

भारत सरकार

Government of India केन्द्रीय विद्युत प्राधिकरण

Central Electricity Authority



[ISO: 9001: 2008]

भार प्रेषण एवं दूर संचार प्रभाग Load Despatch & Telecommunication Division एन.आर.ई.बी. परिसर, 18-ए, शहीद जीत सिंह् सनसनवाल मार्ग, कटवारिया सराय NREB Complex, 18-A, Shaheed Jeet Singh S. Marg, Katwaria Sarai, नई दिल्ली-110016 New Delhi - 110 016

No.LD&T/1/2011-PTCC/

Dated: 07.06.2011

To,

All constituents of Central PTCC.

Subject: Minutes of the 94th Central PTCC meeting held at Madurai on 20th January 2012.

Sir,

The minutes of the 94th Central PTCC meeting held on 20th January,2012 at Madurai has been posted on CEA website for the kind information of all concerned.. **The Minutes of the meeting can be downloaded from CEA website** <u>http://www.cea.nic.in//</u> **under the heading "New Uploads".**

It is requested that any follow-up action required on behalf of your organization may please be initiated immediately so as to achieve fruitful results before the 95th Central PTCC meeting.

The 95th Central PTCC meeting will be organized by Inspection Circle, BSNL in the month of April/May 2012. Agenda items, if any, for the next Central PTCC meeting may please be sent directly to Chief General Manger, Inspection Circle, Bharat Sanchar Nigam Ltd., Sanchar Vikas Bhawan, Residency Road, Jabalpur – 482 001, with a copy to the undersigned

Yours faithfully,

(**D.K. Malik**) Director (PTCC)

Minutes of 94th Central PTCC meeting held on 20th January, 2012 at Madurai

The 94th Central PTCC meeting was held on 20th January 2012 at Madurai under the Chairmanship of Sh. D.K.Jain Chief Engineer (LD&T) CEA. Sh. R. Amuthan, AGM, POWERGRID, SRTS-II was the Chief Guest and Dr. G.C.Manna, CGM, Inspection Circle/BSNL was the Co-Chairman in the meeting.

The list of participants is annexed at Annexure –I.

The meeting started with lightning of lamp by the dignitaries. Shri S.B.K. Moorthy, Chief Manager POWERGRID warmly welcomed the Chief Guest, other dignitaries on the dais and all the delegates assembled from different parts of the country.

Shir D.K. Malik, Director (PTCC) & Secretary (Power) of Central PTCC welcomed all the dignitaries on the dais and all the delegates assembled from different parts of the country for the meeting. He expressed his warm thanks to Shri Bharat Bhushan, ED, POWERGRID and his team for making elaborate arrangements for smooth conduction of Central PTCC meeting. He further introduced the new Chairman and Co-chairman of the meeting Sh. D.K. Jain and Dr. G.C. Manna. He thanked for the cooperation extended by all the utilities in smooth processing of PTCC RA proposals. During financial year 2011-12 it is expected that against submission of 180 PTCC proposals, about 130 shall be cleared for route approval. He was very affirmative and enthusiastic of the end result of the deliberations of the meeting and told the delegates that the meeting would be very fruitful and all problems pertaining to PTCC will be sorted out during the proceedings of the meeting.

While giving opening address, Shri D. K. Jain, Chairman (PTCC), welcomed the participants to the 94th Central PTCC meeting and stated that Central PTCC has been a role model of mutual co-existence of power & telecommunication sector and Railways. He emphasized that Central PTCC has a greater role to play in achieving the zero accidents. He also mentioned about the scheme for Computerisation of PTCC process that will bring cut down processing time. He wished that the 94th Central PTCC meeting at Madurai will have discussions and take decisions / resolve issues brought out in agenda which shall be very useful.

While addressing the gathering Dr. G.C. Manna, Co-Chairman Central PTCC, praised the role of Central PTCC and appreciated the contribution of all the

officers from BSNL and power sector in achieving the goal of PTCC. During his address he emphasized on the expenditure incurred by BSNL in collecting the data and forwarding the same to power authorities for the purpose of PTCC Route approval. He said that as per the rough estimates the expenditure of BSNL (TA & DA of the officers) in collecting and forwarding the data to the power authorities varies from ₹ 39/- to ₹ 75/- per KM of the power line. He further said that it is becoming difficult for BSNL to bear this cost alone. He made a suggestion to the Central PTCC to expand its scope and constitute a committee of senior officers from CEA, power sector and BSNL to discuss and explore the possibility.

Sh. M.A. Khan, CGM, BSNL, TN Telecom Circle and Sh. N.Venkataraman, SE, TNEB, Madurai expressed their views. Finally, Sh. R. Amuthan expressed his views, appreciated the role of PTCC and formally inaugurated the meet.

After the end of address, Sh. DK Malik, Director (PTCC), CEA took up Agenda items for further deliberations.

1.0 Confirmation of the Minutes of the 93rd Central PTCC meeting held at Daman on 29.04.2011.

The Minutes of the 93rd Central PTCC meeting held at Daman on 29.04.2011 were circulated by CEA vide letter no. No.LD&T/1/2011-PTCC/ Dated: 21.06.2011. No comments have been received so far. The participants confirmed the minutes of last Central PTCC meeting.

2.0 Follow-up of decisions taken in the last (93rd) Central PTCC meeting.

2.1 <u>Ensuring 'Zero Level' on unguarded power crossings</u>

In order to bring down unguarded power crossings to zero level, CEA has continuously persuaded the defaulting Power Utilities. BSNL, Inspection Circle has also taken up the matter with the defaulting Telecom Circles. With these efforts, the unguarded power crossings have reduced from 1217 (at the beginning of year 2009) to only 69 at the end of December 2011.

