



GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
SUPPLEMENT
to
PLINTH AREA RATES 01.10.2012
for
SPECIALISED E&M WORKS
2014



**DIRECTORATE GENERAL, CPWD, NIRMAN BHAWAN,
NEW DELHI-110011**



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FOREWORD

SUPPLEMENT to plinth area rates- 01.10.2012 for SPECIALISED E&M works was first published in July 2013 in order to have the rates for preliminary estimation of various E&M services in the built environment. As more and more inputs were received since then, the need was felt to revise the same so that these rates remain more precise.

Thus the current SUPPLEMENT to plinth area rates- 01.10.2012 for SPECIALISED E&M works is a revised and precise version of the first Supplement. I acknowledge the hard work put in by Sh. S.S. Garg, SE(E) TLQA, Sh. R.R. Meena, EE(E)TLQA and Sh. M.P. Sharma, EE(E) TAS under the guidance of Sh. Mukesh Vij ADG(TD) and Sh. C.K. Varma, CE(E)CSQ without which the revision would not have been possible. I also acknowledge the valuable suggestions of other members of specification committee as well as all those involved in the process of revision and finalization of this SUPPLEMENT to plinth area rates- 01.10.2012 for SPECIALISED E&M works.

I am sure that this SUPPLEMENT to plinth area rates- 01.10.2012 for SPECIALISED E&M works will be useful to all concerned engineers of CPWD but also to many other engineering organizations of Central /State Governments as well as practicing architects and E&M consultants.

PLACE : NEW DELHI
DATE : July' 2014

(V.K. Gupta)
Director General, CPWD

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PREFACE

The Plinth Area Rates for Specialised E&M Works were first published in July-2013. Since then many feedbacks have been received from the field units and therefore a need was felt to revise the Supplement PAR for E&M Works. The present supplement to PAR for E&M works is a revised and rationalized version of the first supplement which was published in July 2013.

This supplement to PAR for E&M works is also a sincere and appreciable attempt by the CSQ (Electrical) unit of the department to update the rates of various E&M services for the preparation of the Preliminary Estimate on year to year basis. This will certainly be helpful to the field formations to incorporate the provisions of various essential E&M services in the Preliminary Estimate and will also help to bring uniformity in the preliminary estimation of E&M services.

The rates adopted are based on the detailed analysis of the various quotes from the manufacturers as well as awarded rates of important CPWD projects. In this process, unitized rates of some items have gone down while for some of the items these have remained the same whereas in case of substation, the rates are slightly increased. This cost correction reflects the genuine concern of the Department to be in pace with changes that technology brings in the cost. It is hoped that more and more additions will be made in the coming future to make it more comprehensive and useful to all concerned.

Accordingly, these plinth area rates for E&M works with base 100 as on 01.04.2014 have been prepared for circulation in the department.

PLACE : NEW DELHI
DATE : July' 2014

(R.K. SINGHAL)
SPL. DIRECTOR GENERAL (NR), CPWD
CHAIRMAN, SPECIFICATIONS COMMITTEE



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NO: 10(10)/CE(E) CSQ/Plinth Area Rates / 151

Dated:11/07/14

MEMORANDUM

Plinth Area Rates as applicable on 1.10.2012 were last circulated under Memo no. 62 /SE(TAS)/Plinth Area Rates/399 dated 24/12/2012 alongwith annexure I to V. However, the need for issuing supplement to PAR-1.10.2012 for specialised E&M works for 2014 was felt due to changes in the rates of various E&M services in built environment.

Accordingly, supplement to PAR-1.10.2012 for specialised E&M works with base 100 as on 01.04.2014 has been prepared for circulation in the department. In future, all the preliminary estimates for E&M works in a building need to be prepared on the basis of these plinth area rates.

This supplement to PAR-1.10.2012 for specialized E&M works as on 01.04.2014 is hereby issued and is applicable with immediate effect.

(Mukesh Vij)

Addl. Director General (TD), CPWD

Place : New Delhi

Date : July' 2014

INTRODUCTION

Keeping reasonable provisions for E&M services in the Preliminary estimates of a project for built environment is a very important task and needs to be done very judiciously so that no essential provision is left unincorporated. The costing should not only be realistic considering the time taken by the client to accord AA & ES which may vary and may even take one to two years but should also obviate the need to go for revised estimate.

The foremost task in this direction is therefore to list out all essential E&M components so that no important E&M provision may be missed out. Following is therefore an exhaustive list of various E&M components in a building which again is dependent on the type of building, its utility and local bye laws etc.


