

## **KHARAGPUR- BHUBANESWAR**

### **I. Importance of project**

Railways have given priority to electrify the 'golden quadrilateral' and diagonals' connecting four metropolitan cities of Delhi, Kolkata, Chennai and Mumbai. Delhi, Kolkata and Mumbai have already been inter-connected on electric traction as also Chennai has been interconnected to Delhi. On Kolkata-Chennai route, electric traction is available up to Kharagpur from Kolkata side and up to Barang from Chennai side. Electrification is now under progress on Jakhapura-Haridaspur and Cuttack-Kendrapara Road sections to bridge the gap on Kolkata-Chennai trunk route.

Apart from linking Kolkata with Chennai, this section also links the industrial belt comprising major steel plants and coalfields of West Bengal with South, transporting heavy volume of freight and passenger traffic throughout the year.

### **II Facts at a glance**

RKM	540	
Statewise RKM	West Bengal 54	Orissa 486
Railway Divisions	Kharagpur and Khurda Road Divisions of South Eastern & East Coast Railways.	
Year of inclusion in Pink Book	1995-96	
Year of Sanction	1997-98	
Cost Sanctioned	Rs. 325.18 Cr.	
Expenditure up to March 2005	Rs. 305.68 Cr.	
Outlay for 2005-06	Rs. 19.50 Cr.	

**Energisation details/targets:**

i)Hijli-Balasore-Bhadrak-Jakhapura (226 RKM), Talcher-Barang-Bhubaneswar (115 RKM), Haridaspur-Kapilas Road-Kendrapara Road (40 RKM) and Kapilas Road-Rajatgarh (27 RKM) have been energized till March 2005.

ii) Work is in progress on balance portion of Kharagpur-Bhubaneswar main line i.e. Jakhapura-Haridaspur and Cuttack-Kendrapara Road sections.

iii) Entire section (Except Cuttack-Paradeep) is planned for completion by December 2005.

**III. Special features**

The project is being executed by Chief Project Manager, Bhubaneswar under three groups:

<u>Group No.</u>	<u>Section</u>
104	Cuttack-Paradeep, Nergundi-Talcher, Nergundi-Kapilas Road-Salegaon, Barang-Rajatgarh, Barang-Cuttack-Nergundi all-inclusive.
105	Kharagpur-Bhadrak (Inclusive)
106	Bhadrak (Exclusive)-Kapilas Road (Exclusive)-Barang (Exclusive)-Bhubaneswar (Inclusive)

## **SITARAMPUR – PATNA - MUGHALSARAI**

### **I. Importance of project**

Sitarampur-Patna-Mughalsarai section of Eastern Railway called 'Main Line' is a 562 Km long double line section. Electrification work of this section first appeared in the Pink Book 1981-82 but was subsequently frozen. In the year 1991-92, electrification of only Sitarampur-Jhajha section as part of Sitarampur-Mughalsarai section was defrozen. In the year 1992-93, rest of the portion from Jhajha to Mughalsarai was also defrozen.

Due to increase in traffic, the 'Grand Chord' section (Asansol-Gaya-Sonnagar-Mughalsarai) has become saturated. Electrification of main line i.e. Sitarampur-Patna-Mughalsarai offers alternative route and has been completed on 3.2.2002.

### **II Facts at a glance**

RKM	562
State-wise RKM	West Bengal    Bihar    Jharkhand    U. P.
	16                370                97                79
Railway Divisions	Asansol, Danapur and Mughalsarai of Eastern Railway
Year of inclusion in Pink Book	1981-82/1991-92/1992-93
Year of Sanction	1996-97
Sanctioned cost	Rs. 292.87 Cr.
Revised cost	Rs. 392.49 Cr.
Expenditure up to March 2005	Rs. 391.36 Cr.
Outlay for 2005-06	Rs. 0.41 Cr.

### **Energisation details/targets**

Commercial services have been introduced on the entire section.

### **III Special features**

The project has been executed by Chief Project Manager, Danapur under four groups :

<b><u>Group No.</u></b>	<b><u>Section</u></b>
81	Sitarampur-Jhajha (Including) & Jasidih-Baidyanath Dham (Including)
96	Jhajha-Mokama (Including)-Tal & Rampur Dumra-Garhara.
97	Mokama (Excluding)-Arah (Including)
98	Ara (Excluding)-Mughalsarai (Excluding)

## **VILLUPURAM - PONDICHERRY**

### **I. Importance of project**

The electrification of this section is being taken up as material modification of gauge conversion work. Electrification of this route will provide through characteristics to the passenger as well as freight trains improving efficiency.

### **II Facts at a glance**

RKM	38
State-wise RKM	Tamil Nadu      Pondicherry
	26                      12
Railway Divisions	Tiruchchirapalli Division of Southern Railway
Year of inclusion in Pink Book	2005-06
Year of Sanction	2005-06
Sanctioned cost (as MM to GC)	Rs. 8.60 Cr.
Expenditure up to March 2005	Nil
Outlay for 2005-06 (under GC)	Rs. 1.00 Cr.

