly, the order is issued in CDR system. The telecom circle team should commission the circuit by managing the human resource and material ASAP.

**2. OPEX model -**

Vide Ltr dated 02.11.2020 policy was formulated to provide last mile through

- a. 4F/6F overhead OFC laying OPEX model and
- b. Free band RF modems OPEX models.
- c. Rates and procedural guideline are given in this policy and the amendments thereof (All letters available on Intranet in LC section)

**3. CAPEX power delegation to Circle Heads -**



Vide Ltr no BSNLCO-LC/15/2022-LC dated 08.02.2023, powers were delegated to Circle Heads for incurring CAPEX to commission the pending circuits. Following are the conditions for incurring CAPEX to commission the circuits

- A. If the CAPEX amount is paid upfront - No requirement of commitment
- B. CAPEX amount is compensated against the six months of revenue -  
Customer has to provide commitment of service for 1 years or more
- C. CAPEX amount is compensated against the nine months of revenue -  
Customer has to provide commitment of service for 2 years or more.
- D. CAPEX amount is compensated against the one year of revenue -  
Customer has to provide commitment of service for 3 years or more.

4. **Decentralizing the converter purchase -**

LC section Corporate Office issued the guideline vide Ltr dated 03.08.2021 (available on Intranet). OFC to Ethernet converter may be procured for provisioning of leased circuits by following standard guidelines of procurement of decentralized items subject to budget allocation.

5. **Provisioning of Leased circuits through FTTH partners -**

Vide lr dated 11.12.2020 comprehensive policy was issued by NWP Broadband section, CFA (available on Intranet) regarding commissioning & maintenance of leased circuits through FTTH – Channel partners.

6. **ONT on rental -**

Vide lr dated 23.09.2021 instructions were issued by NWP Broadband section, CFA (available on Intranet) for providing ONT on rent to Leased circuit customers for provisioning of LC circuits through FTTH services as per the rental plan of ONT provided by BSNL or TIP to FTTH customers on rent.

7. **Leased circuit over AirFiber policy (LCoAirFiber) -**

Policy to commission leased line services under Bharat Air Fiber was introduced by NWP Broadband section, CFA vide letter dated 21.02.2022.

Circles should empanel more Air Fiber franchisee to improve the Leased



circuit commissioning in TNF pockets. Following are the brief of rental payable to BAF:

<b>Leased circuits</b>	<b>For aerial distance up to 5 kms</b>	<b>For aerial distance more than 5 kms</b>
Fixed monthly charge to BAF for LC BW up to 50 Mbps	Rs 950	Rs 1500
Fixed monthly charge to BAF for LC BW more than up to 50 Mbps	Rs 1250	Rs 1700

8. **Specific resource requirement through EB System Integrators –**

Specific requirement to commission leased circuit may be met utilizing the System Integrator guidelines issued by EB section.

9. **Miscellaneous policy support**

- Clarification was issued by NWP BB section vide Ltr dated 11.08.2022 that license fee of 8% is not applicable for services on partner providing leased circuits.
- Clarification from NWP BB section vide Ltr dated 13.12.2021 to delink the revenue share payment to the partner from the realisation of amount from the customer. BSNL shall pay for channel partner revenue share as long as customer is live in the CRM and is not disconnected.

10. **All circles should improve TIP & Air Fiber franchisee**

It is observed that Circle with higher rate of commission have higher number of partners. It is suggested that circle office may give target for empaneling TIP & Air Fiber Franchisee to BA based on repeated fault analysis, number of repeated copper faults, circuit pending in TNF, geographical TNF area marking etc.

11. **Overcoming the lack of communication from BCA circle to End A**

Vide Ltr dated 30.09.2022 specific guidelines were given

- a. BCA circle should reply to issues raised by End A circle by message/

email/ letter within 2 working days

- b. OB change request should be completed within 2 working days.
- c. DoA status should analysed and decision should be taken within 2 days with BCA. In case of delay in DoA clearance after 2 days then the issue should be regularly followed up with customer or End A circle
- d. Fortnightly commissioning progress report of project having more than 50 ckts under commissioning/ upgradation/ modification was required to be maintained and shared as per the formats provided. No BCA is maintaining and sharing as per the format on regular basis.

**12. Overcoming the lack of communication from End A circle to BCA circle**

- a. Issues of field unit should be coordinated by End A circle office unit with BCA circle. All India contact list is available from where concern staff may be found.
- b. Higher up of End A circle should escalate the matter with higher up of BCA circle if there is no response to earlier communication.
- c. PHONE CALL should be made in case of email/WhatsApp/ SMS do not resolve the issue

13. No circuit should be disconnected without knowledge of Circle Head.

14. BCA Circle NAM & KAM should be extra vigilant and build better repo to stop the churning from BSNL to other TSPs and migration to SDWAN of other operator/s. The disconnection order from BCA should only be issued after approval from circle head.

15. End A circle LC nodals and field units especially transmission team should give extra efforts to maintain the end links to arrest disconnection due to regular fault.

16. End A circle should increase the TIP & Air Fiber partners to meet the disconnection due to TNF.

## Handling TNF cases

Guideline for TNF cases was issued vide Ltr dated 30.09.2023 summarized

End A Circle declare a location as TNF as it is not feasible utilising CAPEX & media type approval from BCA. End A circle provide the additional CAPEX information or alternate option to commission the circuit to the BCA circle in the CAPEX format shared by BCA.

BCA Circle NAM/KAM will approach customer with alternate endlink option/ additional CAPEX along with option of VSAT for TNF location. Negotiate with the customer for providing onetime payment towards the additional CAPEX or agreeing to other option.

BCA circle will evaluate financial viability w.r.t particular project, CAPEX agreed by customer, alternate technology costing, various rulings and all the delegated by Corporate Office. Accordingly revised approval will be conveyed by BCA circle to End A circle.

At BCA end, if still the commercial proposal non-viable the case should be sent to EB I or EB II unit, Corporate Office with detail of additional CAPEX or any other specific proposal to make link feasible. Additional detail of in ECT format along with RoI detail of the project, undertaking for best negotiation by NAM/KAM for OTC from customer may be shared

To handle the TNF cases pending at End A for which proposal is sent to BCA or pending due to customer was issued vide Ltr dated 21.09.2023 as below

### **1. Cancel Request (CR) option in CDR**

CR option can be utilized by End A & BCA circle as following

- A. Against a circuit "Cancel request" can be marked in Clarity by End A circle. The order will move from Clarity to BCA CO work list in CRM.
- B. The order is not cancelled but it is pending with BCA Commercial Officer. End A actual pendency will be reduced accordingly.
- C. Once the condition of commissioning is met the order can be sent back by BCA Commercial Officer to End A circle after the commissioning conditions are met.

### **2. End A Circle**



- A. Circuits pending for commissioning due to following reason must be marked as “Cancel Request”
- i. Circuits pending due to customer reason in either of following condition
    - a) Customer is asking to delay by more than 1 month due to any reason OR
    - b) Where local end customer is denying to take services.
  - ii. TNF cases – ONLY after meeting both of following conditions
    - a) Exhausting all the commissioning possibilities elaborated in reference letter including any future transmission plan in next 1 month
    - b) Sending TNF information (CAPEX & LAT/LONG of nearest Tower) in the format to BCA after. Sample format of MH circle for providing TNF information is attached at Annexure B.
- B. Circle Head/ GM LC of End A Circle Office should review pendency reason of circuits in CR category and pull back the orders from BCA which are found not meeting the condition mentioned in para 2 (A).
- C. End A Circle head should monthly review the circuits pending in CR category.

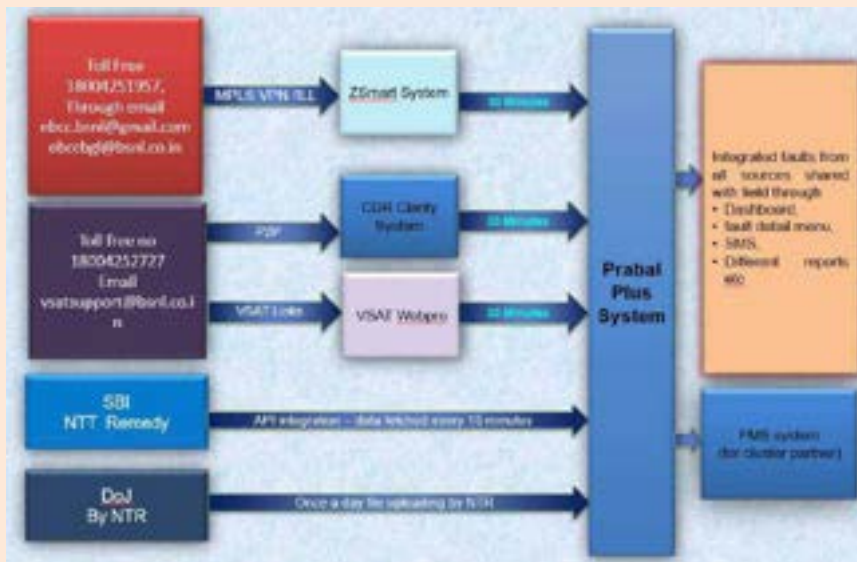
### **3. BCA Circle:**

Concern GM of BCA circle should review pendency reason of circuits in CR category and send back the orders to End A which are found not meeting the condition mentioned in para 2 (A).

#### **Prabal Plus: Fault Monitoring Tool**

Prabal Plus system is aggregating system to reflect the faults booked in different systems (CDR, MPLS NOC, VSAT, API integration with customer etc.). The integration of BSNL fault systems with Prabal and duration of fault transfer is as following.





Prabal Plus system provide following information in in user friendly way meeting following requirements

- Aggregate all the faults in to a single portal
- Different priority to the Enterprise Customers based on Bandwidth, service and category
- Avoid manual intervention to identify the circuit details
- Minimize the time to disseminate the faults booking and its details
- Enable to allocate proper resources including materials & manpower
- **Prabal plus dashboard provides**
  - **Summary view of the faults** within the scope of the user.
  - **Categorizes the faults** as per duration of the faults and shows the total faults
  - **Summarized views of the faults** as per project (Customer), Circle, BA, SSA, Exchange.
  - **Downloading the dashboard** view table as Excel or PDF or copy it to the clipboard.
  - All fields in the dashboard can be sorted and search option to users.
  - **Priority of ticket can be changed** as A, B, C to customers

Send email to [lcprabal.support@bsnl.co.in](mailto:lcprabal.support@bsnl.co.in), for any query related to Prabal Plus system managed by CN Tx South.

**Mera Circle Sarvshresth Circle: Monthly campaigns**

- BSNL intend to elevate its brand reputation in Enterprise segment by emphasizing on the timely provisioning of leased circuit services and

ensuring robust service assurance.

