NORTHEAST FRONTIER RAILWAY

WORK STUDY REPORT

ON

ADEQUACY OF STAFF STRENGTH OF ELECTRICAL DEPARTMENT UNDER Sr. DEE/RNY OF N.F.RAILWAY

GUIDED BY:

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CONDUCTED BY

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STUDY NO. WSNF/05/2019 -20

CASE NO. Z/375/10/05/2019 -20

CENTRAL PLANNING ORGANISATION

N. F. RAILWAY/MALIGAON

GUWAHATI - 781011.

EXECUTIVE SUMMARY

SUBJECT : Adequacy of Staff Strength of Electrical Department under Sr. DEE/RNY of N.F. Railway

STUDY NO	**:**	**WSNF/05/2019-20**
CASE NO	**:**	**Z/375/10/05/2019-20**
AUTHORITY	**:**	**SDGM/N.F.R.**
CONCERN DIV.	**:**	**RANGIYA.**
DEPARTMENT	**:**	**ELECTRICAL.**

DATE OF COMMENCEMENT : **28/11/2019**

DATE OF COMPLETION : **10/12/2019**

DATE OF SUBMISSION : **10/12/2019**

TERMS OF REFERENCE:

Approved annual Programme of Work Study.

NOS. OF RECOMMENDATION: 1(One)

The study team has identified 18 nos. of vacant posts of different categories (Sr.MR-1, Tech/I/ETS-1 and Khalashi/Helper= 16) as surplus and proposed for surrender, which may be deletedfrom the working BOS.

PROJECTED MAN POWER: **18 Posts.**

PROJECTED FINANCIAL SAVING: **Rs 84.42 Lakhs per annum.**

MONTH AND YEAR OF CIRCULATION: **DEC/2019**

I N D E X

CHAPTER - I

1.0 INTRODUCTION:

Rangiya is established as a new division of N.F.Railway in the year 2003 and the jurisdiction under RNY Division Starts from NBQ to CGS in main line and from NBQ to AZA in loop line via GLPT including Branch line from RNY to MZS. The MG Gauge from RNY to MZS is converted BG in the year 2012-13. It is situated at middle part of N.F Rly. It is the corridor of ARUNACHAL PRADESH of N.E.Region, thus it has main role regarding setting up of communication in between state of N.E.Region to other parts of India and the RNY Division has been serving the demands of people of N.E.region satisfactorily even due to difficult of insurgency problems in the region.

However, GOI has taken a policy to connect all the states of NE region to the other parts of country through Railway Network providing updated technical support.

1.1 RATIONALE FOR CONDUCTING THIS STUDY:

- Man power is the most costly and precious resource over Indian Railway and right sizing is the need of the hour.
- Focusing attention on core activities by reducing/elimination of non- core activities.
- Improving the efficiency (output/input) either by improving the output (numerator) or by decreasing the input (denominator).
- Up-gradation/introduction of automation/innovations
- Outsourcing of noncore activity.
- Availability of better process/technology.
- Reducing/removing redundancy in work.

1.2 AUTHORITY:

SDGM of N.F.Railway.

1.3 TERMS OF REFERENCE:

Approved Annual Work Study Programme

1.4 METHODOLOGY:

a) Collection of data relating to workload.
b) Discussion with Sr DEE/RNY & Subordinates and obtaining their views.
c) Assess the workload for Electrical /field activity.
d) Assess the workload for RNY division's field units.
e) Assess the staff requirements for the above workload.

1.5 ACKNOWLEDGEMENT:

Work study team is grateful to Sri N.Prasad, Sr DEE/RNY, Sri A Patel ADEE/RNY , Raju Kumar Patar SSE/P/RNY, for their kind guidance and co-operation for conducting this study. The work study team is thankful to Sri Pradeep Kumar Pal SSE/Tech–II/RNY for his assistance rendered to the work study team for conducting the subject study.

CHAPTER-II

EXISTING ACTIVITIES, WORK LOAD & STAFF

Over the years, there has been tremendous increase in all round activities of Electrical Department. Electrical Engineering is increasingly playing a very vital and crucial role in virtually all facets of Railway working. In addition, due to continuous development of new products, there is very rapid induction of modern technologies on the Railway in general and Electrical Engineering in particular. All this has made it important that all those concerned with the operation and maintenance of these modern assets inspect them regularly and knowledgeably to ensure high degree of reliability and health of assets. Because of rapid development and introduction of new technologies, there will be inevitable need for constant review and updating of man power.