### **Energisation details/targets**

Entire section has been targeted for completion by December 2005.

### **III Special features**

The project is being executed by Chief Project Manager, Chennai.



## **BHUBANESWAR-KOTTAVALASA**

### **I. Importance of project**

Railways have given priority to electrify the 'golden quadrilateral' and diagonals' connecting four metropolitan cities of Delhi, Kolkata, Chennai and Mumbai. Delhi, Kolkata, and Mumbai have already been inter-connected on electric traction as also Chennai has been interconnected to Delhi. On Kolkata - Chennai route electric traction is available up to Kharagpur from Kolkata side and up to Barang from Chennai side. Electrification is now under progress on Jakhapura-Haridaspur and Cuttack-Kendrapara sections to bridge the gap on Kolkata -Chennai trunk route.

Apart from linking Kolkata with Chennai, this section also links the industrial belt comprising major steel plants and coalfields of West Bengal with South, transporting heavy volume of freight and passenger traffic throughout the year.

### **II. Facts at a glance**

RKM	426	
State-wise RKM	Andhra Pradesh	Orissa
	236	190
Railway Divisions	Waltair and Khurda Road Divisions of East Coast Railway.	
Year of inclusion in Pink Book	1997-98	
Year of Sanction	1997-98	
Sanctioned cost	Rs. 322.71 Cr.	
Expenditure up to March 2005	Rs. 283.47 Cr.	
Outlay for 2005-06	Rs. 5.00 Cr.	

#### **Energisation details/targets :**

- (i) Commercial services have been introduced on the entire section.

### **III Special features**

The project has been executed by Chief Project Manager, Visakhapatnam under three groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
110	Bhubaneshwar (Excluding)-Chatrapur (Excluding)
111	Chatrapur (Including)-Tiralu (Excluding)
112	Tiralu (Including)-Kottavalasa (Excluding)

## **AMBALA-SAHARANPUR-MORADABAD**

### **I. Importance of project**

Ambala-Saharanpur-Moradabad is a double line section of Northern Railway comprising 274 route Kms. This is a part of 'B' route of Northern Railway i.e. Mughalsarai-Lucknow-Moradabad-Ambala section. This was approved with the intention of extending electrification further on 'B' route towards Mughalsarai. Subsequently, electrification of Ambala-Saharanpur-Moradabad was split in two phases i.e. Ambala-Saharanpur (89 RKM) as Phase - I and Saharanpur-Moradabad (185 RKM) as Phase-II. The work of phase-II was frozen by Board while sanctioning the detailed estimate during 1995-96, which was defrozen in November 1998.

### **II Facts at a glance**

RKM	274
State-wise RKM	Haryana      Uttar Pradesh      Uttaranchal 68              159              47
Railway Divisions	Ambala and Moradabad Divisions of N. Rly.
Year of inclusion in Pink Book	1992-93
Year of Sanction	1995-96
Sanctioned cost	Rs. 152.21 Cr.
Revised Cost	Rs. 223.73 Cr.
Expenditure up to March 2005	Rs. 201.83 Cr.
Outlay for 2005-06	Rs. 20.40 Cr.

### **Energisation details/targets:**

- i) Section Ambala-Saharanpur-Roorkee-Dausani (163 RKM) have been energised till March 2005.
- (ii) Section Najibabad-Moradabad (95 RKM) has been targeted for energisation during 2005-06.
- (iii) The entire section is targeted for completion by December 2005.

### **III Special features**

The project is being executed by Chief Project Manager, Ambala under two groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
88	Ambala-Saharanpur
89	Saharanpur-Moradabad

## **DELHI – AMBALA - LUDHIANA**

### **I. Importance of project**

Delhi-Ambala-Ludhiana is a double line section of Northern Railway comprising 314 route kms. This section connects major cities of Ambala and Ludhiana in the States of Haryana and Punjab with national capital, Delhi. To meet the growing demand of freight and passenger traffic on this section, electrification was approved in 1991-92 and has been completed during 1996-97.

### **II Facts at a glance**

RKM	314		
State-wise RKM	Delhi	Haryana	Punjab
	28	178	108
Railway Divisions	Delhi, Ambala and Ferozpur Divisions of Northern Railway.		
Year of inclusion in Pink Book	1991-92		
Year of Sanction	1993-94		
Sanctioned cost	Rs. 165.06 Cr.		
Revised Cost	Rs. 299.01 Cr.		
Expenditure up to March 2005	Rs. 298.61 Cr.		
Outlay for 2005-06	Rs. 0.40 Cr.		

### **Energisation details/targets:**

Commercial services have been introduced on the entire section.

### **III Special features**

Electrification of Ambala-Kalka (69 RKM), Sirhind-Nangaldam (120 RKM) and Delhi-Delhi Sarai Rohilla (22 TKM) has been done as Material Modification to Delhi-Ambala-Ludhiana project.



## **SONNAGAR - PATRATU**

### **I. Importance of project**

Sonnagar-Patratu is a double line section of East Central Railway comprising 291 route kms. To meet the growing demand of freight and passenger traffic on this section, electrification was approved in 1990-91 and has been completed during 1996-97.

