SOUTH EASTERN RAILWAY

Review of Staff Strength in the Electrical(G) Wing of KGP Division

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STUDY NO. EFF/896.

S Y N O P S I S

1.	Name of the work study		Review of Staff Strength in the Electrical (G) wing of KGP division.
2.	Terms of reference		Taken as one of the work-studies during the current Financial Year.
3.	Aim		To analyze the present requirement of staff Electrical (G) wing of KGP divn after evaluating the various activities that have become redundant.
4.	Projected manpower surrender.		4 'vacant' posts.
5	Anticipated/projected savings per annum		Rs. 20 lakhs (approx)
6.	No of recommendations		One
7.	Critical analysis & observations		Modern electrical equipments with advanced and automatic technology make several activities easier. It requires minimum human intervention to operate these equipments. Hence, the requirement of man power automatically decreases. The Electrical (G) wing of KGP Division has adopted various new technologies like Automation of pumps in KGP, MOU, RMJ, TPKR, BLS, NMP & KKQ, switching of tower light at various location through automatic timers, 75% by 25% station lighting arrangement with automatic switches, underground cabling, laminated cabling, use of LED lights in place of conventional lighting, replacing of glow sign board with retro reflective board, solar lighting arrangement at L/C Gates etc. In addition, miscellaneous activities have been arranged through contractual agreement at the Railway colonies.
8.	Brief note on recommendations		**In view of modernization in technology including automation of switches, the requirement of man power in Electrical (G) wing may be reduced by 4 posts & lower (D/R) grade of Helper may be surrendered.**
9.	Department/s concerned		Electrical (G)

A C K N O W L E D G E M E N T

Work Study Cell expresses its deep gratitude to the officials in the office of Divl Electrical Deptt (General) including the various units therein & Sr. DPO's Office/ KGP who have rendered their valuable guidance and co-operation in completion of the report.

C O N T E N T S

CHAPTER – I

1.0 INTRODUCTION

The modernization of Indian Railways changes the working scenario in many areas. Electrical Works associated with the installation, modification, removal, inspection or testing of electrical systems & components, including works relating to mechanical, electrical or non-electrical components. Emergency maintenance includes emergency repair of electrical systems that require immediate action and take precedence over routine maintenance activities for the duration of the emergency. The department also maintains high mast lighting equipments on high mast poles complete with luminaries which includes raising and lowering devices consisting of ring assemblies and pole anchorage assemblies. The maintenance also includes both routine and non-routine maintenance work of regular electrical appliances.

In KGP Division several new steps have been taken by Electrical (G) wing for effective electrical usage with power saving and maintenance free equipments. System for automation of pumps installed at 7 stations, timers have been setup in tower lights in various locations which enable illumination and switching off of tower lights at different locations at same time without manual intervention. Lighting arrangements at KGP, MCS, PKU, SRC, BLS and other stations has been done with automatic switches that illuminate 75% by 25% as per arrival time of trains at stations. Similar programmed switches are in the process of being installed in other important stations. Conventional bulbs have been replaced by LED lights which are durable and energy efficient, glow sign boards have been replaced by retro reflective board at all the yards. Solar panels have been installed for lighting in LC gates. In addition, miscellaneous electrical works have been out sourced in the division and other residential colonies. The sections which consists of works like tree trimming, changing of HT-LT conductor, Re-wiring, cable laying, submersible pump repair, light/fan replacement, shifting of transformer, repair of switches and other work are being contractually carried. The departmental vehicle is also under contractual hire. The major works including re-wiring and new wiring have been given to contractors. The Electrical (G) works in the division are being managed by supervisory posts like SSE & JE who are assisted by Sr. Technicians, Technician Gr.-I, Gr.-II, Gr.-III posts with the helping hands of Helper

The subjected study has been taken up as one of the studies in current financial year with a view to identify those posts which could be rendered surplus considering the activities that have been outsourced without hampering the current working system.