TECH/FCD:

The work load of Tech/FCD is to carry out maintenance of DG sets , Cleaning the DG sets, switching on/off during power failure, changing of Lubricating oil, replacement of fuses in power panel in case of over load blowing of fuses etc. Presently in electrical department annual maintenance of DG sets has been awarded to out agencies for all sub- stations/ power houses.

TECH/ELF:

The work load Tech/Electrical is to feed & maintain electrical supply from electrical installation to Equipment/panel. Presently, all the electrical works are being maintained by power supply/electrical department. At TL & AC depot these Tech/Electrical are deployed to maintain the rolling stock equipments viz. alternators, battery, inverters, RMPU package units, V- belt providing/replacement, bogie lifting and ancillary electrical maintenance of lights/fans of coaches as well as depot premises etc.

KHALASHI/HELPER:

The Khalashi/Helper category is engaged to assist the work of Tech/FCD is to carry out maintenance of DG sets , Cleaning the DG sets, switching on/off during power failure, changing of Lubricating oil, replacement of fuses in power panel in case of over load blowing of fuses etc. Also engaged with other Technicians for any other works and also deputed for any heavy departmental work under guidance of supervisors.

TECH/ OEF

The OEF(Oil Engine Fitter) is responsible for daily maintenance and proper checking of fuel of the Low Powered generator units installed at power house. Now-a-days, automatic High power generator are installed and the technical Know how regarding those Gen Set is out of reach of this category of staff and simultaneously, maintenance of those Gen set are offered to OEM through AMC.

MDCM

The MDCM (Motor Driver-cum- Mechanics) is responsible for driving and maintenance of Electric Motor. Now-a-days, those type of working is obsolete .

SPA

The SPA(Station Pump Attendant) is responsible for operation and maintenance of water pump at station and at Berge . However , using automatic/ Remote switching of pump , the work of this category of staff is reduced .

Metre Reader

He is responsible for taking account of consumed electric unit for billing purpose against the concerned consumer/subscriber/ railway staff

1. STAFF POSITION AT RNY UNIT UNDER SSE/P/RNY.

SN	Category	Pay Band	Grade Pay	Sanction	On Roll	Vacancy	Remarks
1	SSE/P/RNY	9300-34800/-	4600/-	4	3	1	
2	OS	9300-34800/-	4200/-	1	1	0	
3	JE.Elect	9300-34800/-	4200/-	1	0	1	
4	CMRS	9300-34800/-	4600/-	1	1	0	
5	Sr MR	5200-20200/-	2800/-	1	0	1	1
		Total		**8**	**5**	**3**	
6	Tech-I/ ETS.	5200-20200/-	2800/-	5	4	1	1
7	TechII/ ETS.	5200-20200/-	2400/-	2	0	2	
8	Tech-III/ ETS.	5200-20200/-	1900/-	2	3	-1	
9	Sr Tech/FCD	9300-34800/-	4200/-	1	1	0	
10	Tech-I/FCD	5200-20200/-	2800/-	2	0	2	
11	Tech-II/FCD	5200-20200/-	2400/-	0	1	-1	
12	Tech-III/FCD	5200-20200/-	1900/-	1	2	-1	
13	Tech-I/OEF	5200-20200/-	2800/-	1	0	1	
14	Tech-III/OEF	5200-20200/-	1900/-	0	1	-1	
15	Sr Tech/SPA	9300-34800/-	4200/-	1	0	1	
16	Khalasi /Help(P)	5200-20200/-	1800/-	23	9	16	16
17	Khalasi /Help(P)/RG	5200-20200/-	1800/-	3	1		
			TOTAL	**49**	**27**	**22**	

Particulars of Electrical fittings/Points under SSE/P/RNY.