- In pursuit to achieve above aim, the Corporate Office's LC section initiate monthly campaign known as the 'Mera Circle - Sarvshresth Circle' (MCSC) challenge. A comprehensive parameter framework has been meticulously devised to assess the effectiveness of circles in Service Delivery, Service Assurance, and compliance to efficiency related information pertaining to Leased circuits.
- The MCSC challenge encompasses specific goals, evaluation criteria, commissioning targets, and prerequisites, all communicated at the onset of the campaign and results announced at the conclusion of campaign.
- LC section, Corporate Office prepares dynamic live dashboard displaying achievement against targets in quantitative and graphical formats, marks secured and ranking of circles during MCSC month. The fault data is updated on daily basis including holidays and commissioning data is updated on weekly basis.
- Each Circle is encouraged to analyze the dashboard data and implement corrective actions to enhance their performance in MCSC.
- Schedule of MCSC
  - In Q1, Q2 & Q3      During last month of the quarter
  - In Q4                      During every month of the quarter
- At the end of MCSC
  - CMD appreciation letter given to rank 1 circle in large, medium and small circles category.
  - CMD advisory letter to the bottom circle in large, medium and small circles.
  - Rank 1 circle in each category will review the contribution of LC concerned persons in achieving the rank and nominate one employee from each circle who performed outstanding during the MCSC. Appreciation letter from Director Enterprise and a memento worth Rs. 5000/- will be given to nominated employee.
- **Parameters of MCSC**

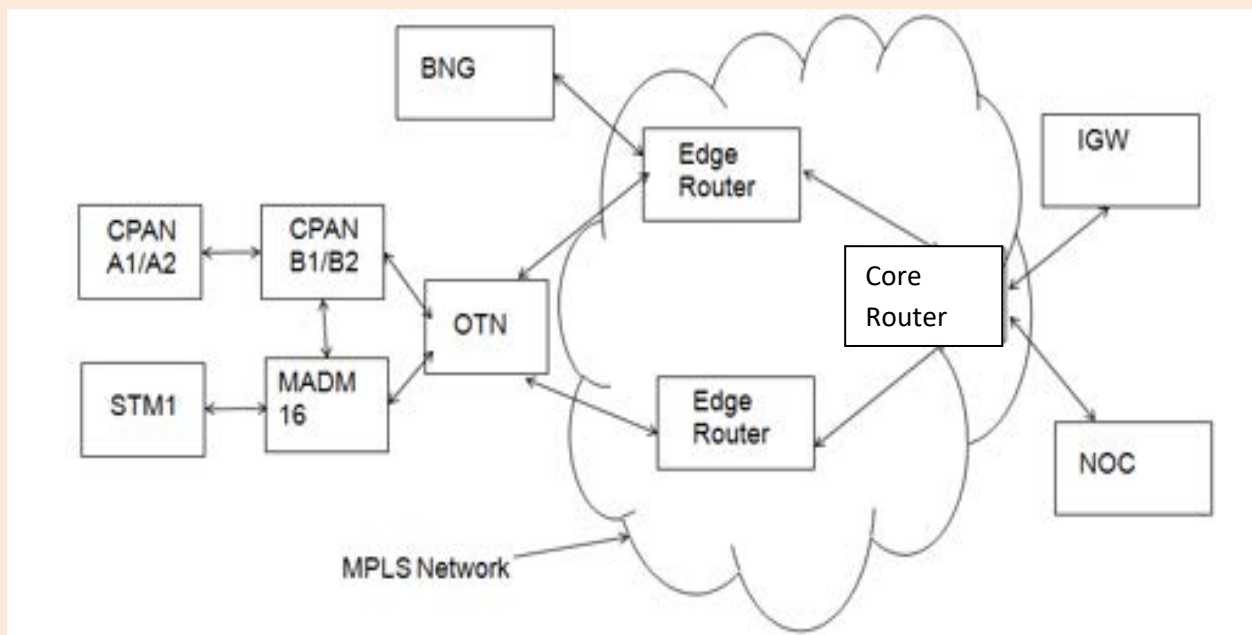
1. Gross circuits commissioned	Max marks	15
2. No of up gradation circuits completed	Max marks	5
3. Average fault rate figure during the month	Max marks	16.25

4. Average no of circuits ckts in more than 7 days fault during the month		Max marks	8
5. Becoming net positive by end of MCSC		Max marks	5
6. BCA circle Resubmit cases/ BCA Circle wise DoA cases/ End A wise customer confirmation		Max marks	5
7. Disconnection reason updation in Google form	Max marks		5
8. Change in circuit pendency status which were pending on start of MCSC and their status at end of MCSC	Max marks		5.75
9. Physical verification	Max - 10	Max	marks
10. Disconnection undertaking from BCA circle to CO, ND	Max marks		5
11. Conversion of Copper circuits to OFC/ reliable media	Max marks		15
12. Updating circuit commissioning pendency reasons		Max marks	5

**Core Network Overview:**

Total OFC laid till date (RKM)- 8.63 Lakh Kms  
 Total Active OFC RKM: 7.02 Lakh Kms  
 Optical Fiber Network (NLD) Active RKM – 2.5 Lakh Km  
 Optical Fiber Network (Access+ Backhaul) Active RKM – 4.52 Lakh Kms  
 Core Routers (99 Nokia + 16 Huawei = 115)  
 Edge routers (480) (Cisco, Juniper, Huawei)  
 OTN Network (201 Nodes) for transport  
 MPLS TP Nodes (CPAN) - (About 46000 No.) for access & aggregation  
 (UtStar & Fiberhome)

**BSNL CORE NETWORK ARCHITECTURE**



**Desired OFC Transmission Network Parameters to be maintained by all CN-TXs/territorial Circles.**

- I. Network reliability (>99%)
- II. MTTR (<4 Hrs. for core network and < 4Hrs for urban areas and <6 hrs in Rural Areas)
- III. FAULT RATE (<1%)
- IV. CPAN UPTIME (>99.2%)

**Monitoring of OFC Network through Transnet Portal:**



- The **Transnet Portal** is accessible at IP: <http://10.192.161.95/t2/> . Daily basis fault report downloaded from Transnet portal and same is uploaded to intranet for reference of field Units.
- Long fault may be track and arrange for early rectification accordingly.
- Retrieval of Fiber report as faulty fiber count downloaded on Monthly basis and same has been circulated in review meeting for achieving the target assign.
- Reliability, MTTR and fault rate report may be downloaded from Transnet Portal for Monitoring of N/W parameter.
- Active OFC and percentage of OFC route updated report may be downloaded from Transnet Portal.
- Material Consumption data is also available in Transnet portal.

**Prajval App:**

The App is for tracking (updating the location data of the mobile device of the FRT member to the server in real-time basis) members FRT (Fault



Rectification Team) & Patrollers of in-house and outsourced routes. The movement of the FRTs can be viewed in the Transnet Web App.

The module has two parts:

1. The “Prajval” mobile app to be installed in the FRT member’s mobile.
2. The Web page where the officers of BSNL can track the movement of FRT Member

**ZSMART:** Portal for IP-MPLS Network

URL: 10.198.208.153:8000/OSS

Request regarding MPLS are booked and monitored in Zsmart portal. Field of monitoring and docket in Zsmart are as below:

1. Request monitoring
  - IBP-Peering Link monitoring
  - Back bone monitoring
  - Node monitoring.
2. History monitoring:
  - IBP-Peering Link monitoring
  - Back bone monitoring
  - Node monitoring.
3. Task center:
  - To be processed
  - Processed
4. Escalation of request
5. MPLS Bulk monitoring
6. SLA Violated
7. Approaching SLA violation.

**OTN MINI EMS:**



- **OTN MINI EMS** is accessible at IP: <http://str.bsnl.co.in:8014/>.
- The service available in OTN MINI EMS are:
  - OTN MINI EMS – For real time monitoring of OTN Routes, service availability and Fault monitoring.
  - Zone wise monitoring is available on the system by clicking on Zone the real time status of OTN routes will be available to user.
  - OTN Route Failure Summary & OTN Service Failure Summary is available on portal. The report is being circulated to all CN-TX Circle on daily basis.
- **CPAN MINI EMS** of all Zones (N, S, W, and E) are available on MINI EMS.
- **CPAN NNI LINKS** (CPAN Network to Network) Failure details are available on portal CPAN NNI links failure summary is also available on Network. The report is being shared with all circles on daily basis.
- **ALIEN MINI EMS:** ALIEN Service Details on NMS is available on portal.
  - OTN EMS & Transnet system were integrated and the automatic fault booking for the OFC routes which are being for the OTN network was started which covers around 60,000 Km out of the total 2,52,000 RKM of the Core Network.
- **Other monitoring exercises being executed at BSNL CO level:**

Extensive monitoring of the core network uptime is being done for the improvement in the uptime of the OFC network. Statuses of the following reports are being posted on the Whatsapp group and also being monitored by Director (Enterprise):



1. OTN route failure summary & OTN routes down for more than 8 hrs
2. OTN Service link failure summary & links down for more than 8 hrs
3. MPLS backbone links failure summary & backbone links down for more than 24 hrs
4. MPLS router isolation
5. CPAN NNI failure report
6. OFC faults pending for more than 1 day.
7. Pending OFC faults uploaded daily on the intranet.

**For Strengthening Core / Transmission Network -**

**Suggestion/Instructions to be followed by Circles / field units:**

1. Patrolling, preventive maintenance, repairs etc in select high fault prone area needs to be increased to bring better results, the same has been asked to be explored & implemented.
2. Circles have to emphasize to book 100% OFC cable faults in the Transnet system. Circles have been advised that faults should be booked promptly and closed only when the break of the cable is rectified. Then only any analysis and redesign of the process is possible.
3. Guidelines issued for fault tracking and fault rectification should be earnestly followed for 100 % clearance of faults.
4. Prajwal App developed in-house by CN-TX South for the tracking of the FRTs & Route Patrollers was further improvised through ITPC and has been made mandatory for outsourced FRT and in-house FRTs with the Implementation of Real Time Fiber Monitoring System (RTFMS), immediate fault location / detection of optical distance of the fault will be possible which will further help in reducing the MTTR. It is mandatory to use Prajwal app by all circles.
5. CBuD (Call before you Dig) App developed by Govt. of should be used by all OFC maintenance team wherever it requires more coordination with other agencies.

6. CPAN port utilization should be done in optimized way.
7. Long pending faults should be rectified on Top Most priority.
8. Environmental condition like temperature, humidity, cleanliness should be maintained in Transmission equipment room to avoid route failure.
9. Retrieval of Faulty fiber must be done on Top priority which will help in strengthening of OFC network and will help in leasing out of spare dark fibre to other retail customers (govt. Agencies/Pvt. Operators etc.).
10. Uploading of photos and videos for New OFC laying/Rehabilitation work are to be followed by all circles scrupulously.

**International Long Distance:**

➤ **International Internet Gateway:** - BSNL has one International Internet Gateway at Agartala.

➤ **Global Managed Network Services:** -

BSNL has empanelled following four bidders for provisioning, commissioning and maintenance of International Bandwidth and Global Managed Network Services for establishment of MPLS NNI with BSNL: -

- (1) M/s Bharti Airtel Limited
- (2) M/s Tata Communications Limited
- (3) M/s Reliance Jio Infocom Limited
- (4) M/s Vodafone Idea Ltd.

**Chennai to Andaman and Nicobar Islands (CANI) Submarine Cable Project:**

This Project was launched & dedicated to the nation by Hon'ble PM on 10<sup>th</sup>, August 2020. The Submarine OFC Cable System is maintained by BSNL. Key

Details are as follows:

- The project cost of 1224 Cr was funded by USOF.
- The Total Submarine Cable link distance is 2312 Kms.
- Chennai – Port Blair: 1492 Kms – Repeated Segment.
- Initial Capacity: 400 Gbps,
- Other segments (7 nos.): 820 Kms – unRepeated Segment.



- Initial Capacity: 200 Gbps,
- Four Fibre Pair Cable.
- The System has a design life of 25 years
- The Bandwidth created under this cable system is leased out to TSPs as per the tariff decided by USOF.
- The CANI Submarine Cable is connecting Chennai to Port Blair along with seven other Islands of Andaman & Nicobar namely, Little Andaman, Car Nicobar, Kamorta, Great Nicobar, Swaraj Dweep, Long Island and Rangat. BSNL is the Project Executing Agency.

**Kochi to Lakshadweep Islands (KLI) Submarine Cable Project:** The Submarine OFC Cable System is maintained by BSNL. Key Details are as follows:

- The Project cost of 1072 Cr is funded by USOF.
- The total Submarine Cable link distance is 1868 Kms
- There are 13 Segments in the KLI Cable Project wherein Kochi to Minicoy Segment (438 Kms) is repeated segment and remaining 12 segments (1430Kms) are non-repeated.
- Initial capacity of 200 Gbps on all segments.
- The System has a design life of 25 years.
- The Bandwidth created under this cable system will be leased out to TSPs as per the tariff decided by USOF.
- The KLI Submarine Cable is connecting Mainland India (Kochi) to 11 inhabited Islands of Lakshadweep namely Minicoy, Kalpeni, Kavaratti, Agatti, Amini, Androth, Bangaram, Bitra, Chetlat, Kiltan and Kadmat. BSNL is the Project Executing Agency.