### **II Facts at a glance**

RKM	291
State-wise RKM	Bihar            Jharkhand
	46                245
Railway Divisions	Mughalsarai and Dhanbad Divisions of East Central Railway.
Year of inclusion in Pink Book	1990-91
Year of Sanction	1994-95
Sanctioned cost	Rs. 172.26 Cr.
Revised Cost	Rs. 183.17 Cr.
Expenditure up to March 2005	Rs. 181.57 Cr.
Outlay for 2005-06	Rs. 0.0001 Cr.

### **Energisation details/targets:**

Commercial services have been introduced on the entire section.

## **BOKARO STEEL CITY - MURI - HATIA - BARSUAN/KIRIBURU**

### **I. Importance of project**

Bokaro Steel City-Muri-Hatia-Barsuan/Kiriburu is partly single and partly double line section of South Eastern Railway comprising of 434 route Kms (BKSC-Muri-Hatia, 125 RKM/double line; Hatia-Barsuan/Kiriburu & Purulia-Kotshila, 273 & 36 RKM /Single Line). This is primarily a goods carrying route passing through rich mineral belt and after electrification, the change of traction at Bokaro, Bondamunda, Purulia etc. has been avoided.

### **II Facts at a glance**

RKM	434		
State-wise RKM	West Bengal	Jharkhand	Orissa
	72	224	138
Railway Divisions	Ranchi, Chakradharpur and Adra Divisions of S.E. Railway		
Year of inclusion in Pink Book	1991-92		
Year of Sanction	1995-96		
Sanctioned cost	Rs. 214.55 Cr.		
Revised cost	Rs. 291.81 Cr.		
Expenditure up to March 2005	Rs. 285.40 Cr.		
Outlay for 2005-06	Rs. 6.40 Cr.		

### **Energisation details/targets**

Commercial services have been introduced on entire section.

### **III Special features:**

The project has been executed by Chief Project Manager, Ranchi under two groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
83	Bokaro Steel City-Muri-Hatia (Including)
84	Hatia(Excluding)-Bondamunda-Bimalagarh-Kiriburu/Barsuan incl. Purulia-Kotshila (Sanctioned as Material Modification)

# **KANPUR-LUCKNOW**

## **I Importance of project**

Kanpur-Lucknow section (74 RKM) is a double line section of Lucknow Division of Northern Railway. This section connects the Industrial city of Kanpur to Lucknow, the capital of Uttar Pradesh. Large number of Mail /Express and passenger trains are presently running on this section and as it links two large and fast growing cities of Uttar Pradesh, there is already a growing demand for running of more trains on this section for daily commuters. Electrification and introduction of main line EMUs will serve these requirements in a more effective manner. Commercial services have been introduced upto Lucknow.

## **II Facts at a glance**

RKM	74
State-wise RKM	The entire section falls in U.P.
Railway Divisions	Lucknow of Northern Railway
Year of inclusion in Pink Book	1997-98 (Supp.)
Year of Sanction	1998
Sanctioned cost	Rs. 60.63 Cr.
Expenditure up to March 2005	Rs. 59.28 Cr.
Outlay for 2005-06	Rs. 0.20 Cr.

## **Energisation details/targets**

Commercial services have been introduced on entire section.

## **III Special features:**

The project has been executed by Chief Electrical Engineer, RE, Lucknow.

<b><u>Group No.</u></b>	<b><u>Section</u></b>
113	Lucknow-Kanpur

## **MORADABAD-LUCKNOW-UTRAITIA**

### **I Importance of project**

Moradabad-Lucknow-Utratia section (338 RKMs) is a part of Ambala-Moradabad-Lucknow-Mughalsarai route of Northern Railway popularly known as “B” route as distinct from its completely electrified route between Ambala and Mughalsarai via Delhi-Ghaziabad-Kanpur considered as “A” route. The route beyond Ambala i.e. Ambala-Ludhiana-Amritsar is also electrified. On “B” route also electrification is completed on Ambala-Saharanpur-Roorkee section and electrification of Roorkee-Moradabad section is expected to be completed by December, 2005, thus, leaving the Moradabad-Lucknow-Mughalsarai (626 RKMs) section the only unelectrified stretch on “B” route. To bridge this unelectrified stretch, Moradabad-Lucknow-Utratia section (338 RKM) is being taken up for electrification as Phase-I.

### **II Facts at a glance**

RKM	338
State-wise RKM	The entire section falls in U.P.
Railway Divisions	Moradabad and Lucknow of Northern Railway
Year of inclusion in Pink Book	2005-06
Year of Sanction	Yet to be sanctioned
Sanctioned cost	Rs. 209.20 Cr.
Expenditure up to March 2005	Nil
Outlay for 2005-06	Rs. 15.64 Cr.

### **Energisation details/targets**

Entire section is targeted for completion by March, 2008.

### **III Special features:**

The project is being presently executed by CPM, Ambala under two groups.

