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Electric Locomotives

1.0 Preparedness for taking over trains on electric traction over newly electrified sections

- Electrification on IR is now being carried out @ 1300 RKM/annum. The pace has increased during last few years. Zonal Railways are being regularly advised to workout requirement of electric locomotives, maintenance facilities and trained running staff for smooth transition of traffic on Electric traction before opening of newly electrified section.
- As per the details of freight & coaching trains running with Diesel locos under electrified territories submitted by Railways for 7 days, it has been observed that switching over of trains from diesel to electric traction on Electrified sections is not very fast due to reasons like non availability of adequate trained crew, maintenance facilities and requirement of coaching locos etc.
- The summary of information submitted by Railways is as under:
 - Avoidable coaching trains running with Diesel locos under Electrified territories as identified by Railways are as under:

Railway	No. of trains (in pair)
CR	Not given
ER	13
ECR	40 (above 200 kms running under wire)
ECOR	0
NR	4
NCR	Not given
SR	6
SCR	4
SER	Not given
SECR	0
WR	26
WCR	Not given

- Similarly, with the freight running data of 7 days, it has been observed that about 12 – 13% of freight traffic is still running with Diesel locos under OHE ranging from few kilometers to up to 500 kms per day. Railway wise status is as under:

Rly	Total Goods trains run on Electrified section / Day			Goods trains run on Diesel under wire/Day			%age running of Diesel under wire		
	Loaded	Empty	Total	Loaded	Empty	Total	Loaded	Empty	Total
CR	393	97	490	83	14	97	21.08	14.31	19.74
ER	22	14	36	7	4	11	30.52	30.52	30.52
ECR	246	122	369	23	13	36	9.28	10.40	9.65
ECOR	259	86	345	39	12	51	14.98	14.00	14.74
NR	227	116	343	102	76	178	44.84	65.88	51.94
NCR	274	249	523	21	20	41	7.57	8.19	7.87
SR	51	34	85	18	11	29	34.64	32.35	33.72
SCR	251	135	386	15	6	21	5.87	4.44	5.37
SER	445	199	644	27	19	46	6.17	9.38	7.17
SECR	310	176	486	27	15	43	8.74	8.77	8.75

Rly	Total Goods trains run on Electrified section / Day			Goods trains run on Diesel under wire/Day			%age running of Diesel under wire		
	Loaded	Empty	Total	Loaded	Empty	Total	Loaded	Empty	Total
SWR	8	3	12	1	0	1	13.56	0.00	9.76
WR	407	266	674	9	6	15	2.24	2.24	2.24
WCR*	-	-	-	-	-	-	-	-	-
IR	2895	1498	4393	371	197	568	12.82	13.12	12.93

*Data not given in terms of no. of trains.

- Further, above data has been converted in GTKMs with assumptions of average coach load, kms under OHE with DSL loco, it is observed that per day nearly about 138 million GTKMs of coaching and 418 million GTKMs of freight is being moved by Diesel traction over Electrified territories (Calculations available in Mailbox of 'elocos' website).
- Although, taking over of all the trains on Electric traction may not be feasible due to unavoidable reasons like non-availability of facilities for traction change & time loss in traction change etc. However, if reduction in above DSL under wire GTKMs by even 50% is achieved, it may result in saving of approx Rs. 1000 Cr. per annum or Rs. 3.0 Cr. per day (on the basis of Line Haul cost).
- Some Railways have worked out financial savings on account of replacing Diesel locos working in Electrified territories.

Rly	Additional expenditure / annum due to Diesel loco running under Electrified territories	Cost calculated on the basis of
ECR	Rs. 187.9 Cr	Fuel cost
NR	Rs. 134 Cr.	Fuel cost
SR	Rs. 46 Cr.	Fuel cost
SER	Rs. 61.71 Cr.	Line haul cost
WCR	Rs. 88.69 Cr.	Fuel cost

The detailed calculation sheets of Railways are available in the Mailbox of 'elocos' website.

Observations of Railway Board on above is as under:

- Requirement of additional electric locomotives for taking over of trains from diesel traction should be assessed realistically duly taking into account extension of trains utilizing same loco. WAG-5 locos (preferably with roller suspension bearings) can be used slow moving smaller passenger trains.
- Requirement of crew and planning for conversion training of existing diesel crew and requirement of additional crew and demand to RRBs for recruitment of ALPs for future.
- Rationalization of coaching links for extension of existing trains without additional electric locos.
- Possibility of transfer of staff from other divisions/Railways as an interim measure and liaison with training centers, of other Railways, also for training/conversion & three phase locos training of running staff in maximum possible.
- Planning of training / sparing of maintenance staff for trip shed if planned in newly electrified section.
- Adequate running supervisory staff e.g. TLC, CC, LI etc. for proper administration of crew on existing / new lobbies planned in the newly electrified sections.

- The detailed status of RE projects is provided in Para 6.0, Railways to discuss action plan on providing trained crew & locos for taking over trains on Electric traction.

2.0 Reliability of IGBT propulsion 3-Phase Electric locomotives – RDSO and CLW to jointly present the road map.

3.0 Safety – Signal Passing At Danger (SPAD)

- During 2014-15 (up to 5th Feb), there have been 4 accident cases (reported to Railway Board Category) logged on Electrical account as against 5 cases last year same period out of which, 2 cases are attributed to Crew (LP). Summarized position is as under :

Sn	Classification	ER	ECOR	SCR	SWR	Total
1	Loco Defect			1 (Loco no. 31345 - Traction motor fell down)		1
2	Loco Pilot		1 (Banking Loco got uncoupled during run and dashed against the Brake van)		1 (SPAD)	2
3	Elect TRD Staff	1 (Entanglement of material trolley carrying TRD material)				1
Total		1	1	1	1	4

- Under reported to Railways category, there have been 58 safety incidences (including SPAD) in 2014-15 (up to 5th Feb) as against 57 cases same period last year. Out of 58 total incidences, 48 cases are attributed to Crew account (LP) as against 47 cases same period last year (tabulated below).

Sn.	Classification	CR	ER	EC	ECO	NC	NR	SC	SE	SEC	SW	SR	WC	WR	Metro	TTL
1	Delayed application of brakes	1														1
2	Careless working	1											1	1		3
3	Bad enginemanship	1		2		1								2		1
4	SPAD	7		1		5		2		2		3		5		25
5	Open trap point							1								1
6	Disregard of shunt signal	1				1		1						4		7
7	Over speeding						1									1
8	Failed to control						1									1
9	Crew failure		1							1				1		3
Total		11	1	3	0	7	2	4	0	3	0	3	1	13	0	48
Same period last year		8	1	0	1	6	2	2	2	1	1	5	3	13	1	46
Increment/Reduction(-)		3	0	3	-1	1	0	2	-2	2	-1	-2	-2	0	-1	2

- From the table above, it is observed that WR & CR account for 50% of the total incidences on Crew account.