CHAPTER – II

2.0 STAFF STRENGTH OF ELECTRICAL (GENERAL) CATEGORY IN KGP DIVN

Sl	Category (Power Wing)	GP	Sanctioned Strength				Actual on roll				Vacancy			
			DRQ	DPQ	LDCE	TOT	DRQ	DPQ	LDCE	TOT	DRQ	DPQ	LDCE	TOT
1	Sr. Tech	4200	0	138	0	138	0	121	0	121	0	17	0	17
2	Tech-I	2800	0	270	0	270	0	253	0	253	0	17	0	17
3	Tech-II	2400	0	42	0	42	0	68	0	68	0	-26	0	-26
4	Tech-III	1900	14	29	14	57	14	40	6	60	0	-11	8	-3
5	Helper	1800	282	0	0	282	278	0	0	278	4	0	0	4
	TOTAL		**296**	**479**	**14**	**789**	**292**	**482**	**6**	**780**	**4**	**-3**	**8**	**9**

CHAPTER – III

3.0 EXISTING SYSTEM OF WORKING :

Electrical Work means work associated with the installation, modification, removal, inspection, maintenance or testing of electrical system components, including works relating to mechanical, electrical or non-electrical components required for the work. Emergency maintenance includes emergency repair of electrical equipments/ circuits that requires immediate action and takes precedence over routine maintenance activities for the duration of the emergency, till rectified. This wing also maintains high mast lighting equipment on high mast poles complete with luminaries, raising and lowering devices consisting of ring assemblies and pole anchorage assemblies. The maintenance includes both routine and non-routine maintenance work of installed electrical appliances.

The Electrical (G) wing functioning at KGP division is managed by supervisory posts like SSE & JE who are assisted by Sr. Technician, Technician Gr.-I, Gr.-II, Gr.-III posts with the helping hands of Helper.

Modern technology has been introduced in various activities that were earlier managed manually. System for automation of pumps installed at 7 stations, timers have been setup in tower lights in various locations which enable illumination and switching off of tower lights at different location at same time without manual intervention. Lighting arrangements at KGP, PKU, MCA. BLS stations have been done with automatic switches that illuminate 75% by 25% as per arrival time of trains at platforms. Similar programmed switches are in the process of being installed in other important stations. Conventional bulbs have been replaced by LED lights which are durable and energy efficient, glow sign boards have been replaced by retro reflective board at all the yards. Solar panels have been installed for lighting in LC gates. In addition miscellaneous electrical works have been out sourced at KGP division which consists of works like tree trimming, changing of HT-LT conductor, Re-wiring, cable lying, submersible pump repair, light/fan replacement, shifting of transformer, repair of switches and other work. Rewiring of the railway quarters are carried out through contractual labour. The departmental vehicle is also under contractual hire.

CHAPTER – IV

4. CRITICAL ANALYSIS AND RECOMENDATION

Modern electrical equipments with advanced and automatic technology makes several jobs easier and without manual observation/ intervention. These equipments require minimum human intervention for operation. Hence logically, there is a lesser requirement of man power. The Electrical (G) Department in the Division has adopted various new technologies like Automation of pumps in 7 stations, switching of tower lights at various location through automatic timers, 75% by 25% station lighting arrangement with automatic switches, underground cabling, laminated cabling, use of LED lights in place of conventional lights, replacing of glow sign board with retro-reflective boards, solar light panels for lighting in L/C Gates etc. In addition to that miscellaneous activities have been outsourced through contractual agreement at various locations.

Rewiring of the railway quarters are carried out through contractual labour.

.4.1 RECOMMENDATIONS

Recommendation – I : In view of modernization in technology including automation of switches in Electrical (G) wing and contractual labour being utilized for various activities, 4 'vacant' posts of Helper, in the DRQ is recommended for surrender.

CHAPTER – V

5 FINANCIAL EVALUATION

In reference to the recommendations made in the study report the financial evaluation on the basis of surrender of 4 'vacant' posts is as under:-

Sl	Desgn	No. of posts	Level	Pay	Avg. Pay	DA @ 9%	Monthly cost per staff	Total cost per month
1	Helper	4	1	18000-56900	37450	3370	40820	163280
TOTAL		**4**						**1,63,280**

The annual savings due to surrender of **4** 'vacant' posts= Rs. 1,63,280 x12

= Rs. 19,59,360/-

Say 20 lakhs per annum

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