<b><u>Group No.</u></b>	<b><u>Section</u></b>
128	Moradabad-Rosa
129	Rosa-Lucknow-Utratia

# **ELECTRIFICATION OF BANGALORE AREA**

## **I Importance of project**

The population of Bangalore, the capital city of Karnataka, has increased manifold in the recent past. Traction change from Electric to Diesel at Baiyappal Halli for the trains coming from Chennai which could otherwise terminate at Yeshwantpur causes heavy detention and cascading effect on trains running on South Western Railway. Similarly, traction changes from Diesel to Electric at Baiyappan Halli causes detention of trains going to Southern Railway from this route. After electrification, it will be possible to ease the growing passenger traffic in the city by way of providing EMU/MEMU services.

## **II Facts at a glance**

RKM	46
State-wise RKM	The entire section falls in Karnataka
Railway Divisions	Bangalore of South Western Railway
Year of inclusion in Pink Book	2005-06
Year of Sanction	Yet to be sanctioned
Sanctioned cost	Rs. 21.44 Cr.
Expenditure up to March 2005	Nil
Outlay for 2005-06	Rs. 18.44 Cr.

## **Energisation details/targets**

Entire section is targeted for completion by March, 2007.

## **III Special features:**

The project is being executed by Chief Electrical Engineer, RE, Chennai

<b><u>Group No.</u></b>	<b><u>Section</u></b>
126	Electrification of Bangalore Area.

## UDHNA – JALGAON

### **I. Importance of project**

Udhna-Jalgaon connects two electrified trunk routes of Western and Central Railway, namely Mumbai-Nagda of Western Railway and Mumbai CST-Bhusawal-Itarsi of Central Railway.

This is single line section covering 306 RKM in which 238 RKM lies in Maharashtra and 68 RKM in Gujarat. Also known as Tapti Valley section, it is an alternative coal route from Western collieries to Gujarat and Mumbai area. In addition, it also serves as an important cross link for long distance Mail/Express services passing through Western & Central Railways. Electrification of this route would obviate the need of change of traction at Jalgaon and Surat, thus reducing engine and wagon detentions, giving an operational boost to the rail traffic.

### **II Facts at a glance**

RKM	306	
Statewise RKM	Gujarat	Maharashtra
	68	238
Railway Divisions	Mumbai Central of Western Railway.	
Year of inclusion in Pink Book	1997-98	
Year of Sanction	1997-98	
Sanctioned cost	Rs. 144.43 Cr.	
Expenditure up to March 2005	Rs. 130.91 Cr.	
Outlay for 2005-06	Rs. 4.20 Cr.	

### **Energisation details/targets**

Commercial services have been introduced on entire section.

### **III Special features :**

The project has been executed by CPM, Surat under two groups:

<u>Group No.</u>	<u>Section</u>
108	Udhna (Excluding)-Nandurbar (Including)
109	Nandurbar(Excluding)-Jalgaon (Excluding)

## **TAMBARAM-CHENGALPATTU-VILLUPURAM** **& CHENGALPATTU-ARAKKONAM**

### **I. Importance of project**

Tambaram-Chengalpattu-Villupuram, (134 RKM) is a Broad Gauge Single Line section and is part of Chennai Egmore-Tiruchchirappalli route. This runs parallel to the electrified MG double line section from Chennai Beach to Chengalpattu and the single line MG electrified section from Chengalpattu to Villupuram. The single line BG section between Chennai Beach and Tambaram has already been electrified. In continuation, Tambaram-Villupuram section (134 RKM) has also been electrified and now, the traffic coming under electric traction from North of Chennai such as Vijayawada-Kolkata and Vijayawada-New Delhi routes is being hauled by electric locomotives up to Villupuram without change of traction.

Chengalpattu-Arakkonam (63 RKM) section, which is under conversion from MG to BG, connects the BG electrified South-West line from Chennai toward Erode on one side and Chennai-Tiruchchirappalli-Tirunelveli/Tuticorin BG section on the other. This will serve as a vital by-pass link route from the North to the Down South, being the shorter route by around 50 Kms. The highly saturated Chennai Central-Arakkonam section will be relieved of congestion once this section is electrified. The important pilgrim centre of Kanchipuram is situated on this section. After electrification, Electric traction has been introduced on Tambaram-Chengalpattu/Takkolam-Villupuram section. The electrification of left-over portion from Takkolam to Arakkonam is being taken up in coordination with Naval Authorities by Southern Railway.

### **II Facts at a glance**

RKM	197
Statewise RKM	Entire section falls in Tamil Nadu
Railway Divisions	Chennai of Southern Railway.
Year of inclusion in Pink Book	1999-2000

Year of Sanction	1999-2000
Sanctioned cost	Rs. 41.36 Cr.
Expenditure up to March 2005	Rs. 39.06 Cr.
Outlay for 2005-06	Rs. 1.00 Cr.

### **Energisation details/targets**

Commercial services introduced on entire section except Takkolam-Arakkonam (7 RKM) section.