SN	Description	Location	Capacity	Nos	Remark
1	**New Power house (Capacity)**	**RNY**	**380 KVA . 320 KVA . 200 KVA .**	**2 Nos. 1 No. 1No**	
2	**New Power house (Capacity)**	**RNY**	**125 KVA .**	**1 No**	
3	**No of Sub- Station**	**Different Station & Colony**	**Serial no 6**	**25 Nos**	
4	**No of Railway Station under Juridiction of SSE/Elect/RNY**	**SSE/Elect/RNY**	**---**	**24 Nos**	

5	**Motor : If any where provided with capacity**	**RNY (STN, New & Old BF Colony,New Power house).** **RNY /RLY/hospital.** **Sub Pump (Gypsum siding).** **NLV.** **THU.** **KTCH.** **BIZ.** **CGS.** **KYO.** **TNL.** **ULG.** **RWTB.**	**12.5 HP.** **7.5 HP .** **(25 & 12.5) H.P.** **7.5 H.P.** **7.5 H.P.** **7.5 H.P.** **7.5 H.P.** **7.5 H.P.** **5 H.P.** **7.5 H.P.** **7.5 H.P.** **7.5 H.P.**	**4 Nos.** **1 No .** **2 Nos Each .** **1 No .** **1 No .** **1 No .** **1 No .** **1 No .** **1 No .** **1 No .** **1 No .**	
6	**Transformer : If any where provided with capacity**	**Old Power House .** **New Power House .** **New Power House .** **New Power House .** **New B.F.Colony .** **Old B.F.Colony .** **New B.F.Colony .** **Gypsum Siding .** **Puthimari Bridge.** **Pagladia Bridge .** **CGS.** **BIZ .** **KDKN .** **NLV .** **KTCH .** **THU .** **KYO .** **GVR.** **KBY.** **TNL.** **HRSN .** **ULG .** **RWTB .** **DRM Building** **RNY .** **Officer's Colony.**	**250 KVA .** **250 KVA .** **500 KVA .** **2 MVA .** **250 KVA .** **250 KVA .** **100 KVA .** **100 KVA .** **25 KVA .** **25 KVA .** **100 KVA .** **63 KVA .** **63 KVA .** **250 KVA .** **100 KVA .** **63 KVA .** **63 KVA .** **63 KVA .** **63 KVA .** **100 KVA .** **63 KVA .** **63 KVA .** **63 KVA .** **250 KVA .** **500 KVA .** **250 KVA .**	**24 Nos.** **2 Nos.** **2 Nos .** **2 1 No .** **Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **1 No .** **1 No .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **1 No .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **2 Nos .** **1 No .** **1 No .** **2 No .**	

7	**Generator (Capacity)**	**RNY (New Power house) .** **RNY (Old Power house) .** **RNY (DRM Building RNY) .** **NLV (Station).** **CGS (Station).** **BIZ (Station).**	**380 KVA .** **320 KVA .** **200 KVA .** **125 KVA .** **125 KVA .** **30 KVA .** **125 KVA .** **75 KVA .** **40 KVA .** **30 KVA .**		
8	**Spans HT/LT over head lines consisting of 2 to 6 wires .No of Spans**	**H.T. Span .** **L.T. Span**	**325 Nos .** **830 Nos .**		
9	**Unit consumed per month**	**306349 KWH .**			
10	**Unit consumed per annum**	**3676188 KWH .**			
11	**Jurisdiction**	**RNY to RWTB (Upto RM -39 LC Gate & CGS to NSRN) (From SK-2 To SK-29 LC Gate)**			

CHAPTER-III

3.0 CRITICAL ANALYSIS OF EXISTING WORKLOAD AND STAFF REQUIREMENTS:

The activities and work load involved with the Staff under Sr.DEE/RNY is already discussed in CH-II. In reference of above, the requirement/ non-requirement of following category of staff is justified as below-

Calculation done on the basis of yard stick of electric department of various category vide Rly Board Circular No. 2001/Elect (G)/138/3. dt 16/03/06 (copy enclosed) as Annexure-II.

As per above circular, the requirement of man power is calculated on the basis of unit consumption per month.

Under heading of General Power Supply of sub-para 1.4 as mentioned as the requirement of is 0.2 staff/1000 units consumed per month.

3.1. As discussed with SSE/Tech-II/RNY of M,PP cell of Sr.DEE-RNY Office and the respective nominated supervisors & officer for the said study, vide Sr.DEE/RNY letter no- EL/59/RNY/BOS/84 dt. 11/06/2018 (placed as Annex-I), the requirement of man power as per Bd's letter no- 2001/Elect(G)/138/3 DT 16/03/06 (placed as Annex-II)

Table-3.1

Position of Unit wise (BOS, On roll) vis-a-vis post required as per Rly BD's. Circular No. 2001/Elect (G)/138/3. dt 16/03/06

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(9)
Jurisdiction	**Total Annual Consumption**	**Total Unit Consumption Monthly**	**Calculated Posts as per Rly Board**	**13% of (4) Supervisor of Total Posts**	**67% of (5)**	**Total Requirement (incd. Supervisors)**	**BOS**
SSE/P/RNY	**3676188**	**306349.**	**61.26**	**8**	**5**	**74**	**75**

As discussed in above table (Para-3.1), nos. of surplus posts non-supervisory technical cadre as per existing Yard stick is tabulated below-

Table-3.2.