1. Internal electrification of building, Central Call Bell System, Lightning Conductor.
2. Computer, LAN, Internet, EPABX, Cable TV, Centralized Clock System etc.
3. External lighting - Road lighting, area lighting, facade lighting, landscape lighting, Illuminated water fountains, architectural lighting or any other special lighting like sports lighting for Stadium.
4. Water Supply Pumps with or without automation or Hydro pneumatic system.
5. Electric Sub Station including HT equipments, Transformers, LT panels etc.
6. Lifts, DG Sets, UPS System.
7. Central AC Plant, Variable Refrigerant Flow Systems, Precision Air Conditioning.
8. Wet riser /downcomer /Sprinkler System, Fire Extinguishers.
9. Fire alarm/detection & PA system, Exit signage system.
10. Building Management System, Automatic Lighting Controls.
11. Building Security system- CCTV, Access control and intrusion alarm system.
12. Gate security system including boom barriers, bollards etc.
13. Solar water heating System, Solar power generation System.
14. Sound reinforcement/Conference/Simultaneous interpretations system, Projector/ Stage lighting.
15. Laundry equipments, Kitchen Equipment, Oxygen Generation Plants, Boilers/Incinerators.

The list is indicative only and there may be more inclusions here depending on the specific requirements of the client or technology up gradation.

Preparation of the preliminary estimate for E&M services thus envisages all the services needed at the time of occupation of the building and hence a proper selection of services out of the list of above is a basic requirement. The aim of this document is therefore to provide suitable cost guidelines for providing adequate provisions in the Preliminary Estimate and the costing of some of the widely required items from the aforesaid list has been included in this supplement. This documents also aims to avoid omission of essential E&M components in a building which causes occupational delay as well as inconvenience to the user.

I am indebted to Sh. V.K. Gupta, Director General, CPWD for his positive energy and immense interest which made this publication possible. I am also grateful to Sh. R.K. Singhal, Spl.DG(NR) and Sh. Mukesh Vij, ADG (TD) and all officers of E&M wing for their valuable contributions. Any suggestions for improvement are welcome.

Place : New Delhi
Date : July' 2014


(C.K.VARMA)
Chief Engineer (CSQ) (E),
CPWD, New Delhi

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20.	Sh. S.S. Garg, SE(E) TAS, CPWD	Member Secretary

PLINTH AREA RATES FOR SPECIALISED E&M SERVICES

Sl. No.	Description of Item	Unit	Rate ₹
1	SUB- STATION EQUIPMENTS		
	Supplying installation testing and commissioning of Sub-Station equipments comprising H.T. Panel, Transformer, HT Cable, Bus trunking from Transformer to LT Panel, LT Panel, Automatic power factor corrector panel, Essential Panel i/c Earthing, inter connecting power cables in sub- station, safety equipments.	per KVA	7500.00
2	DIESEL GENERATOR SET		
	Supplying installation testing and commissioning of silent type D.G. Set, AMF Panel, Bus Trunking /cables from DG Set to essential panel, control cable, Earthing of DG Set and AMF Panel, DG set exhaust piping as per CPCB norms and minor allied works.	per KVA	10000.00
3	RISING MAINS		
	Supplying installation testing and commissioning of compact air insulated Rising mains comprising of end feed units and tap off boxes with suitable capacity 4 pole MCCB, separators, flexible joints, i/c bends, elbows and earthing having 35KA breaking capacity and IP 54 protection.		
3.1	With Aluminum bus bar		
3.1.1	125A	per metre	13000.00
3.1.2	200A	per metre	15500.00
3.1.3	315A	per metre	16600.00
3.1.4	400A	per metre	17600.00
3.1.5	500A	per metre	19500.00
3.1.6	630A	per metre	21200.00
3.1.7	800A	per metre	29000.00
3.1.8	1000A	per metre	36200.00
3.1.9	1250A	per metre	39300.00

Sl. No.	Description of Item	Unit	Rate ₹
3.2	With Copper bus bar		
3.2.1	125A	per metre	17600.00
3.2.2	200A	per metre	17600.00
3.2.3	315A	per metre	24300.00
3.2.4	400A	per metre	25300.00
3.2.5	500A	per metre	28900.00
3.2.6	630A	per metre	33200.00
3.2.7	800A	per metre	47000.00
3.2.8	1000A	per metre	60800.00
3.2.9	1250A	per metre	68800.00
4	BUS TRUNKING		
4.1	COMPACT AIR INSULATED		
	Supplying installation testing and commissioning of compact air insulated Bus Ducting (For Horizontal run outside sub-station) separators, flexible joints, i/c bends, elbows and earthing having 50KA breaking capacity and IP 54 protection.		
4.1.1	With Aluminum Bus Bar		
4.1.1.1	630A	per metre	10000.00
4.1.1.2	800A	per metre	13000.00
4.1.1.3	1000A	per metre	15500.00
4.1.1.4	1250A	per metre	18250.00
4.1.2	With Copper Bus Bar		
4.1.2.1	630A	per metre	24300.00
4.1.2.2	800A	per metre	31700.00
4.1.2.3	1000A	per metre	40100.00
4.1.2.4	1250A	per metre	46200.00