Observations of Railway Board on above is as under:

- In recent case of SPAD on 02.02.15 in BSL (CR), loco 28081 (WAG-7/LDH) overdue IA schedule by about 11 days and was running light engine at the time of SPAD. Poor brake power is one of the probable cause of the SPAD besides crew alertness or over speed etc.
- In another case of SPAD on BCT (WR) on 21.08.2014 where Crew failed to control the train on 1:150 grade. Suspected cause of the SPAD was poor brake power of BLCA rake due to isolation of brake cylinder and malfunctioning of load sensing devices.
- In one case of SPAD, LP of a stationary Goods train at Jharadih station (SECR/BSP) started his train without confirming the departure signals for his train. In enquiry it was revealed that LP was in drowsy state and mistook signals for adjacent line and started without ensuring his signals.
- on 31.10.2014, there was a SPAD case involving train no. 12282 at GMO station while passing through loop line non-stop, Loco Pilot (ADRA/SER HQ) passed the 1st Starter Signal at 'ON' and entered into sand hump with train engine and 3 coaches, however, no casualty was reported. Prima-facie cause of the incidence was inadequate road learning & awareness [about recent signaling (RRI) work done] of ADRA (SER) crew for working in ECR/DHN division due to lack of co-ordination among the Railways.
- WR got conducted one 'Safety assessment & training programme for Loco Pilots' utilizing services of a private agency, wherein nearly 200 Loco Pilots were assessed at ZTI/BRC. WR should get feedback from the trainees & institute's instructors and if found useful, same can be extended.
- Railways to also ensure that :
 - No schedule overdue loco should be engaged in any train other than the one moving in the direction of its homing shed and in any case schedule locos should not be sent out of the owning Railway. TLC/TRS organization should be counseled for correct entry of schedule done date and keep watch on loco attaching/detaching and service change events in FOIS & ICMS. Any wrong entries, if found, should be corrected with proper liaison with OCC/FOIS at first opportunity.
 - Instructions contained in Board's letter no. 2012/Safety(DM)/7/25 dated 28.10.2014 should be strictly followed by Railways.
 - VCD has a pivotal role in alertness of Crew during run. Instructions has already been issued vide Board's letter no. 2014/Safety(DM)/7/1 dated 25.08.2014 for proper functioning of VCD. Also, for effective monitoring of VCD, information from LP about working of VCD at the time of Sign Off is already incorporated in CMS. Railways should check report daily and ensure attention to VCD at the earliest.

4.0 Presentation by CLW on new developments (HOG, DPWCS, IGBT propulsion in set & TCN – VCU – CLW to give presentation.

5.0 Utilization of Electric Loco Shed, Khanalampura, NR

Work of ELS/KJGY is almost complete. Locos have already been allotted. NR to expeditiously process for creation of posts for staff as well as officers so that shed can be made fully operational during 2015-16.

For ELS/KJGY, funds to the tune of Rs. 18.5 Cr. & Rs. 10.0 Cr. provided in Revised Estimate 2014-15 & Budget Estimate 2015-16 respectively.

Railway Electrification & CORE

6.0 Issues of CORE

6.1 ENERGISATION & CRS TARGETS FOR (2014-15)

(A)	Energisation Target	-	1200 RKM (CORE)
		-	300 RKM (RVNL)
		-	52 RKM (NR) HW-DDN
(B)	CRS	Target	- 2030 RKM (CORE)
		-	580 RKM (RVNL)
		-	79 RKM (N.Rly)
		-	(Laksar-Haridwar –Dehradun)
	Total	-	2689 RKM s

CRS done by CORE – 865 RKMs

CRS Application submitted by CORE - 128 RKMs

ENERGISATION AND CRS ACHIEVEMENTS OF 2014-15

Parameters	CORE		RVNL		RLYS		Total	
	TGT	Ach.	TGT	Ach.	TGT	Ach.	TGT	Ach.
Energisation (In RKM)	1200	637 (upto Jan)	300	179 (upto Jan)	52	8	1552	824
CRS (In RKM)	2030	878	580	81	79	0	2689	959

Railway Wise Breakup of section targeted for CRS in (2014-15)

Rly/ Total RKM	Proj.	Section	RKM	TDC	Agency
NR (501)	NR	Laksar-Dehradun	79	31.03.15	Rly
	UMB	Meerut City-Saharanpur	113	31.03.15	CORE
		Jammu Tawi-Udhampur	53	31.05.15	
		Udhampur -Katra	25	31.05.15	
		Ghaziabad-Meerut City	45	31.03.15	
		Jammu Tawi-Pathankot	100	Done	
		Khurja-Meerutcity	84	Done	
NER (458)	JP	Kanpur Anwarganj-Kalyanpur	10	28.02.15	
		Barabanki-Gonda	88	Done	
		Gonda-Gorakhpur	157	31.07.15	
		Chhapra-Siwan incl Siwan-Thawe	88	Done	

Rly/ Total RKM	Proj.	Section	RKM	TDC	Agency
		Siwan-Gorakhpur (Siwan-Bhatni- 50 RKM done)	115	31.03.15	
ECR (319)	DNR	Hajipur-Muzaffarpur- Bachhwara	140	Done	
		Barauni-Katihar	177	31.03.15	
SR (316)	MS	Villipuram-Vellore	150	Done	CORE
		Virudhnagar-Tirunelveli/ Tuticorin	147	Done	
		Shoranur-Calicut	86	28.02.15	
		Coimbatore-Mettupalayam	33	28.02.15	
SWR , SCR (306)	SC	Yelahanka- Dharmavaram- Gooty	306	31.03.15	RVNL
CR (274)	PA	Daund-Manmad Manmad-Shirdi (81 RKM)	255	31.03.15	RVNL
ER (182)	BBS	Gulbarga-Wadi	19	31.03.15	CORE
		Kachujor-Sainthia	30	22 RKM Done	
		Sainthia-Rampurhat	33	31.03.15	
		Rampurhat-Pakur	48	31.03.15	
		Khana-Sainthia	71	28.02.15	
		Vizianagaram Garudaballi	13 RKM CRS done		
NCR (123)	JP	Mathura-Alwar	123	28.02.15	
SCR (100)	SC	Wadi Yard	2	28.02.15	
		Kengeri-Ramnagaram	30	28.02.15	
NWR (72)	JP	Alwar-Rewari	72	30.06.15	
SWR (8)	SC	Yeshwantpur-Chikbanavar	8	28.02.15	
		Sub Total	2689		

CRS APPLICATIONS ALREADY SUBMITTED (RKMs)

Proj.	Group	Section	RKM	Status
Kota	148	Kanpur-Anwarganj- Kalyanpur	10	Submitted on Sep'2014.