### **Policies by different Units of Corporate Office:**

<b>S. N</b>	<b>Policy Guidelines Concerned Particulars</b>	<b>Unit</b>	<b>Contact Officer Name / Designation/ Mobile / Email ID</b>
1	Customer Private Network Establishment (CPNE – Erstwhile SI Guidelines)	EB-II	Sh. Davinder Pal Singh Chawla, AGM (EB-II), BSNL CO.-09464016774, / Sh. Rahul Sharma, DM (EB-II), 9425425566 <a href="mailto:eb2bsnlhq@bsnl.co.in">eb2bsnlhq@bsnl.co.in/gmail.com</a>
2	Channel Partner Policy (CPP)	EB-II	Sh. Davinder Pal Singh Chawla, AGM (EB-II), BSNL CO.-09464016774, / Sh. Sunil Kumar, DM (EB-II), 9868259097 <a href="mailto:eb2bsnlhq@bsnl.co.in">eb2bsnlhq@bsnl.co.in/gmail.com</a>
3	MNS Policy	EB-I	Sh. Sanjay Kumar, DM (EB-I), BSNL CO.-9868121020, <a href="mailto:sanjay.kumar3.bsnl@nic.in">sanjay.kumar3.bsnl@nic.in</a>
		MP Circle	Sh. Kamal Gangwani, DM (EB-MP)-09406916700, <a href="mailto:kamal.gangwani@bsnl.co.in">kamal.gangwani@bsnl.co.in</a>
3	Application Service Providers (ASPs) for software provision, support etc. and Call Centre work etc.	NB	Sh. Yogesh Chaudhary, DM (NB), BSNL CO.- 9968690333, 7982969022, <a href="mailto:yogesh@bsnl.co.in">yogesh@bsnl.co.in</a>
4	ASPs related to Bulk Push SMS and other services.	VAS	Sh. Rajesh Kumar Chawla, DGM (VAS), BSNL CO.- 9416370666, <a href="mailto:rajeshkumar.c.bsnl@nic.in">rajeshkumar.c.bsnl@nic.in</a>
5	Empanelment for Smart City related works	Smart City	Ms. Seema Khandelwal, DM (Smart-City), BSNL CO.- 9435599404, <a href="mailto:skhandelwal810@gmail.com">skhandelwal810@gmail.com</a>
6	Vehicle Tracking / Fleet Management (M2M Services)	VAS	Sh. Rajesh Kumar Chawla, DGM (VAS), BSNL CO.- 9416370666, <a href="mailto:rajeshkumar.c.bsnl@nic.in">rajeshkumar.c.bsnl@nic.in</a>

<b>S. N</b>	<b>Policy Guidelines Concerned Particulars</b>	<b>Unit</b>	<b>Contact Officer Name / Designation/ Mobile / Email ID</b>
7	IDC Services including Data Centres etc.	IT-CFA	Md. Aftab Ahmed Khan, DGM (VAS), BSNL CO.- 09868500203, <a href="mailto:aftabahmed.khan.bsnl@nic.in">aftabahmed.khan.bsnl@nic.in</a>
8	WiFi-EOI for empanelment of SI for turnkey solutions.	NWP-BB	Sh. Sharad Pal Singh, DM (NWP-BB-CFA), BSNL CO.- 9540317176 <a href="mailto:sharadpal.singh.bsnl@nic.in">sharadpal.singh.bsnl@nic.in</a>
9	PABX Agreement/Policy	NB	Sh. Yogesh Chaudhary, DM (NB), BSNL CO.- 9968690333, 7982969022, <a href="mailto:yogesh@bsnl.co.in">yogesh@bsnl.co.in</a>
10	Procurement Guidelines	MM	Sh. Manoj Jain, DGM (MM), BSNL CO.- 9868221748, <a href="mailto:manoj.jain.bsnl@nic.in">manoj.jain.bsnl@nic.in</a>
11	E-Tendering	MM	Sh. Manoj Jain, DGM (MM), BSNL CO.- 9868221748, <a href="mailto:manoj.jain.bsnl@nic.in">manoj.jain.bsnl@nic.in</a>

# HR Vertical



- **Man Power Management-** Right person at right Job, Manpower may be distributed as per the requirement in all the verticals and locations. Please check that more than sanctioned/required executives are not posted in indoor jobs.
- **Online Transfer Portal-** This is a portal for transfer requests of employees for intra- and inter-circle transfers. This is an online portal where employees may submit their requests through their ESS login. The flow of requests from employees to the transferring authority is completely online through SAP.
- **E-DPC:** Time-bound promotions and functional promotions are being accessed through ERP-SAP in online mode instead of an earlier off-line mode.
- **IPMS:** Now quarter - wise targets are being assigned to each and every executive of BSNL through their ESS logins.
- **BSNL Online Attendance Portal:** This portal for attendance has been implemented on PAN India basis for all the employees of BSNL for marking their attendance online through this portal using OTP for both IN and OUT marking.
- **E-APAR for Non-Executives:** Like executive employees, online filling of APAR by non-executives also has been implemented in the ESS.
- **E-office:** Hard files now have been replaced by online E-Office packages.
- **E-Roster:** BSNL Cooperate Office is also in the process of replacing hard manual rosters by maintaining or preparing the roster online through SAP.
- **Online CBT based on Internal Exams** (LICE/LDCE) - Internal exams for the promotion of employees (executives and non-executives) against the internal quota are being conducted through online CBT.
- **Training to Staff:** The regular BSNL trainings may be given to staff. The staff involved in direct public contact may be imparted behavioral training. The core team members of Transmission/ NIB and MSC may be given technical trainings of short durations to update their knowledge. Try to encourage executives to enroll on iGoT/LMDS platforms and get maximum advantage out of it. Start a monthly recognition of executive who has done maximum online useful trainings.

- **Discipline:** Discipline must be followed by all staff. The provisions of BSNL CDA rules may be briefed to all by a small 1 day field workshop.

### **Activities to motivate employees:**

- Regular talks to motivate employees.
- Felicitation of best performing employees on World Telecom Day & BSNL Foundation Day. Also, awards like “Employee of the month” may be started.

### **Miscellaneous Activities:**

- Timely disposal of PG-Cases: No case should be pending for more than 30 days. BA Head should regularly monitor PG cases.
- Conduct Telecom Advisory Committee (TAC) meetings twice a year
- Conduct consumer awareness meetings once a year per district.
- All staff issues involving associations or unions must be resolved timely.
- Regular monitoring of Legal Cases, Review all pending Legal cases, if possible try to close the petty cases. Ensure that all legal and arbitration cases have been entered in LIMBS. Take monthly list of pending court/arbitration cases from LIMBS and monitor.
- Meet the district administration regularly to know their issues and resolve them on a priority basis. It will help build relations with the district administration.

### **Land and Building – Asset Monetization**

- Ensuring that the title ownership records or land assets are properly maintained by the Custodian of Land Records (CLS) as per the Monetization Policy.
- Ensuring that physical verification of each land asset is done every six months.
- Guarding against encroachment of land assets and taking necessary action for eviction in case of encroached lands.
- Identification of unutilized or underutilized properties for monetization.
- Conducting legal due diligence for title ownership and marketability of the land assets identified for monetization.
- Extending required assistance to Valuers, Transaction Advisors etc. by

providing documents, enabling site visits etc.

- Ensuring wide publicity of offer for sale of lands, providing information to the prospective buyers, arranging buyers' meets and all other related activities required for successful monetization.
- Taking up activities related to transfer of land parcel to the successful bidder and concluding the sale.

### **Leasing out Infrastructure:**

- BA Head has to take several initiatives for renting out office space, AC space, Staff Quarters, Store Go downs, Open lands etc. Lot of scope exists for short term renting. Focused effort will fetch handsome revenue to BSNL.
- Similarly, leasing out Fibers/ Cable Ducts / sharing of Tower etc. also has good potential.

### **Inspections:**

- Inspections is very important activity to be carried out by the BA Head. So many ground realities are revealed only through physical inspections.
- At least one exchange to be visited in a week. Keep a fix date/time say 2<sup>nd</sup> half of every Saturday when BA Head will be outdoors.
- Ensure that visit note is always issued after inspection of Telecom Installation.

### **Electrical Installation:**

1. Monitoring of electrical infrastructure through IM module on daily basis with special emphasis on battery health and battery capacity suitability. It shall be ensured that adequate capacity battery installed and they have adequate back up time. The battery repairing to be done in case some cells are faulty. Delay in this will affect other cells also.
2. Down time of DISCOM to be monitor to plan for battery and diesel requirements.
3. AC temperature to be monitored to ensure to avoid high temperature.
4. With IM module, requirement of diesel to be verified and filling arrangements to be decided.
5. On monthly basis power consumption trend to be seen to evaluate up

time and down time to avoid pilferage.

6. Health of electrical instruments i.e. DG/AC/FD/FF systems to be monitor on 15 days basis.

## **OJAS** **(Energy Saving Project)**

In Sanskrit, OJAS means 'Energy'. It is an energy saving driven project started in 2017-18 by electrical wing to save or conserve energy (electricity + fuel) in BSNL telecom buildings, towers, sheds etc.

1. Monthly/Quarterly/Annually check and review energy (Electricity + Fuel) expenses of the BA to meet the annual energy saving target of the circle.
2. Review electricity and fuel consumption of all the installations under the BA by conducting Energy Audit.
3. Ensuring that all electricity bills are paid in time and no penalty is levied on account of power factor, high contract demand, and old arrears. The proper category of tariff is to be ensured.
4. Implementation of various energy conservation measures such as No Cost Measures (NCM), Low-Cost Measures (LCM) and High-Cost Measures (HCM) in coordination with electrical unit.
5. Identification of buildings to implement One Building One Power Plant One Battery Bank One Air Condition (OBOPOBOA).
6. Implementation of OBOPOBOA in coordination with Electrical Unit.
7. Conducting Energy audit of at least 20% installation in a year to ensure optimization of contract demand, proper capacity of battery, power plant size and working module, UPS size.
8. Conducting fire audit along with energy audit to ensure proper size of fuses, switched, working of fire detection and firefighting system, exit paths and regular fire drill.

## Operation Samundra Manthan-OSM (Scrapping and Auctioning)

Operation Samundra Manthan in short OSM is an effort to scrape and dispose of through govt. online auctioning platforms of all such materials that are unserviceable, old, obsolete materials lying at BSNL installations across the country which gives BSNL not only a stream of revenue but also clean up the store spaces and surroundings. Further, through OSM Capital Work-in-Progress (CWIP) and Physical verification of materials are also monitored.

1. Identification of any materials that fit for scrapping and dispose of which may be due to life expired, obsolete, and unserviceable, etc.
2. Preparation and approval of ACE-9 to properly identify the disposal items in a BA.
3. Auctioning of disposal items through MSTC a Govt. of India PSU to auction scrapped materials.
4. Recording sales proceeds and clean up the space for better utilization.
5. Monitoring and striving to reduce Capital Work-in-Progress (CWIP) as per the guidelines or standard procedure issued by the CO, New Delhi.
6. Physically verify the inventories. 33% of inventory must be verified in a year as per the guidelines of BSNL HQ, New Delhi.
7. Identification of slow-moving and non-moving store materials.
8. Intimation of such slow-moving and non-moving store materials to other circles for internal consumption.

### **Infra Monitoring System (IMS):**

The Infra Monitoring System (IMS) consisting of Main Controller Unit (MCU), DG Controller Unit (DGCU), and Switch Room Monitoring Unit (SRMU) communicate with the BSNL IT Platform server to remotely monitor the following critical infra-alarms/parameters to achieve better uptime of BSNL telecommunication network.

- a. AC MAINS STATUS:** The system detects and report the status of mains availability in the Exchange/BTS as soon as the mains fail.
- b. DC VOLTAGE:** The health of 48V DC Battery Bank (BB) is checked and monitored continuously by recording the DC voltage in



analogue form from at least 4 tapping points (**V1, V2, V3, & V4**) in the Battery Bank. It also records the time taken by a battery to reach from >13V to 11.5V which gives an ideal to detect the unhealthiness of a particular cell for repairing or replacement before it damages the other healthy batteries.

- c. **DG ON STATUS:** Whether DG set is ON or OFF after the Mains fail in the exchange.
- d. **Other DG PARAMETERS:** DG fuel level, DG oil pressure
- e. **HUMIDITY:** The range of humidity measure is 0-100% in analogue to digital form.
- f. **TEMPERATURE:** The temperature in the IM system shall be 0-100°C in analogue to digital form.
- g. **SITE STATUS:** It gives the status whether the sites is ON/OFF air. If OFF air, the reason; whether it was due to media failure or power failure.