### **III Special features :**

The project has been executed by CPM, Chennai under two groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
115	Tambaram-Chengalpattu & Chengalpattu-Arakkonam
116	Chengalpattu-Villupuram



## **KRISHNANAGAR-LALGOLA**

### **I. Importance of project**

Krishnanagar-Lalgola is a 128 Km broad gauge single line section on Sealdah-Lalgola line. This section lies on the north side of the State of West Bengal and terminating station "Lalgola" is very close to the famous Padma river of Bangladesh. The adjoining sub-sections Ranaghat-Shantipur and Ranaghat-Krishnanagar are electrified. After electrification of the Ranaghat-Gede and Ranaghat-Bongaon sections, Krishnanagar-Lalgola has become an isolated diesel operated section. Due to resultant shrinkage in diesel loco holding, operational flexibility would be lost to the detriment of efficiency.

### **II Facts at a glance**

RKM	128
State-wise RKM	Entire section falls in West Bengal
Railway Divisions	Sealdah of Eastern Railway.
Year of inclusion in Pink Book	2000-01
Year of Sanction	2002-03
Sanctioned cost	Rs. 63.83 Cr.
Expenditure up to March 2005	Rs. 15.87 Cr.
Outlay for 2005-06	Rs. 20.00 Cr.

### **Energisation details/targets**

- i) Krishnanagar-Berhampur section (86 RKM) is targeted for energisation during 2005-06.
- ii) Entire section is targeted for completion by June 2006.

### **III Special features**

The project is being executed by CPM, Kolkata under one group.

<b><u>Group No.</u></b>	<b><u>Section</u></b>
123	Krishnanagar-Lalgola

## **ERNAKULAM-TRIVANDRUM**

### **I. Importance of project**

Ernakulam-Trivandrum is a 320 RKM Broad gauge section and is a part of Chennai-Trivandrum route. There are two lines between Ernakulam-Kayankulam (one via Kottayam and another via Alleppey along the West coast). The two lines are running far away from each other. The work of doubling between Kayankulam to Trivandrum is in progress. On Chennai-Trivandrum Central Trunk route, electrification of Chennai-Jolarpettai, Salem-Erode and Salem-Metturdam sections has already been completed and entire traffic has been brought under electric traction. Electrification work has also been completed on Erode-Ernakulam section. Electrification of this section will provide smooth and faster flow of traffic straight to Trivandrum.

### **II Facts at a glance**

RKM	320
Statewise RKM	Entire section falls in Kerala
Railway Divisions	Trivandrum of Southern Railway.
Year of inclusion in Pink Book	1999-2000
Year of Sanction	2001-02
Sanctioned cost	Rs. 161.76 Cr.
Revised cost	Rs. 162.32 Cr.
Expenditure up to March 2005	Rs. 149.99 Cr.
Outlay for 2005-06	Rs. 10.92 Cr.

### **Energisation details/targets**

- i) Ernakulam-Chengengeri (72 RKM) and Ernakulam-Shertalai (30 RKM) have been energized till March 2004.
- ii) Sections Chengengeri-Kayankulam-Quilon (81 RKM), Shertalai-Kayankulam (69 RKM) have been energised during 2004-05.
- iii) Entire section is targeted for completion by Dec. 2005.

### **III Special features :**

The project is being executed by Chief Project Manager Chennai under three groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
117	Ernakulam-Kottayam-Kayankulam
118	Ernakulam-Alleppey-Kayankulam
119	Kayankulam-Trivandrum

## MUGHALSARAI-ZAFRABAD

### **I. Importance of project**

Mughalsarai-Zafrabad section is a 68 Km double line section falling under the physical jurisdiction of Lucknow division of Northern Railway. The section consists of 12 block stations and is a part of popularly known 'B' route of Northern Railway, which passes through the state of Uttar Pradesh connecting Haryana, Punjab, Himachal Pradesh and Jammu and Kashmir of Northern India on the one end and states of Bihar, West Bengal, on the other end. 'B' route connects important cities viz. Varanasi, Patna, Calcutta, with the fast developing Northern Region. viz the food grains growing towns of Punjab and Haryana with industrial and coal belt of Eastern India. The route also caters to the needs of densely populated states of Bihar and U.P.

The electrification work on Ambala-Moradabad section is already in progress. The work has been completed between Ambala- Saharanpur-Roorkee and the complete project is targeted to be completed by December 2005. On the other side, the Grand -Chord Line connecting Kolkata to Mughalsarai is already electrified. The electrification work on the Main Line connecting Kolkata to Mughalsarai Via Patna) has been completed on 03.02.2002. Now the entire traffic in Eastern Region will be on electric traction at Mughalsarai.

### **II Facts at a glance**

RKM	68
State-wise RKM	Entire section falls in Uttar Pradesh
Railway Divisions	Lucknow Division of Northern Railway.
Year of inclusion in Pink Book	1999-2000 (subject to requisite clearances)
Year of Sanction	Detailed estimate yet to be sanctioned.
Sanctioned cost	Rs. 49.96 Cr. (Pink Book Cost)
Expenditure up to March 2005	Nil
Outlay for 2005-06	Rs. 0.0001 Cr.