SC	156	Kengeri-Ramanagaram	30	CRS application submitted on 12.03.14. CRS application returned on 25.08.14, for want of CRS application from Bangalore City to Kengeri.
	132 A	Wadi Yard	2	CRS application submitted.
MS	157	Shoranur-Calicut	86	CRS application submitted.
Total			128	

CRITICAL ACTIVITIES OF CRS TARGETS DURING 2014-15 BY CORE

Proj	SECTION	RKM	RLY	TGT	CRITICAL ACTIVITIES
UMB	Meerut City-Saharan-pur	NR	113	31.03.15	<p>Complete Section energized on 2.2 KV Signaling work Out of total 15 stations, PI modifications on 6 stns was to be done by N.Rly, which has been completed. SSI work of 9 stns to be done by RE of which 5 have been completed. For balance status is as below:- Application for Mansurpur submitted for CRS sanction. TDC for commissioning: Mansurpur – Feb' 2015. Rohana Kalan – March' 2015. Tapri – April' 2015. Muzaffar Nagar – May' 2015. TSS Tapri: i) Civil : All work completed, ii) Electrical: Contract awarded to M/s. Descon on March-12. All foundation completed PDC: 28.02.15 TR Line Tapri : Tr. Line (10km): 37/39 tower Fdn & 30/39 tower erection done, work in progress, PDC: 31.03.15. TSS Jaraudanara: i) Civil : Work completed. ii) Electrical: Contract awarded to M/s. SIGMA Construction/Kolkata in February-13. Design completed. Physical work is yet to start. PDC: 30.06.15. TR Line Jaraudanara : SEB estimate with special design tower received and under process . PDC: 31.08.15. 66 KV Line Raising: Between Muzzafarnagar-Jarodanara Km (at 120/2-3)66 KV is required to be raised by UPPTCL. Work re-awarded to UPPTCL in April'14 and work likely to commissioned by Feb' 15. Glued Joints requirement: 30 Nos to be provided by Delhi Division. 72 Maintenance posts. Minimum 36 required. NIL sanctioned.</p>

Proj	SECTION	RKM	RLY	TGT	CRITICAL ACTIVITIES
UMB	Ghaziabad-Meerut City	45	NR	CRS papers ready	<ul style="list-style-type: none"> Complete Section energized on 25 KV. 84 Maintenance posts. Minimum 42 required. NIL sanctioned. CRS sanction awaited for posts creation.
	Jammu Tawi-Pathankot	100	NR	CRS sanction received on 23.07.14.	<p>Sambha TSS : Sambha: i) 90% Civil work completed, ii) TSS contract awarded to M/s Sigma on 13.6.13 and foundation completed. Structure erection 86/115 completed, PDC: 31.03.15</p> <p>Sambha Tr. Line (11 Km) : Work will be done departmently. TDC – Aug' 2015</p> <p>116/232 Maintenance posts sanctioned.</p>
UMB	Jammu Tawi-Udham-pur	53	NR	31.05.15	<p>1362/1382 Fdn done.</p> <p>48.5 out of 53 RKM energized on 2.2 KV.</p> <p>TSS -Manwal: i). Civil work: Work completed. ii). Electrical:. Foundation 214/214 completed. PDC : 31.03.15</p> <p>TR Line Manwal : Contract yet to awarded by JKPDD. PDC: 30.06.15</p> <p>Bridge masts: 100/106 no. erected.</p> <p>Tender for the modification of OHE mast location in drain (98 location) under finalization.</p> <p>OHE for Tunnels: Tender awarded to M/s Enrich RD Infra projects Pvt. Ltd on dt.25/04/13. Bolt Grouting in 19/20 Tunnels completed. Work in progress in last one Tunnel.</p> <p>38 Maintenance posts. Minimum 19 required. NIL sanctioned.</p>
	Udhampur-Katra	25	NR	30.05.15	<ul style="list-style-type: none"> 24 RKM/25 RKM energized on 2.2 KV. 516/589 Foundations and 400/480 Mast erection completed. Work in progress. 25/29 bridge masts provided. All drawing approved.
BBS	Sainthia – Rampur-hat	33	ER	31.03.15	<ul style="list-style-type: none"> Section energized on 25 KV. Balance Work. 50% SED and TW checking is to be done. Rampurhat TSS: Commissioned. TR Line Rampurhat (8km): Completed.
	Rampur-hat- Pakur	48	ER	31.03.15	<ul style="list-style-type: none"> Condonation papers for Sainthia ROB under PHOD signature. Section energized on 2.2 KV. Mast erection-100 ,Wiring Shot-140 and TW checking-153 TKM is under Progress TSS-Pakur: Civil Work completed. 84/84 equipment foundation and 57/84 structure erection and 20/72 equipment erection completed. PDC: 30.04.2015 TR Line Pakur: Tower fdn and erection & stringing completed. PDC: 30.04.15

Proj	SECTION	RKM	RLY	TGT	CRITICAL ACTIVITIES
BBS	Khana-Sainthia	71	ER	31.01.15	<ul style="list-style-type: none"> Section charged on 2.2 Kv. TW checking with division 60% in completed Khana-Sainthia Section Replacement of defective glued joints yet to be done by ER Condonation of Sainthia ROB is under process. Condonation for line No. 2 and 3 of Sainthia FOB, for which head room clearance is less, is under process.
GKP	Barabanki-Gonda	88	NER	CRS authorisation received on 21.07.14	<p>TSS Burhwal: i) Civil work completed, ii) Electrical: TSS contract awarded on M/s. DESCON on Dec.-11, All Fencing & Main Fdn completed, Structure & Eqpt erection completed.</p> <p>TR Line Burhwal (43km): SEB payment paid in March-08. Tower Fdn 132/140 & erection 132/140 done. Stringing 33/43km done, PDC: 30.04.15</p>
GKP	Gonda-Gorakh-pur Cantt	157	NER	31.07.15	<p>Gonda-Baruachak: On 25 KV; Baruachak-Gorakhpur: 2.2 KV Post Wiring works and work in 2nd Line is under progress. (50 km wiring left).</p> <p>TSS Govindnagar : i) Civil work completed, ii) Electrical: All Fdn completed, Steel erection-95% & equipment erection 25% completed. PDC: 31.12.14</p> <p>TR Line Govindnagar (21.6km): Stringing completed up to 69 Tower out 72. ROW problem solved for 3 foundations. Work yet to start. New contract to be fixed. PDC: 31.03.15</p> <p>TSS GKP: i) Civil work completed. ii) All Fdn done, Structure & equipment erection completed. PDC: 31.03.15.</p> <p>TR Line GKP- (0.6 Km): Tower Fdn 04/04 completed. Tower erection 4/4 completed. PDC-28.02.2015</p>
GKP	CPR-SV-Thawe	88	NER	Done	<ul style="list-style-type: none"> CRS Application Status (CPR-SV) : CRS Inspection conducted and authorisation received on 23.06.14. TSS Nunkhar –i) Civil work completed (ii) Electrical: M/s. ATPL, LKO. All Fdn & earthing completed. Work was held up since Nov'12, Structure erection 70% completed and equipment erection 50% completed. PDC: 30.06.15. Transmission line Nunkhar – Completed except charging.