It is a remote monitoring system made available to Circles/BAs in the form of live dashboard to generate Executive report/summary every day, to attain operational efficiency by minimizing human efforts, and to achieve the desire level of uptime.

1. Generate Executive Report/Summary every morning to know the status of infra alarms of telecom installations under the BA.
2. Replace the battery if the time taken to reach 11.5V when the power from Mains and DG both is off is very less.
3. The reports in dashboard also give if the exchange room is very cool or hot or very hot.
  - 3.1 Temperature (C) <20 degrees Celsius is very cool.
  - 3.2 Temperature (C) >= 26 degree Celsius but <=50 degree Celsius is Hot.
  - 3.3 Temperature (C) > 50 degree Celsius is very hot/fire.
4. The site is OFF air due to:
  - a. Media failure, if the DC voltage was >=50V at the time of reporting.
  - b. Power Failure, if the DC voltage was <=45V at the time of

reporting.

5. Remote DG operation features wherever applicable can be sue to minimize the man power.

Thus IM module is helpful in monitoring the infra status and more importantly it enables to see the health of battery bank individual set of cells so that remedial action can be taken so that it does not damage further cells. Further in case of failure of exchange log of various parameters will be available to diagnose the reason of fault. The urgent events like fire / deep discharge of battery/ diesel unavailability/water leakage can be monitored on immediate basis. The data of power non availability and DG run can be used to evaluate battery capacity and diesel consumption.

# Finance Vertical

## FINANCE VERTICAL

In BSNL CO, following sections are working under DIR. Fin.

- 1) CORPORATE ACCOUNTS
- 2) BUDGET & BANKING
- 3) CORPORATE FUND MANAGEMENT
- 4) PROCUREMENT FINANCE
- 5) TAXATION
- 6) REVENUE ASSURANCE
- 7) INTERNAL AUDIT
- 8) ESTABLISHMENT FINANCE/ SEA
- 9) CORPORATE PLANNING & MONITORING

### **A. CORPORATE ACCOUNTS**

#### **1. FINANCIAL KPI'S FOR MEASUREMENT OF CIRCLE PERFORMANCE**

The KPI's for measurement of Financial Performance of Circles are issued on quarterly basis as per following:

EBITDA(Earnings Before Interest, Taxes, Depreciation, and Amortization)% for the circle	$(EBITDA/Total\ Income) \times 100$
Opex Ceiling Amount for the circle	As per Budget Allocation
Asset Turnover Ratio for the circle	Total Income / Fixed Assets excluding Land) x 100
Trade Receivable in days for the circle	$(Trade\ Receivables / Revenue) \times 365$

Circle needs to put in best efforts to achieve the targets so that Financial Parameters of MoU are achieved by BSNL. These KPI's are included in the IPMS of Circles/BAs. Following are the examples of actions and their impact on the Financial KPI's:

<b>Action</b>	<b>EBITDA % for the circle</b>	<b>Opex Ceiling Amount for the circle</b>	<b>Asset Turnover Ratio for the circle</b>	<b>Trade Receivable in days for the circle</b>
Bringing new business	Depends on EBITDA margin of additional revenue.	N/A	Favourable Impact	If collection is done in time, the KPI will be improved
Reduction in cost	Favorable Impact	Favourable Impact	N/A	N/A
Improvement in collection	If old dues are collected, the EBITDA will increase with reduction of provisions	N/A	N/A	Favourable Impact
Decommissioning of Assets not in use	It will reduce EBITDA (and %) if NRV is less than book value	N/A	Favourable Impact	N/A
Sale of Scrap	If realization is more than NRV then EBITDA will improve	N/A	N/A	N/A
Billing of unbilled / short billed cases	Favourable Impact	N/A	Favourable Impact	N/A
Improvement in ARPU	Favourable Impact	N/A	Favourable Impact	N/A

## **2. ACTION / FOCUS POINTS**

The actions of the BA Heads need to be focused on Business, nevertheless, the BA heads need to take necessary actions to ensure proper compliance of the financial and accounting matters. There are several audit qualifications which are continuing for long for BSNL, e.g.

- Prior period bookings are very common
- Lease hold properties accounted as freehold and vice-versa
- Disallowance of subsidies and claims by DoT
- Old CWIP / Delayed capitalization
- Renewal of leases are pending
- Assets held for sale – issues w.r.t. NRV
- Mutation of land is pending
- Old balances lying in books due to lack of review

Following has to be ensured:

- Physical Verification of Fixed Assets and inventories
- Creation/ Reconciliation of Provisions/ Liabilities and its monitoring
- Monitoring Reconciliation of receivables as per General Ledger & Sub-Ledger
- Monitoring of Payment of all statutory dues & its reconciliation in time to avoid interest and penalty
- Ensure timely voluntary closure/ DNP of connections.

The BA heads need to ensure action on these issues and they are responsible to mitigate the audit qualifications.

### **3. IMPORTANT QUARTERLY ACTION POINTS**

It is important that the action points of the BA be reviewed at least on quarterly basis so that the objective of performance improvement and growth is met.

BA heads should ensure timely closing of books and actions taken on Audit qualifications on quarterly basis as per the schedule given by the circles, so that the Corporate Office is able to comply with the financial closing timelines for the company.



## **4. FINANCIAL STATEMENTS**

BSNL prepares its financial statements as per Ind AS. BSNL is a Debt Listed company, as it has issued Non-Convertible Debentures (NCDs). The NCD's are listed on BSE. In view, of the same, BSNL is required to comply with the SEBI (LODR) Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations 2015, as per which BSNL has to publish its Financial Statements on Quarterly basis.

BSNL does Closure of accounts on quarterly basis, with Limited review at the end of Q1, Q2, and Q3. Further, BSNL does its Annual Closure of accounts at the end of every Financial Year with a full Audit of its books of accounts. The timeline for quarterly closure of Accounts is 45 days from the end of every quarter, and for Annual closure of Accounts, it is 60 days from the end of the every Financial Year.

CA Section at BSNL Corporate Office issues the Closure of annual accounts Circular before every financial year closing, which includes schedule of activities for the circles and the corporate office, and the guidelines on various accounting aspects.

## **B. BUDGET & BANKING**

Budget is a fundamental financial planning process that BSNL undertakes to allocate resources efficiently and achieve their objects. Two critical components of budgeting are Budget Estimates and Revised Estimates. It is very essential for BA head to understand their significance and how they contribute to effective financial management.

### **BUDGET ESTIMATES**

Budget estimates refer to the initial financial projections for a specific period, typically a fiscal year. These estimates serve as the foundation for financial planning and decision making. Budget estimates are based on historical data, market analysis and organization goals. This process involves forecasting revenue, expenses and other financial elements. Once the budget estimates are in place, Resources are allocated accordingly. Budget estimates are crucial for decision-making. They help organization to determine whether they have the financial capacity to undertake new initiatives, expand operations and invest in capital projects. So, BE should be prepared considering all the targets and requirements of a business area. Budget must always be linked with the projected revenue and expansion of the business.

Revised estimates also known as budget revisions come into play when there are significant deviations from the budget estimates. Though it should be only when unforeseen events or changes in the business environment or requirement impact the finances. This involves analyzing actual financial performance, identifying variations from original projections and understanding reasons behind these discrepancies.



Budget estimates set the initial financial roadmap for an organization, while revised estimates allow for necessary adjustment in response to changing condition. Together, these components ensure that financial plans remain flexible and aligned with strategic objectives, ultimately contributing to effective financial management and organizational success.

CBB section issues a circular in the first quarter of the financial year to upload OPEX budget RE for the current FY and BE for the next FY in SAP/ERP under versions “21” and “11”, respectively. These circulars are available on the BSNL intranet.

## **BUDGET CONTROL**

Budget estimates establish benchmarks for performance evaluation. They enable organisation to compare actual financial results with projected figures thereby promoting accountability among departments.

Budgetary control is a critical aspect of financial management that enables organisation to maintain fiscal discipline, allocate resources efficiently and achieve their objectives. Budgetary control is the process of monitoring, managing and regulating financial resources to ensure they align with the budgeted targets and organizational goals. Budgetary control helps organisation maintain financial stability by preventing overspending and resource misallocation. It provides a basis for evaluating the performance of business areas, circles and projects. Continuous monitoring of financial transactions and comparing them to budgeted figures are essential. This enables early detection of discrepancies and corrective action. This can be achieved by implementing cost-control measures such as cost reduction initiatives, procurement optimization and vendor negotiation to manage expenses effectively.

Budgetary control is the linchpin of financial management, guiding organisations towards financial discipline and stability, strategic alignment and optimized resource allocation. It is an ongoing process that requires vigilance, adaptability and a commitment to fiscal responsibility.

Code in SAP to view CAPEX Budget: ZIMBUDGET\_1

T-Code in SAP to view OPEX Budget: GR55->ZFM1

## **CENTRALIZED PAYMENT PROCESS**

Centralized payment processing is a strategic approach that organization adopts to streamline and optimize their financial operations. It involves consolidating payment functions and resources into a single centralised system. Centralized payment process is the consolidation of financial transaction management. This approach enhances efficiency, reduce

cost, improve controls and minimize the risk of errors associated with dispersed payment functions.

BSNL has adopted it gradually with adding one by one expenses heads. Circles are required to feed pre-defined assignment code against each document/invoice in “assignment” field. With the introduction of assignment codes, the circles are not required to submit fund request to corporate office. The CBB section fetches the data from SAP on the basis of these assignment codes for payment. Payment of most of the expenses head are being done by centralised settlement cell established at corporate office.

CBB section issues necessary circulars regularly on BSNL intranet. BA Heads may refer the same for details.

## **C. PROCUREMENT FINANCE**

**Financial aspects related to Procurement:** Following are some of the major aspects which need to be monitored by BA heads. The instructions issued by various sections of BSNL CO should be used as primary reference.

1. Procurement of services or goods should be only as per approved budget. The purchase proposal originated by planning or operations units must necessarily contain the following parameters which should be vetted by Finance during their scrutiny/ appraisal. Further, procurement of goods should be undertaken after considering the inventory available on ERP which should be physically reconciled, and eliminating the possibility of seeking diversion of stores from other BAs in circle where stock may be idling.
  - 1.1 A business case / feasibility assessment for the proposed procurement based on the guidelines issued by different sections of BSNL CO from time to time. Purchase proposals with better payback period should be prioritized.
  - 1.2 Guidelines issued by Budget section for CAPEX should be adhered for processing the cases with full details to facilitate quicker disposal at BSNL CO. Guidelines issued by CNP & CNO cells for preparing the cases for OFC laying & rehabilitation, by NWO CM cell for tower & infra related matters, by CGM EW (BSNL CO) for electrical infra should be referred for preparing the cases for CAPEX approval of BSNL CO. Similar guidelines issued by other planning & operations sections should be referred for preparing the cases related to concerned unit.
  - 1.3 Guidelines issued by MM section w.r.t. procurement manual provisions should be strictly adhered to. BA heads may mandate their planning & internal finance personnel to get their intranet ID

to be mapped for SMS alerts on upload of any circular by MM / PF /Taxation units of BSNL CO, so that inadvertent omission or contravention of instructions is avoided.

1.4 Any item or work available on GeM must necessarily be procured from GeM unless quality & time considerations make it imperative to make such procurements outside GeM, as per relevant provisions of GFR endorsed by MM section of BSNL CO. All such decisions should be recorded with reasons in writing. Outstanding of GeM procurement is monitored at ministry level, hence it is very important that after payment is made, the information should be updated on GeM IMMEDIATELY. It is advisable for BA heads / IFAs to include GeM outstandings (as seen on the portal) as one of the parameters for weekly monitoring.

2. Some important aspects w.r.t. process of procurement including tender, award of work & arbitration etc. are as follows:

2.1. There is an order of precedence in the matter of execution environment of procurement process.

- Highest in the order are provisions of the constitution
- Followed by “Laws” (framed by the legislature as a Law or an Act),
- Followed by “Rules” (framed by executive i.e. the ministries & departments of the Government, i.e. General Financial Rules (GFR) or Manuals for procurement issued by Ministry of Finance, GoI),
- Followed by “policies” (framed by operating entities such as CPSE, i.e. Procurement manual of BSNL).