### **Energisation details/targets**

Awaiting procedural clearances.

### **III Special features :**

The project is to be executed by Dy.CPM/RE/Lucknow under one group:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
120	Mughalsarai-Zafrabad

## **LUDHIANA-AMRITSAR**

### **I. Importance of project**

Ludhiana-Amritsar section is double line section of Ferozepur Division of Northern Railway. Delhi-Ambala-Ludhiana was under already electric traction and extension of electrification beyond Ludhiana towards Amritsar has since been completed. This has resulted in avoiding the detention of trains coming on electric up to Ludhiana and going to Amritsar and terminating at intermediate sections on Ludhiana-Amritsar section.

### **II Facts at a glance**

RKM	136
Statewise RKM	Entire section falls in Punjab.
Railway Divisions	Ferozepur Division of Northern Railway.
Year of inclusion in Pink Book	1997-98 (Supplementary)
Year of Sanction	1998-99
Sanctioned cost	Rs. 114.83 Cr.
Expenditure up to March 2005	Rs. 130.91 Cr.
Outlay for 2005-06	Rs. 0.80 Cr.

### **Energisation details/targets**

Commercial services have been introduced on entire section.

### **III Special features :**

The project is being executed by Chief Project Manager, Ambala under one group:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
114	Ludhiana-Amritsar

## **RENIGUNTA-GUNTAKAL**

### **I. Importance of project**

The section Renigunta-Guntakal lies on the West Coast line & forms part of Chennai-Mumbai trunk route. Presently, 139.87 RKM are double line and the rest of the section is a single line section with patch doubling in progress. The section mainly serves for transportation of Iron ore for export from Bellari/Hospet mines to Chennai port. Besides usual growth of Iron ore traffic, there are proposals for new Sponge Iron Plants, Cement Plants in addition to expansion of existing ones, which will generate considerable traffic. Electrification of this section will enable faster movement of 4500 T trains of Iron ore and Coal without change of traction at Renigunta as Chennai-Renigunta and Renigunta-Vijayawada-Visakhapatnam sections are already on electric traction. This would bring considerable savings in detention to wagons and rolling stocks.

### **II Facts at a glance**

RKM	308
Statewise RKM	Entire section falls in Andhra Pradesh.
Railway Divisions	Guntakal Division of South Central Railway.
Year of inclusion in Pink Book	1992-93 Defrozen in Nov 1998
Year of Sanction	2000-01
Sanctioned cost	Rs. 168.34 Cr.
Expenditure up to March 2005	Rs. 73.77 Cr.
Outlay for 2005-06	Rs. 32.00 Cr.

### **Energisation details/targets**

- (i) Commercial services have been introduced on Renigunta-Nandalur section (86 RKM).
- (ii) Electrification work on Nandalur-Guntakal section (222 RKM) has been defrozen as per traffic needs vide minutes of Board's meeting on 10.01.2004.
- (iii) Board yet to give clearance to RVNL.

### **III) Special features:**

The project is being executed by CPM, Chennai under two groups:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
92	Renigunta-Kamlapuram
93	Kamlapuram-Guntakal

## **PATNA-GAYA**

### **I Importance of project**

Patna-Gaya is a 92 Route Kilometers broad gauge single line unelectrified section connecting two principal towns of Bihar viz. Patna and Gaya and links two principal electrified routes of East Central Railway i.e. Grand Chord via Gaya-Dhanbad and Main Line via Patna. Patna-Parsabazar is double line patch-doubling work of remaining section in progress has been sanctioned in phases.

Patna is the capital city of Bihar, the second largest state of the country. High priority has been assigned to the development of industrial infrastructure around Patna. Gaya on the other side is an important pilgrimage center with large business community and historical Buddhist tourist work force. The relatively short distance between these two cities has led to the increased mobility of people from one city to another. Heavy sub-urban traffic will be there for railways to carry. Jehanabad is the important station of Patna-Gaya section with heavy passenger booking (commuter service) for Gaya & Patna.

### **II Facts at a glance**

RKM	92
State-wise RKM	Entire section falls in Bihar
Railway Divisions	Danapur Division of East Central Rly.
Year of inclusion in Pink Book	1999-2000
Year of Sanction	2002-03
Sanctioned cost	Rs. 36.44 Cr.
Expenditure up to March 2005	Rs. 31.42 Cr
Outlay for 2005-06	Rs. 0.75 Cr.

### **Energisation details/targets**

Commercial services have been introduced on entire section.

### **III) Special features :**

The project has been executed by CPM, Danapur under one group:

#### **Group No. Section**

121 Patna-Gaya

# **CIRCULAR RAILWAY AROUND LUCKNOW AREA INCLUDING MALHAUR-SAFEDABAD-BARABANKI**

## **I Importance of project**

Lucknow, the capital of most populous State in India, Uttar Pradesh, and the seat of culture and education have made phenomenal development with rapid increase in industrial activities, administration and educational centres. Suburban commuters traffic on the circular rail section around Lucknow has increased substantially and electrification of this section covering various stations around Lucknow is providing convenient train services to the people living in this area as MEMU services being run on just electrified Kanpur-Lucknow section, have been extended to the stations around Lucknow to reduce the intensity of growing population in the city and help boost industrial activity around Lucknow. The electrification of circular railway will also provide seamless journeys between circular areas of Lucknow and Kanpur.