Proj	SECTION	RKM	RLY	TGT	CRITICAL ACTIVITIES
DNR	Hajipur-MFP-Bachhwara	142	ECR	Done	<p>Hajipur-Muzaffarpur-Samastipur-Bachhwara commissioned on 10.12.14.</p> <ul style="list-style-type: none"> Ram Dayalu Nagar TSS : (i) Civil work completed.(ii) Electrical: All Fencing Foundation done. Equipment foundation done. Equipment erection completed. EIG sanction applied. Ram Dayalu Nagar TR Line: (05 Km): SEB payment made in March-07, 19/23 Tower foundation completed. Tower erection 12/23 completed. PDC: 31.03.15. Bachhwara- TSS: EIG sanction obtained. Bachhwara TR Line (12km): SEB payment paid in March-08. Tower Fdn 11/41 done, tower erection- Nil, work stopped. Contract terminated by BSEB. Re-tendering due on 12.02.15 PDC: 31.10.15
DNR	Barauni-Katihar	177	ECR	31.05.15	<ul style="list-style-type: none"> Section energized on 2.2 KV. Barauni-Mansi SED checking completed. Mansi-Katihar SED checking is in progress. TSS Khagaria: Commissioned. TR Line Khagaria: completed. TSS Naugachhia: Civil Work, equipment foundation & structure erection completed. Joint checking being done. TR Line Naugachhia: 1/9 Tower foundation completed. ROW problem. PDC: 31.03.15
JP	Kanpur Anwarganj-Kalyanpur	10	NCR	28.02.15	<ul style="list-style-type: none"> CRS application under GM's signature. TDC- 28.02.15
	Mathura-Alwar	123	NWR	31.03.15	<ul style="list-style-type: none"> Section Energised on 2.2 KV SED & tower wagon checking completed.. TSS:Ramgarh- Civil Works Completed. Foundation and Structure erection work completed.Earthing is under progress. PDC:15.02.15 TR Line Ramgarh- completed. TSS Deeg- Civil Works Completed. Foundation and Structure erection work in Progress. PDC:31.03.15 TR Line Deeg- Completed. SCADA work yet to start. PDC – 31.05.15
MS	Virudhnagar - Vanchimanyachhi-Tuticorin & Vanchimanyachhi-Tirunelveli	147	SR	Done	<p>CRS authorization received on 15.12.14.</p> <p>TSS: Vanchimanyachhi:(i) Civil work completed (ii) Electrical: Contract terminated & re-tender is under finalization. PDC: 30.06.15.</p> <ul style="list-style-type: none"> TR Line Vanchimaniyachhi: SEB estimate yet to be received. Application fee paid. PDC:30.06.15. TSS: Kovilpatti: Completed. TR Line: Kovilpatti: Completed
MS	Shoranur-	147	SR	28.02.15	<ul style="list-style-type: none"> Section energised on 25 kV.

Proj	SECTION	RKM	RLY	TGT	CRITICAL ACTIVITIES
	Calicut				<ul style="list-style-type: none"> CRS papers submitted. PDC-28.02.15
	Coimbatore-Mettupalaya	33	SR	31.03.15	<ul style="list-style-type: none"> Section energised on 2.2 KV. SED & tower wagon checking is done. PDC-March'2015
SC	Wadi Yard	2	SWR	31.03.15	<ul style="list-style-type: none"> Wadi Goods Yard (19 TKM): Work completed and CRS sanction obtained. Wadi Coaching Yard (18 TKM): Work completed and EIG permission received.. CRS papers submitted.
SC	Kangeri-Ramnagar	30	SWR	31.03.15	<ul style="list-style-type: none"> CRS application submitted in first week of July.'14 TSS Bidadi: Equipment erection completed. Testing under progress. PDC: 28.02.15. TR Line Bidadi: (5.6km): Work awarded on 31.01.14. Foundation 10/42 completed. PDC: 30.04.15.
	Yeshwantpur-Chikbanvar	8	SWR	28.02.15	<ul style="list-style-type: none"> Complete section charged on 2.2 KV. EIG application for 25 KV charging of section has been submitted to CEE/SWR on 26.03.14
TOTAL		2030			

Issues Raised by CCRS/CRS During RE Project Inspections:-

- Improper Implantation.
- Horizontal distance of 2575 mm below the rail level from the foundation edge as per IRSOD.
- BPAC failures.
- OHE Design not as per the latest wind Zones, confirming to IS:875(Part 3), 1987.
- Earth Resistance Values in Electrical and S&T Installations higher than standard.
- Creation of Maintenance Posts and bodies in place – at least 50%.
- Panto Entanglement and OHE Breakdown cases.
- CORE, Zonal Railway to take all precaution to avoid adverse comments from CRS on the above issues.

Targeted section for energisation in 2014-15 (CORE)

Proj.	Gr	SECTION	TGT	Ach.	STATUS
UMB	143C	Bajalta-Ramnagar	21	21	<ul style="list-style-type: none"> 14 Nos foundation balance Bridge masts: 16 Nos balance OHE for Tunnels: Work in progress in last Tunnel.
	159	Garhmukteshwar-Amroha	33	33	<ul style="list-style-type: none"> Foundation work completed. 17 Nos Mast erection balance.
	179	Udhampur-Katra	19	19	<ul style="list-style-type: none"> 73 Nos foundation and 137 Mast erection balance. Work under progress.
	Sub Total		73	73	

Proj.	Gr	SECTION	TGT	Ach.	STATUS
BBS & KKK	166	Kuneru-Singapur Road	37	37	• Foundation work completed. • 880 Mast erection balance. Vizianagaram-Garudaballi (13 RKM) commissioned on 06.02.15
	167	Theruvali-Titlagarh	107	107	Foundation and Mast erection work is under progress.
BBS & KKK	168	Andal-Sitarampur	57	1	353 foundation & 1537 mast erection balance.
	170A	Jharsuguda-Sambalpur	45	0	Foundation and Mast erection work is under progress
	Sub Total		246	145	
MS	169	Metupalayam yard	3	3	Energised on 2.2 KV.
	157	Kannur Yard	4	4	Energised on 2.2 KV.
	158	Netharavati-Penambur	23	10	499/1920 foundation & 209/1600 mast erection completed. Work held up due to non completion of doubling in Mangalore Jn- Penambur section.
	Sub Total		30	17	
JBP	173 A	Cheoki-Manikpur	92	48.6	1374 No. Foundation completed and 381 Mast erection completed as on 17.07.2014.
	173 B	Satna-Rewa & Satna-Jaitwar	70	66.5	LOA issued on 15.01.2014 to M/s CIPL-Cobra JV, New Delhi. 448 nos. Foundation done.
	174	Satna-Bhadanpur		46	4166 nos. Foundation & 1064 mast erection done.
	Sub Total		222	162	
GKP	141	Chaurichaura-Gauribazar	8	8	Work held up due to non completion of doubling and S&T modification work by Open Line.
	Sub Total		8	8	
LKO	164	Sitapur Cantt-Rosa	86	59	Foundation and Mast erection completed.
	Sub Total		86	59	
DNR	149	Katareah-Karhagola Raod	2	2	Bridge mast drawing for 4 bridges of Barauni-Katihar section approved by CBE/ECR. PDC-28.02.2015.
	176	Garwa Road-Paraspa	140	26	1900/4257 foundation completed. Mast erection yet to commence. Contractor M/s EMC-BCPL(JV)is working very slow.
	Sub Total		142	28	
NJP	150	Dumdangi-Raninagar Jalpaiguri	62	0	2115/4768 foundation & 246/3439 mast erection completed. Contractor M/s ECI is working very slow.
	171	Kumedpur-Adina	44	44	1918/1926 foundation & 1191/1786 mast erection completed.
	Sub Total		106	44	
SC	161	Dewalgaon -Rajoli	52	10	638/2688 foundation & 559/2223 mast erection completed. Contractor M/s ECI is working very slow
	156	Sethihalli- Yeliyur	35	0	Work in progress