2.2. Awareness of above reference is especially important because **there is no “procurement law” at present for reference by CPSE.**

- GFRs and Procurement manuals of MoF are referred as base guiding documents on which BSNL procurement manual is based.
- Further “guidelines” (such as guidelines issued by CVC or DPE) are not enforceable in terms of their legal standing, being advisory in nature. Accordingly, Central Vigilance Commission (CVC) which had issued 72 circulars containing various guidelines on Public Procurement from time to time and also hosted them on Commission’s website, has withdrawn them.
- Apart from the guidelines issued by CVC, Department of Expenditure (DoE), Government of India has also been issuing guidelines on public procurement including manuals on procurement of goods, works and

consultancy & other services, and on other occasions, various other Organizations like NITI Aayog, D/o Promotion of Industry & Internal Trade have also issued guidelines on public procurement.

- CVC after deliberations with DoE and within the organizations concluded that it would be appropriate if public procurement guidelines are issued from D/o Expenditure. Due to multiple organizations issuing guidelines, procurement executives were facing problems in having a single authoritative source of reference.
- Accordingly, DoE in collaboration with CVC updated
  - (i) Manual on Procurement of Goods,
  - (ii) Manual on Procurement of Works
  - (iii) Manual on Procurement of Consultancy & Other Services,

Where in all the CVC guidelines on public procurement have been merged, and these updated Manuals have been uploaded on the website of CVC and all the earlier guidelines of CVC on public procurement have been withdrawn.

2.3. Another issue of concern is related to decisions regarding outcome of tender process in terms of establishing the reasonability of rates. In this regard, preparation of estimates is the most important part of the process, because accuracy of estimate determines the level of authority competent to approve a proposal in terms of delegated financial powers, as well as establish reasonability of rates within a variation of up to 10% depending on the intensity and openness of competition. Revision of estimates after tender rates have been discovered is not advisable, and if circumstances make it unavoidable, tender should be cancelled & re-invited with revised estimates. Such revision of estimated cost should not be based on outcome of previous cancelled tender alone, but should be supported with empirical and verifiable facts necessitating revision, and must be recorded in writing.

2.4. In the matters of administrative decision regarding arbitration or other litigations related to procurement process, it needs to be duly taken cognizance of the fact that all BSNL personnel are “public servants” and carry the liability of “public accountability”. Accordingly, provisions of Article 299 of the constitution necessitating all government contracts to be executed in writing by personnel authorized to do so, provisions of the Indian Contract Act 1872, Sale of Goods Act 1930 and some provisions of similar laws enacted by state governments



are also applicable. Accordingly, a decision to proceed with litigation should be based on due diligence and after exhausting conciliation possibilities.

In general, the compliance with these stipulations is ensured by MM cell of BSNL CO through their circulars issued as custodian of procurement policy, and it is important for BA heads / IFAs to keep themselves updated with instructions issued by MM cell through BSNL intranet.

3. It is also important to be clear that for a reference to delegated financial powers, all limits for sanction of project estimates are for values excluding tax, and for items related to expenditure, including tenders, are for values including tax. Further, correct estimation of cost is important because tender approving authority is determined on the basis of estimates, not the outcome. Tenders for which estimated cost is beyond the financial power delegated to BA, sub-delegation of powers should be sought before inviting the tender.
4. Report of Open POs should be monitored on weekly basis, and should be reconciled with GR/IR balances of BA accounts to ensure timely clearance of dues.
  - 4.1. Modified process flow for invoice processing should be implemented as issued by MM section as part of MM centralization process. Invoices are to be received by Finance directly, who are required to initiate the approval work flow by linking it with relevant MIGO & SES entries. As per these instructions invoices are not required to be physically routed to or endorsed by field executives, who are required to verify the receipt of goods/ services through MIGO / SES, and recording any deficiencies in these documents. The due deductions shall be proposed by finance and approved by competent authority through concerned MM/ user section.
  - 4.2. Outstanding of vendor payments should be monitored through ageing report of Accounts Payable on weekly basis, to avoid the instances of delays on any account. Payments to MSEs should be specifically monitored to ensure complete processing at BA level with reasonable time for due processing and release of these by Central CSC, within the prescribed time of 45 days for overall process. Invoice processing at BA level is considered complete only when “R” block is removed.
  - 4.3. All vendors should be encouraged to register on Bill Suvidha, which currently facilitates SES process flow and submission of invoice, and is being developed to be the portal





for Vendor Interface. Periodic Vendor meet with stakeholders should be considered for vendor development and awareness.

- 4.4. BSNL Inventory Tracking System (BITS) needs to have all consignees on-boarded, to facilitate MIGO (receipt of Goods in ERP) in real time. Detailed instructions on the subject issued by MM section of BSNL CO need to be followed. Optimization of process time is expected to facilitate quicker payment to vendors, as well as improved cash flow for BSNL through better utilization of Input Tax Credit.
- 4.5. Obsolescence of inventory should be monitored regularly, and the prescribed process for scrapping & disposal of such inventory should be followed. The process must be executed in ERP to ensure accounting accuracy, and avoid such instances where scrapping is processed offline and receipts are accounted for as other income, while the asset / inventory continues to figure in inventory.

## **D. TAXATION**

Timely availing of Input Tax Credit (ITC) of GST is of utmost importance to BSNL. As per GST Law, ITC of GST can be availed by BSNL only if the invoices are matched with the GST returns filed by the vendors (GSTR-2A) and tax has been deposited by the vendor (GSTR-3B). To fulfil the requirements of matching of invoices with GST Returns the following actionable points need to be followed by BAs

1. BA heads are required to ensure that vendor invoices are booked in SAP timely and correctly. While Posting Vendor Invoices in SAP the following points needs to be taken care of.
  - i. Invoice Number is entered in SAP exactly as given by vendor in GST Invoice.
  - ii. Invoice Date must also be recorded in SAP exactly same as provided by vendor in GST Invoice.
  - iii. Vendor code must be selected appropriately with correct GSTN maintained in vendor master as provided by vendor in his GST invoice.
  - iv. Tax codes of IGST/CGST/SGST must be applied correctly as charged by the vendor in GST return.
  - v. Place of supply (POS) in T-Code FB60/MIRO must also be entered in SAP as per GST invoice.
  - vi. Invoice must be booked in the State to which the invoice has been

issued by the vendor.

- vii. ITC (Input Tax credit) must not be booked in excess of taxes charged in the GST invoice.
- viii. Each GST invoice must be booked in single SAP document only.

**Videos in this regard are posted on YouTube channel “BSNL Training Videos”**

2. Vendors must file the GST returns (GSTR-1 and GSTR-3B) for the invoices submitted with BSNL timely and correctly. To ensure this, BAs must review auto reconciliation report available in SAP through T-Code **“ZFI\_ITC\_RECO / All”**.

- i) Mismatch in Invoices: In case of any mismatch in invoice details like invoice no. , invoice date etc. as per invoice submitted with BSNL and invoice reported on GST portal vendor, vendors must be pursued to amend GST returns of the invoice.
- ii) In case of non -reporting of invoice in GST returns (GSTR-2A) vendors must be pursued to file GSTR-1 return for the invoices.

iii) In case if the invoice is matched but tax has not been deposited by the vendors in GSTR-3B vendors must be pursued to file GSTR-3B return for the invoices.

Further, Vendors needs to be sensitized that in case of non-reporting/non-matching of invoices with GST returns filed by them within statutory time limits, BSNL will not be able to claim ITC as per GST law and accordingly cannot release amount retained from the invoice. Further the loss of ITC is also liable to be recovered from any amount payable to them at present or in future or in cash.

3. For timely availment of ITC, BAs must also review the report of invoices reported by the vendors in GST returns but still not booked in SAP. This report available is also available in SAP and can be accessed through SAP T-Code **“ZFI\_ITC\_RECO / Un-matched in 2A”**. Immediate action must be taken by the BAs, to book these pending invoices in SAP so as to enable BSNL to claim ITC of such invoices within statutory time limit.

## **E. INTERNAL AUDIT**

### **INTERNAL AUDIT RELATED ACTIVITIES:**

#### **1. Internal Audit wing at BA level and its functioning:**

There should be an Internal Audit wing at BA level as internal audit is a management tool to improve efficiency and to establish financial discipline in the Business Area. IA wing of concerned BA should conduct internal audit inspection of OAs/SDCAs under BA and BA Head should

review those reports for improvement of business.

**Action to be taken by BA Head:-**

1. Formation of Internal Audit wing at BA Level.
2. Getting conducted Internal Audit Inspection of OA/SDCA and getting compliance of audit paras from concerned OA/SDCA.
3. Review of IA Report and suitable action to be taken for improvement of Business.

**2. Settlement of IA paras:**

Internal audit section, BSNL CO as well as Internal Audit Section of Circle Office conducts internal audit inspection of BAs on general as well as specific themes. After audit inspection a report containing observations made by audit team and action required thereon called audit paras is prepared and circulated to concerned BA for their compliance. In this regard, BA head should ensure proper compliance of audit paras within one month of receipt of the report.

**Action to be taken by BA Head:-**

1. Compliance of IA Paras within one month of receipt of report.
2. Review of IA Report and taking suitable action on the findings for improvement of business.

**3. Compliance and settlement of C& AG, DAP and F&C audit paras:**

Director General of Audit F&C (Finance & Communication), Govt. of India conducts audit inspections of various BAs of BSNL and issues audit report for compliance of audit para. In this regard, auditee BA has to comply the said audit paras within four weeks' time.

If the replies submitted by auditee BA for any para is not found satisfactory by F&C audit, that para gets converted to DAP (Draft Audit Para). The compliance of DAP is to be given by BA Head within four weeks.

Further if reply of DAP is not found satisfactory, F&C audit proposes it to be included in the C&AG report of India and thus, DAP gets converted into C&AG para which is viewed very seriously by management.

Hence, BA head has to ensure proper compliance at F&C audit paras & DAP level to avoid their conversion into C&AG Para. In case of C&AG Para, BA Head has to prepare Action Taken Note in prescribed format.

**Action to be taken by BA Head:-**

1. Proper compliance of F&C report paras within four weeks.
2. Proper compliance of Draft Audit Paras within four weeks.
3. Proper compliance of C&AG Paras within four weeks in ATN Format.

**INTERNAL FINANCIAL CONTROLS (IFC):**

Branch Auditors of the Circle give certain qualifications based on inherent limitations of Internal Financial Controls which are known as IFC related qualifications. BSNL Board has approved a matrix of these controls and defined a

periodic activity to be performed by various functionaries, and is available on BSNL intranet. Following actions are to be ensured at the BA level:

1. Self-Control Validation Testing of all the Controls and keeping the evidence for audit.
2. Carrying out Test of Effectiveness by Internal Auditors on quarterly basis based on the evidences kept after performing Self Control Testing.
3. Making all efforts to convert non-compliant and Partially Complaint Control into fully Complaint.
4. Making all efforts for 100% compliance of critical controls as it is part of IPMS.
5. Making efforts to mitigate at least 50% IFC related qualification reported by Branch Auditors of the Circle.

## **REVENUE ASSURANCE:**

### **RA in BSNL**

BSNL Management decided to strengthen the Revenue Assurance Control Environment in BSNL. In this regard, a pilot project was executed for the implementation of Revenue Assurance in the Punjab Telecom Circle. Based on activities performed at BSNL Punjab Circle, certain controls have been formulated. Broad steps involved in Revenue Assurance (RA) work are as follows:-

Collection of input data from primary function unit /data owners located at Data Center, Billing Center, and Circle/Business Area for performance of Revenue Assurance controls.

Execution of RA Controls by RA Team of respective Zones.

Exceptions generated from execution of Controls are to be rectified and submission of compliance to RA Team by data owners located at Data Center, Billing Center, Circle/ Business Area for timely resolution and closure of all the issues highlighted.

### **Action to be taken by BA Head**

1. To submit the input data pertaining to BA to RA Team as per the prescribed timeline, to perform the RA Controls.
2. Corrective action to be taken to rectify the exceptions forwarded by RA Team and compliance report in this regard to be furnished to RA team as per the set timelines by RA Team.
3. To review the findings & take suitable preventive action so that such type of exceptions may not occur in future.

## **F. REVENUE MANAGEMENT- CFA**

Revenue targets as per Cabinet approval under revival 2.0 Amt. in crore of Rs.