Jurisdiction	Total Annual Consumption	Monthly cosump	Post Calculation as per Rly Board L/No. 2001/Elect (G)/138/3. dt 16/03/06	BOS. (excl. Sup & Min) from Tab 1,4&5 pg 6,13&15)	On Roll (excl. Sup & Min)	Vacancy (excl. Sup & Min)	Surplus posts (excl. Supervisor & Ministerial)
SSE/P/RNY	**3676188**	**306349.**	**61.26**	**75-8= 67**	**66-5= 61**	**9-3=6**	**1**

3.3. Proposed Surplus posts under Sr.DEE/RNY

SN	Category	Pay Band	Grade Pay	Sanction	On Roll	Vacancy	Identified Surplus Posts
1	SSE/P/RNY	9300-34800/-	4600/-	4	3	1	
2	OS	9300-34800/-	4200/-	1	1	0	
3	JE.Elect	9300-34800/-	4200/-	1	0	1	
4	CMRS	9300-34800/-	4600/-	1	1	0	
5	Sr MR	5200-20200/-	2800/-	1	0	1	1
		Total		**8**	**5**	**3**	
6	Tech-I/ ETS.	5200-20200/-	2800/-	5	4	1	1
7	TechII/ ETS.	5200-20200/-	2400/-	2	0	2	
8	Tech-III/ ETS.	5200-20200/-	1900/-	2	3	-1	
9	Sr Tech/FCD	9300-34800/-	4200/-	1	1	0	
10	Tech-I/FCD	5200-20200/-	2800/-	2	0	2	
11	Tech-II/FCD	5200-20200/-	2400/-	0	1	-1	
12	Tech-III/FCD	5200-20200/-	1900/-	1	2	-1	
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14	Tech-III/OEF	5200-20200/-	1900/-	0	1	-1	
15	Sr Tech/SPA	9300-34800/-	4200/-	1	0	1	
16	Khalasi /Help(P)	5200-20200/-	1800/-	23	9	16	16
17	Khalasi /Help(P)/RG	5200-20200/-	1800/-	3	1		
			TOTAL	**49**	**27**	**22**	

CHAPTER-IV

RECOMMENDATION

The study team has identified 18 nos. of vacant posts of different categories (Sr.MR-1, Tech/I/ETS-1 and Khalashi/Helper= 16) as surplus and proposed for surrender, which may be deleted from the working BOS.

CHAPTER-V
FINANCIAL IMPLICATION

SN	Category	Pay Band	G/Pay	Basic Pay in Rs	Revised Pay as per 7th CPC	Salary per annum in INR	Nos. of posts proposed for surrender	Total amount in Rs
1	Sr.MR	9300-34800/-	4200/-	26,250	67,462.5	8,09,550	1	8,09,550
2	Tech-I/ETS	5200-20200/-	2800/-	15,500	39,835	4,78,020	1	4,78,020
3	Khalasi/Helper/P	5200-20200/-	1800/-	14,500	37,265	4,47,180	16	71,54,880
						TOTAL	18	84,42,450. Lakh Say (84.42 Lakh)

5.1. PROJECTED FINANCIAL SAVINGS PER ANNUM

If the recommendation of this study be implemented, the financial savings per annum will be **Rs 84.42** Lakhs (say) per annum

CHAPTER - VI

6.0. READY RECKONER

Pay Band	GP	Mean pay	Basic Pay in Rs	M.F. of 7th CPC(2.57) & revised Pay	Salary per annum in INR
9300-34800	4600	22050	26,650	68,490.5	8,21,886
9300-34800	4200	22050	26,250	67,462.5	8,09,550
5200-20200	2800	12700	15,500	39,835	4,78,020
5200-20200	2400	12700	15,100	38,807	4,65,684
5200-20200	2000	12700	14,700	37,779	4,53,348
5200-20200	1900	12700	14,600	37,522	4,50,264
5200-20200	1800	12700	14,500	37,265	4,47,180