Proj.	Gr	SECTION	TGT	Ach.	STATUS
	177	Nallapadu-Vinukonda	75	0	2932/3832 foundation & 1967/3258 mast erection completed.
	Sub Total		227	101	
	Grand Total		1200	637	

Targeted section for energisation in 2014-15 (RVNL)

SN	Section	Target	done	Balance	Status
1	Pune-Bhigwan & Gulbarga-Wadi (Package-1)	70	62	8	Foundation-6690/7219, Mast Erection-3391/5798; bracket erection-3018/7234 Wiring(cat+Cont)-238/862
2	Raichur-Wadi (Package-2)	70	44	26	Foundation-4726/5013 Mast Erection -3213/4011 Bracket erection-3333/4011 Wiring(cat+Cont)-340/584
3	Guntakal-Raichur (Package-3)	70	43	27	Foundation-5091/5591, Mast Erection- 3463/4491 ,bracket erection-3401/6100 Wiring(cat+Cont)-201/660
4	Amla-Chhindwara	70	30	40	Foundation-2426/2900, Mast Erection- 1842/2550 ,bracket erection-1708/2900 Wiring(cat+Cont)-68/106
5	Hisar-Manheru	20	00	20	LOP approved-10KM, CSD-aproved-2.2KM
Total		300	179	121	

6.2 Progress of Works Tenders : OHE

Gr	Section	RKM	Estt/ L1 Cost (Crore)	Date of Tender Opening	Stage	Remarks/ Status
182 184 185	EPC Tender -Delhi Sarai Rohilla- Rewari, Alwar-Jaipur-Phulera-Ajmer	353	460.00	01.08.14	Under TC of RFQ	RFQ opened on 01.08.14. Under acceptance.
181	Singapur Road (Ex.) - Damanjodi (Ex.)	152	50.32	03.03.15	-	Tender paper uploaded.
187	Palanpur-Ahmedabad-Kalol-Gandhinagar-Khodiyar	161	52.80	27.11.14	under finalisation	TC under signature.
183	Rewari (Ex.) - Phulera (Ex.)	213	86.77	05.12.14	under finalisation	TC under signature.
151	Raninagar Jalpaiguri(Ex) - New Bongaigaon (Ex)	221	94.40	18.12.14	under finalisation	TC under preparation.

Gr	Section	RKM	Estt/ L1 Cost (Crore)	Date of Tender Opening	Stage	Remarks/ Status
172	Pakur-Malda Town	74	41.25	15.01.15	BN/CS/Legal vetting/ verification	Tender opened on 15.01.15. EMD verification , legal vetting, credential verification processed. BN/CS under finance vetting since . LAR updation send to CORE/Finance on 29.01.15
136 & 137	Utraitia-Mughasarai balance doubling work	144	33.72	29.01.15	under finalisation	Tender opened on 29.01.15, BN & CS and LAR updation vetted.
190	Bakhtiyarpur-Tilaiyya- Manpur	132	47.45	16.03.15	TP under preparation	NIT uploaded
188 & 189	Azimaganj-New farakka	200				Vetted Quantity schedule (Scanned copy) received from Project on 03.02.15. Particular Specification and Readiness report awaited from Project. Project was asked to resubmit quantity schedule after scrutiny.

Progress of Store Tenders (Electrical Items)

SN	Section/ Tender No	Description	Type	Quantity	Tender Opened on (Date)	Remarks
1	5187	Catenary Wire	EP	975 MT	01.12.2014	Under TC
2	5185	Catenary Wire	Regular	1825 MT	10.02.2015	
3	5186	Contact Wire	Regular	2900 MT	10.02.2015	
4	5129	132/27kv Traction Power Transformer	Regular	7 Nos	28.11.2014	Under TC
5	5160 A	Insulator (porcelain)	Regular	29631 Nos	10.12.2014	Under TC

6.3 Coordination Issues with Zonal Railways (CORE)

Northern Railway
<ul style="list-style-type: none"> Creation of Maintenance Posts for Ghaziabad-Meerut city Section. EIG Sanction for 25 KV charging of Varanasi-Phaphamau-Unchahar Section. Oscillation and Emergency Breaking Distance (EBD) trial on 4-wheeler MEMV(prototype vehicle) may be expedited.
South Western Railway
<ul style="list-style-type: none"> Expedite the submission of CRS application of Bangalore – Kengeri – Ramanagaram section

6.4 Requirement of Officers:

RE Project	Railway	Junior Scale	Senior Scale
CORE	NCR	2	0
Ambala	NR	2	1
Bhubaneswar	ECOR	1	1
Kolkata	ER	2	1
Secundrabad	SCR	3	1
Jaipur	NR	1	1
	WR	1	1
New Jalpaiguri	NFR	0	1
Jabalpur	WCR	1	1
Danapur	ECR	1	1

Requirement of Supervisor

S.N		Railway	Railway Supv	TW Drivers/ Loco Pilots	Technicians
1	Req	NER	4	3	4
	Released		0	0	0
2	Req	NWR	3	2	5
	Released		0	0	2
3	Req	ER	8	3	6
	Released		5	3	0
4	Req	SR	10	2	5
	Released		4	0	1
5	Req	NFR	6	2	6
	Released		0	0	0
6	Req	SCR	7	3	6

S.N		Railway	Railway Supv	TW Drivers/ Loco Pilots	Technicians
	Released		0	0	3
7	Req	NCR	7	3	9
	Released		4	0	0
8	Req	WCR	5	3	6
	Released		3	1	5
9	Req	ECR	2	3	4
	Released		2	0	0
Total	Req	Total	52	24	52
	Released		18	4	11

Requirement of Staff

SN	Category	Minimum Requirement	On Roll	Balance requirement
Kolkata				
1	Supervisor(SSE/SE/JE)	22	11	11
2	TW Driver/LP	6	1*	5
3	Technicians	10	6	4
*: 3 LP on loan				
Jabalpur				
1	Supervisor(SSE/SE/JE)	31	11	20
2	TW Driver/LP	11	3*	8
3	Technicians	40	12	28
*: 2 LP on loan				
Secundrabad				
1	Supervisor(SSE/SE/JE)	40	11	29
2	TW Driver/LP	11	3*	8
3	Technicians	30	14	16
*: 2 LP on loan				
Danapur				
1	TW Driver/LP	8	2	6
2	Technicians	20	14	6
Jaipur				
1	Supervisor(SSE/SE/JE)	40	15	25
2	TW Driver/LP	12	2	10
3	Technicians	32	12	20
Bhubhneshwar				
1	Supervisor(SSE/SE/JE)	32	22	10
2	TW Driver/LP	9	6	3
3	Technicians	20	5	15