Vertical	2021-22	2022-23	2023-24	2024-25	2025-26
CFA	5264	5245	6120	7008	7825

These revenue targets are sacrosanct and are being monitored by DoT. Accordingly, the BA Heads are assigned revenue targets that are to be achieved without fail.

### **REVENUE MONITORING REPORTS**

Flash figure revenue report - PAN India overall Revenue (ABF)

S.No.	Sources of revenue		Achievement of 2022-23	Achievement of 2023-24	% increase over last year
			up to May-22	up to May-23	
A2	Revenue from CFA Services				
(i)	Landline Post Paid	Landline			
(ii)		PCO Including VPT			
(iii)		Session Initiation Protocol (SIP)			
(iv)		Out Bound Dialing (OBD)			
(v)		Surcharge			
(vi)	<b>IN Service</b>	IN Service Revenue			
(vii)	<b>Broadband</b>	Broadband			
(viii)	<b>FTTH</b>	Bharat Fiber & Bharat Air Fiber			
(ix)	<b>USO (RDE L, VPT, B)</b>	USO Subsidy			
(x)	<b>IUC PSTN</b>	Port & Infra Charges			
(xi)		IUC PSTN			
(xii)	<b>IDC</b>	Revenue from IDC service (Escrow A/c)			
(xiii)	<b>Wi-Fi</b>	Revenue from Wi-Fi service			



(xiv)	<b>Other Revenue</b>	Other Revenue (If any)			
(xv)	<b>New Business CFA</b>	Smart City, Raygain etc.			
(xvi)	<b>BharatNet</b>	Centage/ AE & EC			
(xvii)		O&M			
(xviii)		Bldg. space & Infrastructure Charges			
(xix)		Revenue share			

BA HEADS are advised to discuss the report with IFA on monthly basis. This report is available from ITPC portal <http://itpc.ndc.bsnl.co.in/pls/apex/f?p=301> for north zone.

### **1. REVENUE ENHANCEMENT AND MONITORING -**

Revenue enhancement and monitoring of all the streams to achieve the targets fixed are crucial aspects for any organization. Telecom PSUs operate in a competitive and dynamic environment and they need to continually improve their revenue generation strategies while ensuring effective monitoring of their revenue from operations. The following actions can be approached for effective revenue enhancement and monitoring:

#### **A. Revenue Enhancement:**

- **Market Analysis:** Conduct thorough market analysis by Sales & Marketing teams to identify customer needs, preferences, and trends. This analysis can help identify opportunities for new services, pricing adjustments, and package offerings by competitors that can attract and retain customers.
- **Product and Service Innovation:** Regularly introduce new and innovative products and services to cater to changing customer demands. This could include offerings such as high-speed data plans, bundled services, IoT solutions and more.
- **Pricing Strategy:** Develop a pricing strategy that aligns with the value provided and prices offered by the other operators. This involves setting competitive prices that attract customers while ensuring profitability.

#### **Importance of Tariff:**

- Revenue = (Tariff x Traffic) + (FMC x n)
- Tariff is a major determinant of revenue.
- It is a very specialized function in any telecom organization.
- Traffic is measured in terms of MOU (minutes of usage).



- The order of MOUs is normally in millions and billions of minutes.
- Slight variation in tariff leads to major upside/downside in revenue.
- Sensitivity analysis of tariff parameters to revenue is very important.
- Traffic understanding is very important in the fixation of tariffs.

**Note:**

BA Head must send the tariff proposal so that business is not only augmented but revenue is assured continually.

- **Segmentation and Targeting:** Divide the customer base into segments based on demographics, usage patterns, and preferences. Tailor marketing strategies to address the specific needs of each segment.
- **Promotions and Marketing:** Use effective marketing campaigns to promote new services, features and special offers. Engage with customers through various channels including social media, advertisements and direct communication.
- **Customer Experience:** Focus on delivering an exceptional customer experience. Happy and satisfied customers are more likely to stay loyal and recommend the services to others.
- **Partnerships and Alliances:** Collaborate with other companies for synergistic partnerships. This could include partnerships with content providers, device manufacturers, or other telecom companies for mutual benefit.

## **2. REVENUE MONITORING:**

- **Through Reports:** Flash figure and Sub ledger reports are to be analysed on monthly basis. Flash figure revenue report and sub-ledger report are prepared on cash basis. Our Accounting Standards require to report the revenue on accrual basis which is captured in Trial Balance.

**BA Head/ IFAs needs to ensure:**

- ◆ **That proper reconciliation between sub-ledger reports with Trial balance is done on monthly basis for correct reporting.**
- ◆ **Large variance of revenue in any stream needs analysis.**
- ◆ **Capture all revenue billed either by CDR, or SAP in Flash figure report.**
- ◆ **Revenue stream for which sub-ledger is not prepared needs to be monitored by local reporting system. For e.g. Rental billing and realization, Govt. projects revenue etc.**

◆ **Allocate proper resources where potential growth in revenue is higher.**

- **Data Analytics:** Utilize data analytics tools to monitor customer behaviour, usage patterns and preferences. This data can provide insights into areas of improvement and opportunities for revenue growth.
- **Network Performance:** Continuously monitor the network's performance to ensure high-quality service delivery. Proactively identify and resolve network issues to minimize service disruptions. Identify no coverage/ poor signal areas to install new BTS.
- **Revenue Leakage Prevention:** Implement systems to detect and prevent revenue leakages, such as unauthorized usage or fraudulent activities. Regular audits can help identify and rectify any discrepancies.
- **Compliance and Regulations:** Stay updated with relevant telecom regulations and compliance requirements. Ensure that the PSU's operations are aligned with these regulations to avoid legal and financial repercussions like issue of TR refund within 60 days as per TRAI guidelines.
- **Financial Tracking:** Monitor financial performance, revenue streams and expenditure regularly. This helps in identifying areas where revenue can be optimized and costs can be controlled.
- **Performance Metrics:** Define and track key performance indicators (KPIs) that reflect revenue generation and operational efficiency. Regularly assess these metrics to evaluate the success of revenue enhancement strategies.

In summary, revenue enhancement and monitoring involve a combination of strategic planning, customer-centric approaches, data-driven decision-making and adherence to regulatory standards. By continuously adapting to market changes and focusing on delivering value to customers, the organisation can achieve sustainable revenue growth and maintain a strong competitive position.

### **3. PROPER UTILIZATION OF CUSTOMER INTERACTION SYSTEM (CIS) MODULE AS A TOOL FOR IMPROVING COLLECTION EFFICIENCY**

All Activities like Reminding, Notices, Field visits etc. needs to be ensured timely and monitored at BA Head level on daily basis to ensure timely collection of current month billing as well as old outstanding.

The following reports available on CIS Portal need regular monitoring which affect revenue collection performance:

- i. Missing Mapping Report
- ii. Pending Reminder Report
- iii. Pending Field Visit Report
- iv. Pending Defaulter/Legal Notice and Recovery Visit
- v. Pending Permanent Disconnection Report
- vi. Missing Mobile Number & Email-id Tagging Report
- vii. CIS Login Report

BA head should monitor the above parameters on regular basis for continued improvement in the BA's performance.

#### **4. COLLECTION ENHANCEMENT AND MONITORING**

**“Revenue is vanity, profit is sanity and cash is reality.”**

BA head should monitor collection enhancement and monitoring from all streams to achieve the targets fixed by BSNL HQ / Circle. BA needs to continually improve their strategies to improve /enhance collections. The following actions can be taken for effective collection enhancement and monitoring:

- i. Maintaining sufficient number of CSCs for convenience of the customers in making the bill payment.
- ii. Offer a variety of convenient payment methods and diverse payment channels including online portals, mobile apps, and bank transfers and authorized payment canters. Accessibility to multiple channels increases the likelihood of customers making payments on time
- iii. Proper and timely Reminding to the customers.
- iv. Making suitable teams to run collection drives on regular basis.
- v. Contacting the customers who were recently disconnected to know the reasons and resolve the issues if any, responsible for disconnection and try to bring them back.
- vi. Ensure timely delivery of Bills and reminder to customers. 100 % updation of Email IDs and Contact number needs to be ensured.

#### **REMEMBER:**

- The reality test of the BA Head lies in the amount of cash collected each month.
- Cash is the lifeblood of any business and without it, survival is very unlikely.
- Cash collection target is an important IPMS parameter.
- Daily monitoring of cash collection is done by the CFO and CEO of any organization. This is followed in BSNL too.

- This target is not exclusive to finance personnel but needs to be assigned to each personnel in the field.

## **5. CONVENING OF LBM/HPC/NATIONAL LOK ADALAT**

Timely convening of LBM/HPC must be ensured at BA Head level to ensure liquidation of old outstanding dues. BA Head needs to ensure that Maximum cases should be submitted in National Lok Adalats at taluka and lower courts along with District level courts for maximum realization of old Outstanding. Field staff should also be involved in delivery of notices. However, preference should be given for delivery of notices through courts/thanas wherever possible. Delivery of notices through Post Offices should be the last preferred option.

## **6. TIMELY PROCESSING OF TR REFUND SECURITY DEPOSIT**

To avoid Interest on Delay /court cases/litigation from customer of closed connections and to comply with TRAI guidelines, timely processing of TR refund Security deposit needs to be ensured. As per TRAI guidelines, refund for closed connections needs to be released within 60 days from the date of closure. BA head should monitor that the refunds are being issued within the timeline prescribed by TRAI.

## **7. ACCOUNTING OF REVENUE, COLLECTION AND WRITE OFF**

BA head should review the financial statements to ensure that proper and accurate accounting of revenue, collection and write off is being done on regular basis. It also gives a picture of operational efficiency of the BA. It should be ensured that no revenue stream left unbilled and unaccounted in books of accounts.

## **8. Collection efficiency**

BA head needs to endeavor for improvement in collection efficiency with a strong focus on 1st month collection efficiency. Increasing collection efficiency for maintaining financial stability and sustainability.

1st Month	2nd Month	3rd Month	6th Month
Target 90%	Target 94%	Target 99%	Target 99.80%

### 1<sup>ST</sup> MONTH (TARGET 90%)

- Active numbers are targeted for early realization of the bill amount.
- Slab-wise persuasion, i.e. higher value customers first (descending value)
- Plugging out the non-performer in the persuasion team.

### 2<sup>ND</sup> MONTH (TARGET 94%)

- OG-Barred numbers are pursued for early realization of bill amount affecting second month collection efficiency.

### 3<sup>RD</sup> MONTH (TARGET 99%)

- IC barred numbers are to be targeted for early realization of the bill amount.
- Recovery notices are issued for ICB cases.
- Orders analysis and arranging clearance of the same in a timely fashion.

### 6<sup>TH</sup> MONTH (TARGET 99.8%)

- Defaulter notices, and legal notices for early settlement of cases.
- Field visits in a systematic manner with control over records.
- Making available feedback for information of LBM/HPC, helping them to take decisions on case to case for settlement.

### **Calculation of collection efficiency:**

6th-month collection efficiency of Dec-22 =

Net ABF of Jul-22 minus outstanding of Jul-22 as on 31.12.2022/ Net ABF of Jul-22

Net ABF = Gross ABF minus cancellation.

(It is one of the IPMS parameters and corrective actions need to be taken for the enhancement of the collection efficiency of each service.)

### **9. CREDIT ADJUSTMENT OF INVOICES ISSUED IN LAST FINANCIAL YEAR UP TO 30TH SEPTEMBER OF NEXT FINANCIAL YEAR TO AVOID GST CASH LOSS.**

All cases of wrong and fictitious bills issued in previous financial year (Ex. FY 2022-23) have to be cancelled by the month of Sep. in next year (Ex. 30.09.2023) without any exception to prevent revenue loss on account of payment of excess GST. Invoices cancelled by billing system needs to be checked immediately and corrective action to be taken in consultation with ITPC team.

## **G. REVENUE MANAGEMENT - EB**

Revenue targets as per Cabinet approval under revival 2.0 Amt. in crore of Rs.

Vertical	2021-22	2022-23	2023-24	2024-25	2025-26
EB	4700	5200	5700	6270	6300

These revenue targets are sacrosanct and are being monitored by DoT. Accordingly, the BA Heads are assigned revenue targets that are to be achieved without fail.