## **II Facts at a glance**

RKM	56
State-wise RKM	Entire section falls in U.P.
Railway Divisions	Lucknow Divisions of Northern & NE Rly.
Year of inclusion in Pink Book	2001-2002
Year of Sanction	2000-2001 (Supplementary)
Sanctioned cost	Rs. 39.71 Cr.
Expenditure up to March 2005	Rs. 38.04 Cr.
Outlay for 2005-06	Rs. 0.50 Cr.

### **Energisation details/targets**

Commercial services have been introduced on entire section.

## **III) Special features :**

The project has been executed by Dy.Chief Project Manager/RE/Lucknow under one group:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
122	Circular Railway around Lucknow area

## **DELHI SARAI ROHILLA-GURGAON**

### **I. Importance of project**

Delhi-Gurgaon is a 30 Kilometres long twin single line (one BG & one MG) sub-section of Delhi-Rewari route under Bikaner Division of Northern Railway. Gurgaon, the fastest growing city of Asia having Software Technology Parks, offices of Multi-National Corporations and important Housing Complexes is to be linked with Delhi Area presently on electric traction i.e. Delhi, New Delhi and further to Ghaziabad/Hazrat Nizamuddin. Presently, 7 pairs of passenger trains run on Delhi/Delhi Sarai Rohilla and Rewari section combining both BG and MG tracks. The proposed electrification on this route would enable running of fast MEMU train services against the ever-increasing demand of commuters, thereby, providing faster, reliable and pollution free public transport.

### **II Facts at a glance**

RKM	30
State-wise RKM	Entire section falls in Delhi & Haryana
Railway Divisions	Bikaner Division of Northern Railway
Year of inclusion in Pink Book	2001-02 (Subject to requisite clearances)
Year of Sanction	Detailed estimate yet to be sanctioned.
Sanctioned cost-Pink Book	Rs. 12.00 Cr.
Expenditure up to March 2005	Rs. 0.50 Cr
Outlay for 2005-06	Rs. 0.0001 Cr.

### **Energisation details/targets**

Awaiting procedural clearances.

### **III) Special features:**

The project is to be executed by Chief Project Manager/RE/ Ambala.

<b><u>Group No.</u></b>	<b><u>Section</u></b>
124	Delhi Sarai Rohilla-Gurgaon



## **KUSUNDA-JAMUNIATAND**

### **I. Importance of project**

Kusunda-Katrasgarh-Jamuniatand section of Dhanbad-Chandrapura branch line of East Central Railway is a (22.69 RKM) twin single line non-electrified section between two electrified routes viz. Grand Chord on one end, and CIC section on other. This section includes 14 colliery sidings and is provided with twin single line, which are worked on Absolute Block System. Freight traffic between Dhanbad-Chandrapura which could otherwise go towards Chandrapura side via this shorter route from the collieries in the section or from Dhanbad side, was routed via the lengthy electrified route i.e. Dhanbad-Gomoh-Chandrapura as Kusunda-Katrasgarh-Jamuniatand section was not electrified. Mail/Express and passenger trains had to run on diesel traction even in electrified route due to the fact that this small stretch was unelectrified. Now, Electrification of this route has provided through characteristics to the passenger as well as freight trains improving efficiency.

### **II Facts at a glance**

RKM	23
Statewise RKM	Entire section falls in Jharkhand.
Railway Divisions	Dhanbad Division of East Central Railway.
Year of inclusion in Pink Book	1997-98
Year of Sanction	1998-99
Sanctioned cost	Rs. 16.42 Cr.
Expenditure up to March 2005	Rs. 16.00 Cr.
Outlay for 2005-06	Rs. 0.42 Cr.

### **Energisation details/targets**

Commercial services have been introduced on entire section.

### **III. Special features:**

This project has been executed by CAO/Con./E. Rly.

## **BANDEL-KATWA**

### **I Importance of project**

Bandel-Katwa section (105 RKM) is a single line section of Howrah Division of Eastern Railway. This section falls within the Kolkata suburban complex. It is predominantly a passenger carrying section and most of passengers being of daily commuters in nature. The problem of the section therefore lies during the morning and evening peak hours periods. The consensus solution of the problem by way of introduction of EMU/MEMU train services in the section has been achieved through Electrification of this section which increased the line capacity.

### **II Facts at a glance**

RKM	105
State-wise RKM	The entire section falls in West Bengal.
Railway Divisions	Howrah Division of Eastern Railway
Year of inclusion in Pink Book	1992-93
Year of Sanction	1993-94
Sanctioned cost	Rs. 50.28 Cr.
Expenditure up to March 2004	Rs. 46.96 Cr.
Outlay for 2004-05	Rs. 1.50 Cr.

### **Energisation details/targets**

Commercial services have been introduced on the entire section.