7.0 Creation of TRD maintenance posts by Zonal Railways

- Vide letter **No. E(MPP)2012/1/10 dated 04.09.2012**, it is explicitly stated that on the subject of "Creation of posts required for maintenance, and operation of new assets", General Managers can create posts for new assets/organizations and DRMs can create posts in Safety and operational categories only for new assets on 1:1 basis, i.e by surrendering 1 post in a particular grade, a fresh post can simultaneously created in the same lower grade, with the approval of General Manager.
- Sanction of 86 non-gazetted posts (TRD) conveyed by Railway Board for Sonapur division of ECR.
- 10 revenue charged Gazetted posts created for NR (JAG-2, SS-3, JS-5)

TRD Post creation by Zonal Railways for carrying out CRS Inspection

Project /Rly	Section	TKM	Remarks
Ambala/NR	Ghaziabad-Meerut City	120	Sanction of 42 posts required for CRS inspection . Nil created so far.
	Meerut City- Saharanpur	160	Sanction of 36 posts required for CRS inspection. Nil created so far.
	Jammu Tawi- Udhampur	78	19 posts required for CRS inspection. Nil created so far.
LKO/NR	Unchahar- Phaphamau-Varanasi & Phaphamau-Prayag-Allahabad	312	Case processed for 144 Posts. NIL created so far.
Kolkata/ER	Khana-Sainthia-Pakur	460	Case processed for 207 Posts.. NIL created so far.
Chennai/SR	Shoranur-Mangalore	765	45 posts sanctioned
	Coimbatore-Mettupalayam	39	Case processed for 15 posts. NIL created so far.
Jaipur/NWR	Alwar-Rewari	193	Case processed for 87 posts. 44 created so far.
Jaipur/NCR	Mathura-Alwar	160	98 post required. NIL created so far.
Secundrabad / SWR	Kengeri-Ramnagaram	70	Posts has been created
Gorakhpur/NER	Bhatni-GKP-Gonda	530	Posts has been created
Danapur/ECR	Barauni-Katihar	430	Posts has been created

8.0 NEW ELECTRIFICATION PROPOSALS TO BE INITIATED BY ZONAL RAILWAYS

Section	RLY	Status
Central Railway		
Pune-Satara-Sangli-Miraj - Kolhapur	CR	Awaited from Railway
East Central Railway		
Samastipur-Khagaria via Hasanpur	ECR	Awaited from Railway
Northern Railway		
Ludhiana-Firozpur-Jalandhar	NR	Awaited from Railway
Amritsar-Batala-Bharoli	NR	Awaited from Railway
Akbarpur-Faizabad-Barabanki	NR	Awaited from Railway
Bhatinda-Firozpur Cantt.	NR	Awaited from Railway
Moradabad-Aligarh incl. Bareilly-Chandausi	NR	Awaited from Railway
Muazzampur Narayan- Gajraula	NR	Awaited from Railway
North Eastern Railway		
Gorakhpur-Siwan via Padrauna	NER	Awaited from Railway
North East Frontier Railway		
Guwahati-Tinsukhia via Lumding	NFR	Awaited from Railway
Purnea-Katihar	NFR	Awaited from Railway
North Western Railway		
Ringus-Sawaimadhopur - Jaipur	NWR	Awaited from Railway.
South Central Railway		
Parbhani-Parli-Baijnath	SCR	Awaited from Railway
Mudkhed-Adilabad	SCR	Awaited from Railway
South East Central Railway		
Chhindwara-Nainpur-Mandla	SECR	Processed in Board's office. Not agreed by Planning Dte.
Nagpur-Nagbhir	SECR	Proposal awaited
South Western Railway		
Omallur-Bangaluru	SWR	Awaited from Railway
Londa-Miraj	SWR	Awaited from Railway
Bangaluru-Tumkur-Hubli incl. Birur-Talguppa	SWR	Awaited from Railway
Chikjajur-Bellary	SWR	Awaited from Railway
Western Railway		
Rajkot-Jamnagar-Okha	WR	Awaited from Railway

9.0 OHE Theft Cases in RE Section

S.N	Project	Theft cases			
		2012	2013	2014	2015(Jan)
1	BBS/KKK	10	13	17	2
2	MS	4	0	8	0
3	GKP	11	11	8	1
4	DNR	6	5	7	1
5	SC	2	6	0	0
6	JP	8	2	21	2
7	NJP	6	6	9	0
8	LKO	25	20	14	0
9	UMB	28	15	26	3
10	JBP	0	0	12	3
TOTAL		100	78	122	12

10.0 Sanction of Detailed Estimate of RE Works

SN	Name of Work	AE Cost (Cr.)	DE Cost (Cr.)	Status
1	Katwa-Azimganj-Nalhati & Azimganj-Tildanga/New Farakka incl. Nalhati & Azimganj bypass line	229.26	306.32	Presently with Finance Dte. Of Railway Board.
2	Manpur-Tilaiya-Bakhtiyarpur	140.00	140.00	Detailed estimate sanctioned by Board on 18.02.2015

Electrical Energy Management

11.0 Energy Action Plan – Procuring power at reduced terriff

SN	Initiative	Quantum of power	Target
1.	Power through unscheduled interchange (UI) arrangement	25 MW	Implemented
2	Procuring Power through Bi-lateral arrangements:		
a.	From Gujarat Urja Vidyut Nigam Limited (GUVNL) for Maharashtra (CR & WR)	100 MW	30.06.2015*
b.	From Damodar Valley Corporation (DVC) for Delhi-Kanpur section (NCR)	50 MW	30.03.2015*
3.	Power through Captive power plant being set up in JV with NTPC (4x250 MW)	900 MW	1 st unit- Sept 15
4.	Direct Power procurement through open bidding	300 MW	30.06.2015*
	Total		

* - Subject to obtaining open access by the respective State

@- Subject to acquisition of land in certain patches of plant area

12.0 Energy Audit & its Implementation

SN	Initiative	Target
1	Conducting energy audits at locations mandated in the Regulation at 6 PUs & 10 TSSs by Zonal Rlys-	Sept 15
2	Conducting energy audits at major locations under UNDP project al load centres having load > 500 KW Fund allocation Rs. 1 Cr under PB/NR	Dec.15 (25 locations)
3	Conducting energy audit by Zonal railways at major buildings/ hospitals/ stations/ workshops, having connected load more than 100 KW as per BEE National Energy Conservation Award policy with provision of fund of Rs5 cr	Mar 16 (50 locations)
4	Implementation of energy audit recommendations: (i) short and medium term nature involving least investment in 6-12 months (ii) long term recommendations after sanction of works under PH-36	Mar 16 Mar 17