### **REVENUE MONITORING REPORTS**

Flash figure revenue report - PAN India overall Revenue (ABF)

BA HEADS are advised to discuss the report with IFA & EB team on monthly basis to ensure consistent increase in revenue This report is also available from ITPC portal <http://itpc.ndc.bsnl.co.in/pls/apex/f?p=301> for NORTH Zone.

S.N.	Sources of revenue		Achievement of 2022-23	Achievement of 2023-24	% increase over last year
			up to May-22	up to May-23	
<b>A3</b>	<b>Revenue from Enterprise Services</b>				
(i)	<b>Circuits</b>	Circuits / Leased Lines			
(ii)	<b>Dark Fiber Revenue</b>	Dark Fiber Revenue			
(iii)	<b>INMARSAT</b>	INMARSAT services			
(vii)	<b>BharatNet</b>	Fiber leasing charges			
(ix)	<b>Other Govt. projects</b>	Revenue from other Govt. projects			
(x)	<b>Other Revenue</b>	Other Revenue (If any)			



## **1. TIMELY UPDATION/RENEWAL OF LEASED CIRCUITS MOUs-**

All BA heads should be familiar with the validity period of MOUs in their jurisdiction and take timely action for renewal and updation of all MOUs going to be expired in the system in every month for continuity of business and billing. Non updation of MOUs is resulting in to wrong billing, huge cancellation/credit adjustment and disputes with our valued customers.

## **2. MONTHLY REVIEW OF LC PRE-BILLABLE DATA SHARED BY ITPC TO AVOID WRONG BILLING -**

Verification of pre-billable data on monthly basis before invoicing to the customer must be ensured by application of correct tariff, matching of physical parameter of a circuit with billable data and billing of all working circuits to stop incidences of wrong and fictitious billing. Due to implementation of e-invoicing, cancellation (fully reversal) of B2B bills will not be possible. Correction can be done by credit/debit only.

## **3. TIMELY SLA FINALIZATION WITH EB CUSTOMERS TO AVOID GST CASH LOSS**

Due to late finalization of SLA (Service Level Agreement) penalty by circles, BSNL is losing lots of money as any credit adjustment after stipulated time is not eligible for GST tax credit. In many cases customers are calculating downtime and deducting SLA amount from bills. In all cases, SLA penalty needs to be challenged and negotiated for downward revision. Credit adjustment for final SLA penalty may be given before 15th September for zero credit loss. The BA Heads must ensure that no incidence of GST cash loss occurs in their area of jurisdiction after 30th September for invoices related to previous financial year, due to non-finalization of SLA. So, SLA finalization needs to be reviewed every month in all eligible cases.

## **4. ENSURE TIMELY DISCONNECTIONS OF LCS (LEASED CIRCUITS)**

In case voluntary disconnection request has been received from the customers to avoid wrong billing in CDR – After getting request from the customer, LC connection should immediately be disconnected ensuring that no further billing is done to avoid any GST loss and billing dispute with the customer in future.

## **5. REGULAR INTERACTION WITH EB CUSTOMERS FOR REALIZATION OF OUTSTANDING THROUGH NAMS/KAMS -**

As NAMS/KAMS and officers of EB sales team are in the direct contact of the customers in the process of rendering the services, they must be utilized for realization of the outstanding with finance team by giving the definite targets

and timeline for realization of billed amount not yet realized. It must be noted that the sales process cannot be treated as complete without realization of money from customers.

## **6. CREDIT ADJUSTMENT OF INVOICES ISSUED IN LAST FINANCIAL YEAR UPTO 30<sup>TH</sup> SEPTEMBER OF NEXT FINANCIAL YEAR TO AVOID GST CASH LOSS –**

All cases of wrong and fictitious bills issued in previous financial year (Ex. FY 2022-23) have to be cancelled by the month of September in next year (Ex. 30.09.2023) without any exception. Repeat Cancellation/Credit adjustment in each account (If any) must be checked to ensure validity of commercial data. Invoices cancelled by billing system needs to be checked immediately and corrective action to be taken in consultation with ITPC team.

## **7. KPI AND MAIN AREAS TO BE FOCUSED IN R/O BA HEADS IN EB VERTICAL**

<b>SL No</b>	<b>KPI</b>	<b>Expected Results</b>
1	Revenue	Revenue monitoring of EB vertical to achieve the targets fixed in GPMS/IPMS. Flash figures and Sub-ledger reports need to be analyzed on monthly basis by the BA Heads. Comparison of revenue growth with previous month and corresponding month of previous year is required to be made to analyse the trends.
2	Reduction of old EB outstanding	Outstanding should be monitored by the BA Heads regularly and action be taken for liquidation of the same.
3	Reduction in Credit Adjustment and Cancellation	BA Heads need to ensure correct billing by timely updating/renewing the MOUs, timely finalization of SLA, applying correct tariff and other physical parameters in system etc. to avoid credit adjustment and cancellation.
4	Credit adjustment of invoices issued in last financial year up to 30th September of next financial year to avoid GST Cash Loss	In all cases of wrong and fictitious bills issued in previous financial year (Ex. FY 2022-23) have to be cancelled by the month of September in next year (Ex. 30.09.2023) without any exception.
5	Billing to all working connections	It should be ensured that billing of all working connections has been done as per billing schedule.

## **H. REVENUE MANAGEMENT- CM**

Revenue targets as per Cabinet approval under revival 2.0 Amt. in crore of Rs.

Vertical	2021-22	2022-23	2023-24	2024-25	2025-26
CM	6686	6716	8188	11150	14350

These revenue targets are sacrosanct and are being monitored by DoT. Accordingly, the BA Heads are assigned revenue targets that are to be achieved without fail.

### **REVENUE MONITORING REPORTS**

Flash figure revenue report - PAN India overall Revenue (ABF)

BA HEADS are advised to discuss the report with IFA and concerned officers on monthly basis to ensure consistent increase in revenue and identify areas where focus is required and take necessary corrective action. This report is also available from ITPC portal 10.19.9.89.

S. No	Sources of revenue		Achievement of 2022-23	Achievement of 2023-24	% increase over last year
			up to May-22	up to May-23	
A1	<b>Revenue from Mobile Services</b>				
i	<b>GSM</b>	Postpaid (Including postpaid SIM)			
ii		Total sale of Mobile prepaid SIMs			
iii		Push SMS			
iv		Incoming International SMS			
v		IN Prepaid Revenue as per IN Server			
vi	<b>IUC GM SC</b>	Port & Infra Charges			
vii		IUC GMSC			
viii	<b>Tower Sharing</b>	IP Fee			
ix		Energy charges			
x	<b>LWE</b>	Centage and any other billing by Circle			
xi	<b>Other Revenue</b>	Other CM Revenue (If any)			



**1. MONITORING OF CUSTOMER INTERACTION SYSTEM (CIS) FOR PERSUASION OF OUTSTANDING:-**

Circles have been instructed to make this CIS/Notice Module functional in all the zones so that the same can be effectively utilized for realization of old GSM outstanding dues, issue of GSM outstanding notices/legal notices to the existing customers/old closed connections, to improve collection efficiency and arrest accumulation of fresh outstanding etc. This office is regularly communicating with all the Circle regarding utilization of Notice Module in CIS for GSM Postpaid Services. It was intimated by ITPC that “Notice Module” of CIS portal has been made functional in all the Zones.

**2. MONTHLY RECONCILIATION OF C-TOP UP SALES.**

Needless to say C-Top UP systems are extremely revenue critical systems and require utmost adherence to the reconciliation process on periodic basis, without fail, so as to avoid any un-foreseen instance of revenue leakage. In this regard, even the reports being generated by FMCC (Fraud Management and Control Centre) could also be taken for reconciliation and detection of any revenue leakage. Furthermore, it is also to be ensured that standard instruction issued on similar subject by various cells including that of Finance, TR, S&M-CM and Revenue Assurance of BSNL CO are adhered to positively. For the reconciliation of C-Top UP sales instructions.

**3. TIMELY HOLDING OF HPC/LBM FOR LIQUIDATION OF OUTSTANDING:-**

Holding of LBM/HPC as per BSNL rules is a major tool for the liquidation of old irrecoverable outstanding. Circles are advised to hold the LBM/HPC as per rules to liquidate the old outstanding.

**4. MONITRING OF OUTSTANDING AGAINST DOT CONNECTIONS, BSNL SERVICE CONNECTIONS AND EXEMPTED CATEGORY CONNECTIONS:-**

In respect of outstanding against DoT, the claims of BSNL Service Mobile facility provided to DoT Officers may be got verified/certified from the concerned CCA officers/Office responsible for making payment at the earliest and the BSNL dues may be realized from the concerned DoT Offices as per the procedure mentioned in the DoT/BSNL Circulars.

Instructions have been issued to circles to re-verify the service connections along with the services provided on these connections and ensure that the connections and services are as per the entitlement of the officer/official concerned. All services which are beyond the entitlement should be charged and recovery of the same is to be ensured by the concerned circle. Further all the billing zones are also asked to explore the possibility of linking the Service

Connection with HRMS of employee. Circles are also instructed to ensure that the BSNL service connections may not be the part of exempted category connections.

Regarding exempted category connections circles are instructed to review the exempted category list on regular basis and outstanding against these category should be reviewed and recovery of the same may be ensured by the concerned circles. **Instructions in respect of categorization of accounts under Exempted Category and recovery of outstanding against exempted categories are also issued, these instruction may be followed to allow any GSM Post-paid Number under exempted category.**

#### **5. MONITORING OF IPF AND INFRA BILLING NEEDS TO BE ENSURED**

Monitoring of IPF and Infra billing needs to be ensured as per MSA (**Master Service Agreement**) (Escalation etc.) and also recovery of the same.

#### **6. MONITORING OF FRAUDULENT ACTIVITIES IN SALES CHANNEL AND STOCK ALLOCATION/ADJUSTMENT.**

For this, certain instructions have been issued by this office regarding privileges like add/modify of the user's, viewing/executing rights, preservation of records related to these activities and use of BSNL domain email ids only. These instructions are to be followed by each circle/billing zone to avoid any fraudulent activities in sales channel and stock allocation/adjustment.

#### **7. KPI AND MAIN AREAS TO BE FOCUSED IN R/O CM VERTICAL**

<b>SL No</b>	<b>KPI</b>	<b>Expected Results</b>
<b>1</b>	<b>Liquidation of outstanding</b>	1. Achievement of liquidation targets as assigned by BSNL CO. Review of the achievement on monthly basis.
		2. Review of outstanding against service connections and ensure the recovery of current as well as old outstanding.
		3. Review the billing and collection pattern of outstanding more than one lakh and ensure the collection from CUG/Govt./Corporate VPN in the same month.
		4. Review of exempted category on periodic basis and ensure the categorization of billing account as exempted category as per BSNL Policy.
<b>2</b>	<b>Collection Efficiency</b>	1. Achievement of collection efficiency targets as assigned by BSNL CO. Review of the achievement on monthly basis.

		<p>2. Ensuring the collection from CUG/Govt./Corporate VPN customers in the same month in which bills are issued.</p> <p>3. Targeted IVRS/OBD/Manual Calling to ensure maximum collection.</p> <p>4. Comparison of collection efficiency parameters with the previous month as well as with the previous year.</p>
3	Revenue	1. Achievement of Revenue targets as assigned by BSNL CO. Review of the achievement on monthly basis.
		2. Comparison of Revenue growth with the previous month figures as well as with previous year figures to analysis the trends.
		3. Comparison of Revenue Growth figures with Circle as well as PAN India Average.
4	ARPU	1. Comparison of Revenue growth with the previous month figures as well as with previous year figures to analysis the trends.
		2. Comparison of Revenue Growth figures with Circle as well as PAN India Average of BSNL and industry Average.
5	No of Billed Subscribers	1. Monitoring of billed subscriber of current month with previous month as well as with previous year and analysis the trend.
6	IN Revenue(GSM Prepaid)	1. Monitoring of IN prepaid revenue on daily and monthly basis and comparing the current month revenue with previous month as well as with corresponding month of previous year.