### **III Special features :**

The project has been executed by CAO/Con/E. Rly. under one group.

#### **Group No. Section**

102      Bandel-Katwa

## **KHURJA-MEERUT-SAHARANPUR**

### **I. Importance of project**

Khurja-Meerut-Saharanpur section is a single line section of Delhi & Moradabad Divisions of Northern Railway connecting two important electrified/under electrification routes of Northern Railway viz. Khurja-Ghaziabad section of Delhi-Kolkata route on one end and Ambala-Saharanpur-Moradabad on the other. Section Khurja-Ghaziabad is already saturated. Due to heavy traffic density of this section and slow movement in Delhi area, freight trains are detained short of Ghaziabad and also in Delhi area. Electrification of Ambala-Saharanpur-Moradabad is in progress and targeted for completion by Dec-05. Electrification of Khurja-Meerut-Saharanpur will provide link between two electrified routes and will serve as a by-pass route avoiding Delhi area, thus, releasing the line capacity required in and around Delhi area.

### **II. Facts at a glance**

RKM	207
Statewise RKM	Entire section falls in U.P..
Railway Divisions	Delhi & Moradabad Divisions of Northern Railway.
Year of inclusion in Pink Book	1996-97
Year of Sanction	Yet to be sanctioned.
Sanctioned cost	Rs. 89.21 Cr.
Expenditure up to March 2005	Rs. 0.10 Cr
Outlay for 2005-06	Rs.0.0001 Cr.

### **Energisation details/targets**

Section Khurja-Meerut-Saharanpur is presently under consideration of Board.

### **III. Special features:**

The project is to be executed by CPM, Ambala under one group:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
107	Khurja-Meerut-Saharanpur

## **CHANDIL-MURI-BARKAKANA**

### **I. Importance of project**

Chandil-Muri-Barkakana section is a part of Western Corridor of South Eastern Railway. This section originates from Chandil station on Chandrapura-Asansol section and connects East Central Railway via Muri.

### **II Facts at a glance**

RKM	119	
Statewise RKM	Jharkhand	West Bengal
	95	24
Railway Divisions	Adra Division of South Eastern Railway.	
Year of inclusion in Pink Book	1992-93	
Year of Sanction	1995-96	
Sanctioned cost	Rs. 55.26 Cr.	
Expenditure up to March 2005	Rs. 48.81 Cr.	
Outlay for 2005-06	Rs. 3.00 Cr.	

### **Energisation details/targets**

Commercial services have been introduced on the entire section.

### **III Special features:**

The project has been executed by Chief Project Manager, Ranchi under one group:

<b><u>Group No.</u></b>	<b><u>Section</u></b>
99	Chandil-Muri-Barkakana

## 11.0

**PROJECT DETAILS  
AT A GLANCE**

<u>RLY</u>	<u>PROJECT</u>	<u>PAGE No</u>
ER	KRISHNANAGAR-LALGOLA	
	SITARAMPUR-PATNA-MUGHALSARAI	
ECR	KUSUNDA-JAMUNIATAND	
	PATNA-GAYA	
	SONNAGAR-PATRATU	
ECoR	BHUBANESWAR-KOTTAVALASA	
	KHARAGPUR-BHUBANESWAR	
NR	AMBALA-SAHARANPUR-MORADABAD	
	DELHI SARAIROHILLA-GURGAON	
	KANPUR – LUCKNOW	
	KHURJA-MEERUT-SAHARANPUR	
	LUDHIANA-AMRITSAR	
	MUGHALSARAI-ZAFRABAD	
	MORADABAD-LUCKNOW-UTRAITIA	
	DELHI-AMBALA-LUDHIYANA	
NE	CIRCULAR RAILWAY AROUND LUCKNOW AREA INCLUDING MALHAUR-SAFEDABAD-BARABANKI	
SR	ERNAKULAM-TRIVANDRUM	
	TAMBRAM- VILLUPURAM & CHENGALPATTU- ARAKKONAM	
	VILLUPURAM –PONDICHERRY(GC)	
SCR	RENIGUNTA-GUNTAKAL	
	TIRUPATI-PAKALA-KATAPADI (GC)	
SER	BOKARO STEEL CITY- MURI-HATIA-BARSAUN/ KIRIBURU	
	CHANDIL-MURI-BARKAKANA	
SWR	ELECTRIFICATION OF BANGALORE AREA	
WR	UDHNA-JALGAON	

## INDEX

<b>S. No.</b>	<b>State</b>	<b>Page No.</b>
1	Andhra Pradesh	
2	Bihar	
3.	Chhattisgarh	
4	Delhi	
5	Gujarat	
6.	Haryana	
7.	Himachal Pradesh	
8.	Jharkhand	
9.	Karnataka	
10.	Kerala	
11.	Madhya Pradesh	
12.	Maharashtra	
13.	Orissa	
14.	Punjab	
15	Rajasthan	
16	Tamil Nadu	
17.	Uttar Pradesh	
18.	Uttaranchal	
19.	West Bengal	
20.	Railway Map of India	