13.0 IR's Solar Mission – Harnessing Solar Energy

1000 MW solar plants planned to be set up in Railway/private land and on roof top of Railway buildings by the developers at their own cost with subsidy/Viability Gap Funding (VGF) support of MNRE in next 5 years. Railway will procure solar power at economical tariff fixed for a period of 25 years in following phases -

SN	Initiative	Capacity	Action by	Target
A	Under IR's funding			
1	Provision of solar plant at Katra station, NR	1 MW	NR	31.03.15

SN	Initiative	Capacity	Action by	Target
2	Provision of solar PV modules at rooftop - -10KWp x 200 stations -100KWp x 20 Offices -45KWp at RDSO -500 KWp x 5 buildings	6.55 MW	Store Dte, Railway Board	Tender award- 31/03/15, Work to commence complete by Dec-15.
3	Provision of solar PV modules at 2000 LC gates and office buildings	1.28 MW	CR-50, ER-50, ECR-200, EcoR-100, NCR-100, NE-250, NF-200, NR-150, NWR-170, SR-150, SCR-130, SE-50, SECR-50, SWR-150, WCR-50, WR-150	Dec. 16, being done by Zonal railways
4	10.5 MW wind mill in Tamil Nadu	10.5 MW	SR	Tender scheduled to open on 28.01.15
B	Under JV/PPP			
1	Setting up of wind mill in Rajasthan through REMC	25 MW	REMC	Contract awarded. To be commissioned by Oct 15
2a	Phase-I: 200 MW through tariff based bidding process without subsidy for the states of Maharashtra & AP where the cost of power is high	200 MW	REMC/ZR	Bid invitation- 31/03/15, Award- Sept15
b	Phase-II:50 MW on Rooftop with Central Financial Assistance (CFA) from MNRE through tariff based bidding process by ZR/REMC. In principle sanction for Rs.60 Cr subsidy received from MNRE.	50 MW	ZR	To be distributed to Rly for implementation
c	Phase-III: 500 MW with VGF support under National Clean Energy Fund (NCEF) on tariff based bidding process (Ground mounted) .	500 MW	REMC/ZR	Application submitted to MNRE on 29.09.14. Sanction of VGF processed by MNRE. MNRE has given comfort letter for harnessing 200 MW through CPSU scheme.

SN	Initiative	Capacity	Action by	Target
d	Phase-IV:150 MW on Rooftop with Central Financial Assistance (CFA) from MNRE.	100 MW	REMC/ZR	Submitted to MNRE on 24.10.14. In principle approval of 50 MW has been communicated by MNRE.
e	Phase-IV:100 MW with CFA support from MNRE. (Ground mounted) .	150MW	REMC/ZR	To be processed after progress of 500 MW under phase-III above.
3	132.5 MW-wind mill in Gujarat & Maharashtra	132.5 MW	REMC	Load points and States to be firmed in Gujarat, Maharashtra & AP.

14.0 Passenger amenities items – Progress of Escalators & Lifts

SN	Initiative	Target (Subject to fund availability)
1.	Provision of escalators under existing sanctioned works -47 nos.	May 15, 27 escalators provided by Nov 14.
2.	Provision of 400 escalators by Zonal Railways –work distributed vide RE 14-15 (Copy enclosed)	Dec 2017
3.	Provision of 400 lifts by Zonal Railways work distributed vide RE 14-15 (Copy enclosed)	Dec. 2017

15.0 Uploading data ay Railsaver

A web based application namely "**Railsaver**" has been developed by CRIS under the funding of UNDP. Zonal Railways shall give confirmation of uploading all data by 15th Mar15. Action plan for energy audits shall be planned through Railsaver.

16.0 Standardization of Elect(G) items

Elect(G) items that are required to be standardized for procurement by existing/developing new specifications by RDSO, source development by Zonal Railways/RDSO shall be identified for further action.

Bharat Sarkar
Rail Mantralaya
(Railway Board)

No.2014-B-115

New Delhi, dated 13.2.2015

The General Managers,
All Indian Railways.

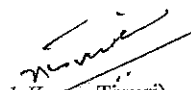
Sub : Revised Estimates 2014-15 – Demand No.16

Ref : Board's letter No.2014-B-115 dated 11.2.2015

The following works of provision of Lifts and Escalators appearing in Northern Railway's Pink Book 2014-15 as Item No.854 and 855 under planhead '53-Passenger Amenities' have been split and distributed as individual items under various Railways as indicated against each –

854. Lifts at A1, A & other pilgrim stations on Indian Railways (with high passenger density) (400 Nos) – Allocation DF(1)			855. Escalators at important stations of Indian Railways (179 Nos) – Allocation DF(1)	
Railways	Number	Cost (₹ in thousands)	Number	Cost (₹ in thousands)
Central	40	100000	11	82500
Eastern	17	42500	2	15000
Northern	86	215000	46	345000
North Eastern	23	57500	6	45000
Northeast Frontier	19	47500	6	45000
Southern	35	87500	18	135000
South Central	21	52500	9	67500
South Eastern	12	30000	8	60000
Western	30	75000	25	187500
East Central	34	85000	9	67500
East Coast	9	22500	6	45000
North Central	30	75000	7	52500
North Western	12	30000	12	90000
South East Central	2	5000	6	45000
South Western	12	30000	4	30000
West Central	18	45000	4	30000
Total	400	1000000	179	1342500

2. These works will appear as individual works under the concerned Railways in the Pink Book 2015-16 and suitable funds would be provided for them for their early commissioning.


(Mahesh Kumar Tiwari)
Deputy Director Finance (Budget)
Railway Board.

Copy to :- FA & CAOs, All Indian Railways – for necessary information please.

Electrical (G)

17.0 Progress & planning of new capacity augmentation works of EMU, MEMU & EOG sheds.

(Rs in thousands)