## I. GOVERNMENT PROJECTS IN BSNL

Presently BSNL is executing following Government Projects:

- 1) BharatNet Phase-I
- 2) BharatNet Phase-II
- 3) LWE (*LEFT WING EXTREMISM*) and its upgradation to 4G
- 4) CANI (*Submarine Optical Fiber Cable (OFC) connectivity between Chennai and Andaman and Nicobar Islands (CANI project)*).
- 5) KLI (Kochi Lakshadweep Island Submarine cable connectivity)
- 6) NFS (Network for Spectrum) Defense Project handled by BSNL
- 7) 4G Saturation Project

These Government projects are executed on different methodologies:

1. Principal to Agent basis (P2A) – BharatNet Phase-I, NFS, KLI, CANI BSNL acts as an agent of Principal (GoI). GST number of Principal is used. Tenders are invited in the name of Principal. Assets belong to Principal.



2. Principal to Principal basis (P2P) – BharatNet Phase-II BSNL acts as a contractor of Principal. GST number of BSNL is used. Tenders are invited in the name of BSNL. Assets belong to Principal.
3. Grant Projects – LWE, BharatNet 4G Saturation Project Tenders are invited in the name of BSNL. GST number of BSNL is used. Assets belong to BSNL.

### **REVENUE FROM GOVERNMENT PROJECTS:**

- BSNL earns revenue in the form of Administrative Expenses & Establishment Charges (AE & EC)
- Project Monitoring Charges (PMC) and Centage are synonymous of AE & EC.

## **Oorja Portal**

### **Objectives:**

- Electrical being the top most head for the OPEX expenditure apart from the employee cost, proper use of Oorja portal will certainly help in control and reduction in the expenditure towards electric charges.
- Comprehensive Electrical Consumption monitoring.
- Centralized Bill Processing for efficient Payment Processing.
- Electrical Bill validation as per the tariffs applicable.
- Consumption analytics and Spike monitoring.
- Efficient payment processing to minimize penalties and maximize returns on early bird payment incentive.
- Enable the site in-charge to pursue with DISCOM to issue Revised Bills in case of wrong billing.
- Identifying the modification of tariff parameters like – Unit charges, slabs, fixed charges, Electricity Duty, Subsidies etc.
- Enable the entries of Tax components in to the ERP System for accounting.
- Alerting Circles - Power Factor penalties, Excess Demand charges etc.
- Proper accounting of Security deposit, Additional SD, Consumption Deposit, interest on SD etc.
- Closure of Service Connections which are not feeding any active equipment.

### **Pre-requisites:**

- Identification of Exchange/BTS/Building (named as Entity) details where sites having EB Service Conn.
- Collection of Site /Building In-charge details against each Entity.
- Nomination of BA Node & Circle Working Nodes.
- Task 1: Creation of Oorja Portal login facilities to Site In-charge, BA/Circle Nodes.
- Task 2: Creation of Entity in Oorja portal for each site.
- Task 3: Configuration of Entity with EB Service connection/Consumer Account Number (CAN).
- Task 4: Addition of Entity in to Oorja (ECAV) Meter Master Form in the

- Oorja portal.
- Site In-charge can access his sites through Oorja Portal and can fill the Oorja Meter Master form.
    - Task A: Filling of Electricity Connection Authentication and Verification (ECAV) template.
    - Task B: Filling of Oorja Meter Master template as per SAP Meter Master & Vendor Master
  - Task 5: Task A & Task B can be filled commonly in Oorja Meter Master Form in Oorja Portal.
  - Task 6: Manual Bill Validation Module: Works on Configuration and Tariff Module.

### **Monthly Site Approval (MSA):**

- Every Site In-charge must visit the Site(Building/Exge/BTS) at least once in a month to check whether Electricity Meter is in working condition or not. To know the Electricity Meter working status, a form
  - **Monthly Site Approval (MSA)** made available in the Oorja portal.
- Site In-charges are mandatorily submit the MSA form once in every month by entering Current Meter reading of any day of that month and Date on which Current Meter reading was taken along with the following certification.

***“This is to certify that the Electricity Service Connection (for which the bill is paid in the last month) is utilized for BSNL purpose only and the bill issued by the DISCOM is in order.”***

- Submission of this form against each Site will give the approval for the next month Auto Bill Validation & Payment (ABVP) for that Site. If not submitted, next month bill will not be allowed to process the bill in ABVP.
- MSA form having present month calendar only and will be refreshed on 4<sup>th</sup> of every month.

**Electricity bill payment is being done through various methods viz. Oorja, BBPS and Manual Process.** Electricity payment of Gujarat, Chhattisgarh, Himachal, Uttaranchal, Punjab, Orissa, Maharashtra, and ITPC Pune is live successfully. Payments for 8 Circles are being processed through the Oorja portal and the payment is being done centrally by Corporate CSC, BSNL CO.

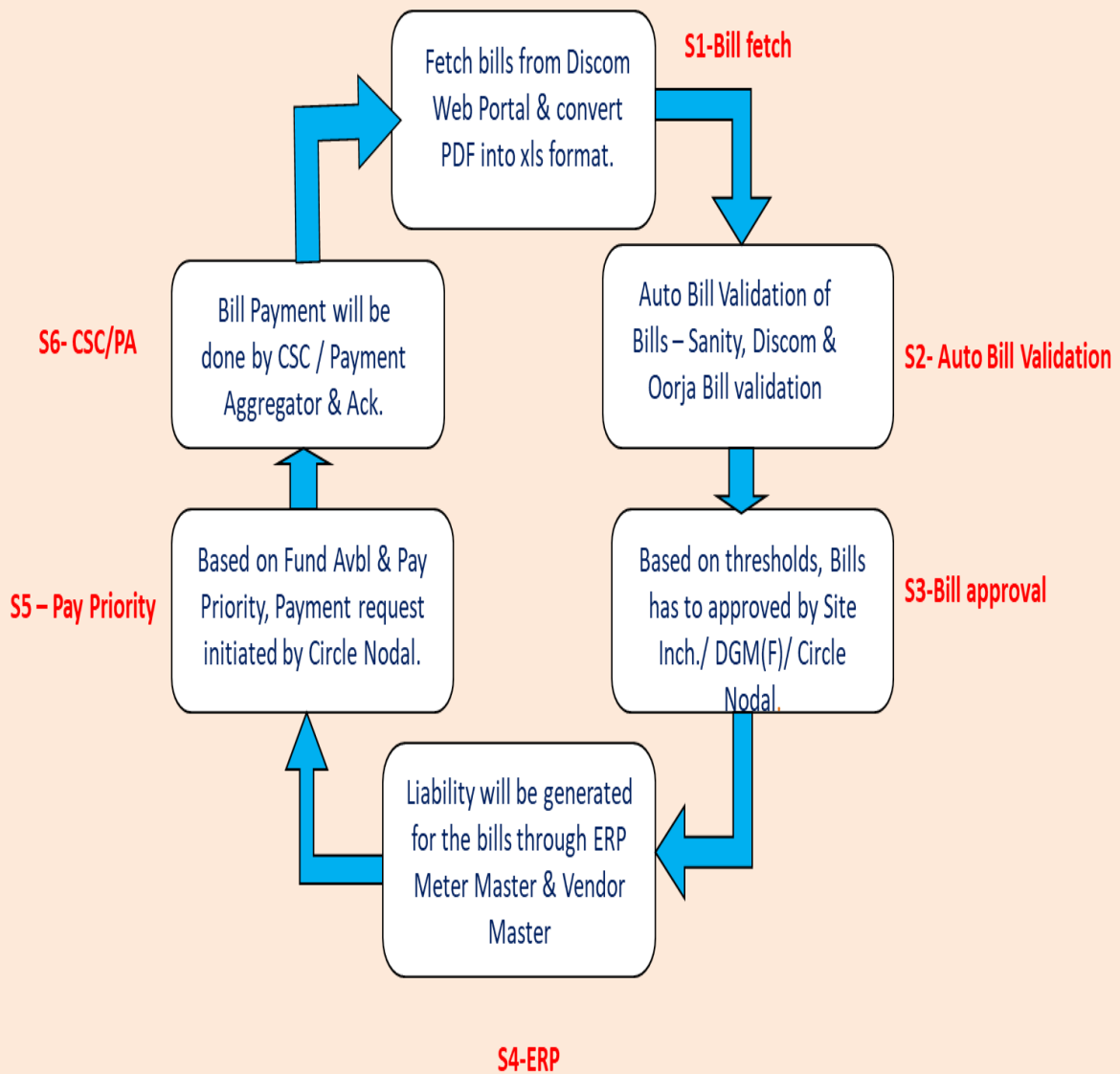
ITPC Hyderabad is the Nodal circle for the development and operation of Oorja SAP Integration. Details of all the electricity bills are fetched from the various DISCOMs across the Circle on a regular basis and after verification and authentication from the electrical wing of the concerned circle, the bills are processed for payment. Entire details are maintained in the Oorja Portal itself.

Funds requisitions of above noted 8 Circles (Twice a Week) are raised by the concerned Circles to the C-CSC Section of BSNL CO and the payment is also

being made twice a week by the Corporate CSC. Simultaneously, the payment details are updated automatically in SAP for reconciliation purposes.

1. BA Heads may ensure that all the payments are made within the Pay by date so that Surcharge/Penalty on delayed payments may be avoided.
2. BA Heads may also ensure that all failed payments of Oorja, Posted in Time Barred GL (1310110) should be cleared & and reprocessed timely.

### Auto Bill Validation & Payment (ABVP) System Basic Work flow:





## Role of Site In-charge (SI):

- All Sanity, DISCOM & Oorja Bill Validation failed Invoices will appear under “Bills Pending at Site In-charge “ block in Auto Bill Validation & Payment Dashboard.
- Site In-charge can verify the reasons for SBV, DBV & OBV failed cases through Bill Summary.
- Can verify the last 6 months Consumed Units & Current Amount data for Relative Bill % Variation.
- Can verify the Oorja - A, B & C Parameters in comparison with DISCOM Parameters in case of Oorja Bill Validation.
- Invoice mile stones can be viewed through Work Flow (WF) button.
- Bill PDF issued by DISCOM Web Portal can be viewed through ‘BILL’ button against each Invoice.
- Site In-charge can also have facility to see all the stages of Invoices in all the blocks of dashboard.
- All the approved Invoices will be sent to DGM (F) for Financial Approval.
- The dockets will be auto generated based on exceptions in SBV/DBV/OBV.
- The docket can be closed by identifying the reasons for variations in Oorja calculated values w.r.t. DISCOM Parameters values and escalate to Oorja or escalate the issue to DISCOM with proper reasons and remarks.
- Invoices cannot be processed for payment in the next month if it has a pending Docket.

## Validation & Alert Check list for Site In-charge before approving the Payment:

- SBV, DBV & OBV: If exception in any one of these 3 Validations, bill will be shown for verification.
- **Alerts:** The following Alerts/Warnings due to abnormal variations in the vital parameters are given to SI for verification and approve the bill accordingly:
- **MM & MSA:** Meter Mismatch & MSA not approved cases released by CWN for verification.
- **MSA\_W:** If Current Meter reading is not in between the DISCOM CMR & OMR.
- **FAA\_W:** If Final Approved Amount is beyond 1 lakh rupees.
- **CU\_W:** If Consumed Units (CU) > 100% of Relative % Variation w.r.t last 6 months avg. of CU.
- **CA\_W:** If Current Amount Pay (CA) > 100% of Relative % Variation w.r.t last 6 months avg. of CA.
- **SC\_W:** If Late Payment Surcharge > 30% of Current Amount Pay may due to unpaid disputed bill.
- **MI\_W:** If DISCOM issues more than one Invoice against a site within 25 days will be identified as Site having Multiple Invoices (MI\_W)



within the billing cycle may be due to Revised or Duplicate Bill. Multiple Invoice details are given for approving the correct bill and reject the wrong bill.

### **Role of DGM (F):**

- Invoices which are approved by Site In-charge and Invoices which are validated by Oorja System (DBV & OBV Success) will appear in “Bills Pending at DGM (F)” block in the dashboard.
- Need to verify the Final Approved Amount, Tax components etc. derived from Bill is correct or not. Any discrepancies need to escalate to ITPC through Circle Nodal for implementation.
- DGM (F) has to approve all the Invoice by pressing “Bulk Approve” button through Select All,
- Multi Select or can also approve Individual Invoices like Site In-charge.
- DGM (F) can send the Invoice back to Site In-charge if any discrepancies in the Invoice.
- All the approved Invoices will be sent to Circle Nodal (L1) for final Approval.