Sl. No.	Description of Item	Unit	Rate ₹
4.2	SANDWICH TYPE		
	Supplying installation, testing and Commissioning of Sandwich bustrunking including vertical and horizontal bends, adopter box, flange end and flexible joint with suitable earthing strips having 50KA breaking capacity and having IP 54 protection.		
4.2.1	With Aluminum Bus Bar		
4.2.1.1	630A	per metre	11200.00
4.2.1.2	800A	per metre	13600.00
4.2.1.3	1000A	per metre	15300.00
4.2.1.4	1250A	per metre	17500.00
4.2.1.5	1600A	per metre	21900.00
4.2.1.6	2000A	per metre	25700.00
4.2.1.7	2500A	per metre	34700.00
4.2.1.8	3200A	per metre	38900.00
4.2.1.9	3600A	per metre	43500.00
4.2.1.10	4000A	per metre	49800.00
4.2.2	With Copper Bus Bar		
4.2.2.1	630A	per metre	31500.00
4.2.2.2	800A	per metre	37700.00
4.2.2.3	1000A	per metre	50500.00
4.2.2.4	1250A	per metre	65700.00
4.2.2.5	1600A	per metre	78500.00
4.2.2.6	2000A	per metre	106600.00
4.2.2.7	2500A	per metre	135000.00
4.2.2.8	3200A	per metre	147000.00
4.2.2.9	3600A	per metre	173000.00
4.2.2.10	4000A	per metre	198400.00

Sl. No.	Description of Item	Unit	Rate ₹
5	UNINTERRUPTED POWER SUPPLY		
5.1	Supplying installation testing and commissioning of online UPS system with 30 minutes backup i/c batteries.	per KVA	20000.00
5.2	Add for every additional 30 minutes backup.	per KVA	8000.00
6	CENTRAL AC PLANT		
6.1	Supplying installation testing and commissioning of Energy Efficient Central AC Plants	per ton	70000.00
6.2	Add for stand by Chilling units system(High side)	per ton	38000.00
7	VRV/VRF AC SYSTEM		
	Supplying installation testing and commissioning of VRV/VRF System i/c indoor, outdoor units, piping, cabling/ bustrunking/ risingmain(within the building), wiring, electrical panel and also treated fresh air system.	per HP	55000.00
8	PRECISION AIR-CONDITIONING SYSTEM		
	Supplying installation testing and commissioning of Precision Air-conditioning system i/c piping,controller and cabling etc. required for the system.	per ton	100000.00
9	SOLAR PHOTO VOLTAIC POWER GENERATION SYSTEM		
	Supplying installation testing and commissioning of Grid interactive roof top solar photo voltaic power generation system i/c space frame but without battery.	per KWp	100000.00
10	SOLAR WATER HEATING SYSTEM		
	Supplying installation testing and commissioning of Solar water heating system of following rated capacity and region i/c electrical heater back up and make up tank but without piping.		
10.1	Solar Water Heating system with heat exchanger type 1 for cold region		
10.1.1	200 liter per day	each	46000.00
10.1.2	300 liter per day	each	64000.00
10.1.3	1000 liter per day	each	210000.00

Sl. No.	Description of Item	Unit	Rate ₹
10.2	Solar Water Heating system with heat exchanger type 1 for warm region		
10.2.1	200 liter per day	each	45000.00
10.2.2	300 liter per day	each	61000.00
10.2.3	1000 liter per day	each	230000.00
11	CCTV SYSTEM		
	Supplying installation testing and commissioning of IP based CCTV system for building security comprising of PTZ, Fixed camera, cabling, recording, display system and hardware and software support.	per sq. metre	300.00
12	ACCESS CONTROL SYSTEM		
	Supplying installation testing and commissioning of Access control system for building security comprising of Controller, E&M locks, Reader, Smart cards, cabling, recording, display system and hardware and software support.	per sq. metre	190.00
13	BUILDING MANAGEMENT SYSTEM		
	Supplying installation testing and commissioning of Building management system etc. cabling, recording, display system and hardware and software support.		
13.1	Built up area up to 10000 sq mt.	LS	4800000.00
13.2	Add extra for built up area beyond 10000 sq mt.	per sq. metre	160.00
14	HYDROPNEUMATIC WATER SUPPLY SYSTEM		
	Supplying installation testing and commissioning of Hydropneumatic water supply system consisting of 3nos pumps (2 working+1 stand by) i/c microprocessor based control panel and VFD complete as required.	per LPM	2000.00
15	OCCUPANCY SENSORS		
	Supplying testing and commissioning of occupancy sensors.	per sq. metre	75.00

REFERENCE TO AMENDMENTS

S.No.	Reference under which issued	Item No.	Page No.	Remarks