Fund Provided in Revised estimate for the year 2014-15 under Plan Head – 42						
Rly	Year of sanction	PB Item nos. of 14-15	Description of work	Anticipated cost / Expenditure	Fund provided in RE 2014-15	Work Progress (%)
ER	2011-12	488	NKG: Upgradation of infrastructural facilities for mtc of 12 car rakes	50000/ 37982	20000	Phy- 90, Financial -76.03 Railway may expedite the work
	2000-01	495	Ranaghat: EMU Car shed	394252/ 388549	2912	Work physically completed & financial liabilities to be cleared.
	2008-09	505	Howrah & Bandel Car sheds: Addl. Mtc. Facilities for running of 12 coach EMU trains	115022/ 49764	3000	Phy- 99 Financial – 43.26 Railway may expedite the work
	2008-09	506	NKG Car shed: Addl. Pit on line no. 4 & sheds on line 3 & 4 for 12 car rakes	72800/ 8030	16	Phy- 25, Financial -11.03 Railway may expedite the work
	2010-11	519	Howrah & Bandel Car sheds: Addl. Mtc. Facilities at car sheds for running 12 coach EMU trains (Phase -II)	108018/ 21353	5837	Phy- 83 Financial -19.77 Railway may expedite the work
	2010-11	520	Barsat Car shed: Extension of inspection pits and shed (line no. 3 & 4) for maintenance of 12 coach EMU trains	29494/ 14075	6113	Phy- 75 Financial -47.72 Railway may expedite the work
	2010-11	521	Sonarpur Car shed: Extension of shed over pit line no. 3, 4, 5 & 6 independent shunting neck, cat walk, stabling line etc for 12 coach EMU trains	59988/ 32102	5527	Phy- 95 Financial -53.51 Railway may expedite the work
NR	2007-08	747	GZB EMU Car shed: Extension of heavy repair shop	74559/ 41843	7000	Phy- 92, Financial -56.12 Railway may expedite the work
	2008-09	754	Lucknow: Setting up of MEMU shed for 10 rakes	188812/ 40724	8237	Phy- 40 Financial -21.57 Railway may expedite work
	2011-12	770	GZB EMU Car shed: Addl. Facilities for mtc. Of 20 car EMU/MEMU rakes	51165/ 12294	5500	Phy- 16 Financial -24.03 Railway may expedite the work
SR	2007-08	636	AVD: Expansion of inspection shed & stabling line for 12 car rakes	80000/ 53389	4152	Phy- 88 Financial -113.81 Railway may expedite the work

Rly	Year of sanction	PB Item nos. of 2014-15	Description of work	Anticipated cost / Expenditure	Fund provided in RE 2014-15	Work Progress (%)
SER	2010-11	437	TKPR: Extension of inspection/stabling pits, covered shed with lighting arrangement and modification of car shed for mtc. Of 12 car rakes	65050/ 46946	20000	Phy- 99 Financial -73.3 Railway may expedite the work
ECR	2005-06	598	Jhajha: Development of addl. Facilities for MEMU shed	47676/ 40029	13873	Phy-57 Financial -83.96 Railway may expedite the work
	2008-09	624	Jhajha: Extension of MEMU car shed for maintaining 16 car rakes	58000/ 28897	5050	Phy- 50 Financial -49.82 Railway may expedite the work
ECoR	2007-08	439	Khurda Road: Mtc. Facilities for MEMU (15 rakes)	100357/ 65358	537	Phy- 52 Financial -67.3 Railway may expedite the work
SECR	2011-12	348	Bhilai: Expansion of MEMU shed with necessary facilities (Phase II)	41458/ 32361	16442	Phy- 86, Financial -78.06 Railway may expedite the work
Kol. Metro	2008-09	36	Noapara: Rake Rehabilitation facility	761900/ 217727	58624	Phy- 40, Financial -28.58 Railway may expedite the work
	2011-12	33	Noapara Car shed: Conversion of stabling line 7-14 to inspection bay & washing line for increased rake holding	133800/ 16649	20971	Phy- 0 Financial -12.44 Railway may expedite the work
	2012-13	34	Noapara: Upgradation of running shed facilities for mtc of air conditioned rakes	42970/ 0	1001	Phy- 0, Financial -0 Railway may expedite the work
	2012-13	35	Noapara: Extension of POH shed no. 3 (Bay no. 3)	33102/ 0	15001	Phy- 0, Financial -0 Railway may expedite the work
Total				2823922	279795	

18.0 Progress of 152 sets of 3 phase Electrics for EMU/MEMU by ICF.

- Manufacturing of 152 sets of 3 phase Electrics for EMU/MEMU, Prebid meeting was held on 18-07-2014 at ICF. Technical specification was finalized by Board. Board has accorded the approval to the technical specification alongwith Addendum/ corrigendum no. 1 vide letter dated 16.10.2014
- RDSO have uploaded draft addendum – 02 to the specification for 152 sets of electrics on 12-02-2015 without approval of Board which amount to interference in tendering process and RDSO should take immediate corrective measures.
- ICF should expedite the procurement of 3 phase electrics as it adversely affecting production of 3 Phase EMU/MEMUs.

19.0 Progress of air conditioned EMU rakes for Mumbai Sub-Urban.

- Three Phase AC EMU : Development of Indigenous 3- Phase Propulsion with BHEL Electric. Tender was opened on: 03-03-2009, P.O issued on 23-11-10. Railway Board have extend delivery period (third time) up to 10.4.15.

- **Critical issues:**

- i) **Equipments under manufacturing and for which testing is yet to be completed**

- a) IV coupler & Jumper Assy.
 - b) Electric wiper
 - c) Assembly Driver Desk
 - d) TCMS panels.
 - e) Return CT
 - f) TM with hollow shaft for instrumental trials
 - g) RMPU

- ii) **Equipments manufactured/ software for which testing is yet to be completed**

- a) TCMS software
 - b) Driver, Guard seat.

- iii) **Important revised design document to be submitted**

- a. Detailed schematics of TC1, TC2
 - b. Vehicle test plan
 - c. Free safety plan

- **Timeline for Air Conditioned 3 Phase AC EMU 12 car rake with vestibule (BHEL Electric)**

Sl. No	Activity	PDC
1	Manufacturing of shells of DMC (02) & NDMC (02)	Completed
2	Manufacturing of shells of TC (08 nos)	02 TC ready
3	Supply of electrics	10/04/2015
4	Wiring, cabling and installation of conduits	15/05/2015
5	Completion of all furnishing activities	31/07/2015
6	Commissioning at ICF and dispatch to W. Rly.	31/08/2015

Note: PDC- 31/08/15 is **subjected** to supply of all equipments by M/s BHEL by 10/04/15.

RDSO & ICF should expedite the work. Introduction of Air conditioned rake in Mumbai as a budget commitment has already been delayed.

20.0 Progress of rehabilitation of NGEF rake by Kolkata Metro.

Work contract for rehabilitation of 7 nos. of NGEF rakes was awarded on 7.6.14 of contract value of Rs. 25.55 Crs. It is expected that two NGEF rake will be rehabilitated during the current financial year. Kolkata Metro may give the current status & expedite the work.

Electrical Development

- 21.0 Rolling out Electric locos duly assembled / commissioned ex. Dankuni.** Roll out of 1st assembled loco from Dankuni unit was 100 days target of MR. Target for rolling out the 1st loco to be firmed up by CLW/Dankuni.
- 22.0 Western DFC Project** - Rewari Shed - NWR shall ensure protection of land and arrangement of power supply.
- 23.0 Electric Locomotive Factory at Madhepura** - Target for completion of power supply and Rail/Road connectivity works to be firmed up by ECR.
- 24.0 Rail Coach Factory/Kancharapara** - Target for completion of physical works.
- 25.0** Air conditioned EMU rake to be turned out by ICF against development order placed on BHEL by Railway Board. RDSO/ICF to provide target for, roll out of prototype Air Conditioned EMU rake.
- 26.0 Energy Efficient Train Power Supply System (HOG)** - It is a energy efficient system. Northern Railway/RDSO/CLW to provide the report on implementation of the scheme.