In the last Central PTCC Meeting it was informed that one unguarded power crossing has been reported in the state of Karnataka and 39 reported in the state of Assam. (In Assam, Power Utilities were to take action for 28 unguarded crossings and BSNL was to take action for 11 unguarded crossings). During the discussions the representative from Assam Telecom Circle apprised the committee that the pending unguarded crossings are in the remote and difficult areas of Assam and due to floods and bad weather these could not be attended. She assured the committee that the guarding shall be provided before the next Central PTCC meeting. There was no representation from AEGCL so it was decided that DET PTCC, ER shall take up this issue in the SLPTCC meetings.

All the four DETs (PTCC) were requested to make all out efforts in the State Level PTCC / District level PTCC meetings to bring the unguarded crossings to zero level to avoid fatal or non-fatal accidents to the personnel and to properly and to protect equipment / telecom installations.

(Action: Assam telecom circle, all the four DET's PTCC.)

2.2 Formation of a Committee for Revision of PTCC Manual, 1995 edition

The revised version of PTCC Manual (2010) was got printed by CEA and is available for sale for Rupees 600/- per copy. It can be purchased from Electric Power Information Society (EPIS), Central Electricity Authority, Sewa Bhawan, RK Puram, New Delhi-110066. The EPIS's telefax nos. are 011-26101696 and 011-26732216. Further details can be obtained from CEA website <u>www.cea.nic.in</u>

All the members were requested by Sh D.K. Malik, Director (PTCC) to place their order for the PTCC manual at the earliest. Dr. G.C. Manna CGM, Inspection Circle, BSNL was requested to get the requirement of the PTCC Manual ascertained from all the circles of BSNL for procuring the PTCC Manual. Sh. Prem Shah DET(PTCC) New Delhi was entrusted the job of ascertaining the requirement of PTCC Manual from all the circles of BSNL and co-ordinate with CEA for procuring the same. (Action:- All power utilities, DET, PTCC, New Delhi)

2.3 <u>Computerization of PTCC Route Approval Process</u>

The Consultant has been appointed by CEA for the scheme of 'Computerization of PTCC process'. Presently RFP (Request for Proposal) for the Developer / System Integrator is under progress. For the smooth running of the project, the orientation & user training propramme for the concerned officers from BSNL, Power and railways shall be organized by CEA.

Sh. N. Bhandari, Director(LD&T) described in detail the training propramme proposed by CEA. All the members appreciated the spirit behind the scheme and training. All the delegates / members offered their whole hearted support for it.

It was categorically made clear that all the officers nominated for User <u>Training</u> programme are going to be the actual users of the system and should have attended the <u>orientation programme</u> organized by CEA as a pre requisite to User Training. The details of proposed training programme are as follows;

1. The orientation programme shall be held as follows:

The orientation programme for the officers from BSNL, Power and Railways shall be organized by CEA at New Delhi. Two days programme shall be jointly conducted by CEA, Consultant and the Developer. The participants shall be briefed about the new system, its advantages and other inbuilt salient features which shall drastically reduce the processing time for PTCC route approval.

All the participants shall have to make their own travel and stay arrangements at New Delhi. Working Lunch and tea/coffee shall be arranged by CEA during the programme.

2. Training programme for the actual users of the system.

This training shall be conducted separately for the officers from BSNL / Telecom Sector, Power Sector and Railways.

a. Training for BSNL/Telecom Sector.

Two / three days training programme shall be conducted by CEA, Consultant and the Developer for all the officers who are involved in PTCC clearance work of telecom circuits. The participants shall be given on-hand training for using the web-based system in submitting PTCC proposals for new telecom circuits.

It is proposed to organize the training at the Regional Training Centers of BSNL at four different locations so that the batch size is limited to 20-22 participants. Any charges for the facilities provided by the training centers shall be born by BSNL.

All the participants shall have to make their own travel and stay arrangements at the training centers.

The participants shall be two from each state Telecom Circle plus persons from DET, PTCC office, Inspection Circle and may be from some private service provider.

b. Training for Power Sector

Three days training programme shall be conducted by CEA, Consultant and the Developer for all the officers who are involved in PTCC clearance of EHT Power Lines. The participants shall be given on-hand training in submitting web-based PTCC proposals for new power lines.

It is proposed to organize the training at the Regional Power Committee 's NRPC New Delhi, SRPC Bangalore, WRPC Mumbai and ERPC Kolkata.

The training shall be conducted at four different locations so that the batch size is limited to 20-22 participants. All the participants shall have to make their own travel and stay arrangements at the training centers.

The participants shall be two each from each power utility.

C Training for Railways.

Two / three days training programme shall be conducted by CEA, Consultant and the Developer for all the officers who are involved in PTCC clearance of Railway circuits. The participants shall be given on-hand training in submitting web-based PTCC proposals for new Railway telecom circuits.

It is proposed to organize the training at the IRISET Secunderabad. The Training shall be conducted in two batches so that the batch size is limited to 20-22 participants. Any charges for the facilities provided by the training centers shall be born by Railways.

Two participants shall be from each zone of the Railways. All the participants shall have to make their own travel and stay arrangements at the training center.

Finalization of modalities for the training shall be worked out with mutual consent after developer is in place. It is requested that designated nodal officers to carry out as under:

Nomination of officer to undergo this training

- 1. Orientation training.
- 2. User training.
 - a. The nominated officers are to be involved in arranging & furnishing Legacy data of their respective organization/zone.
 - b. The Central PTCC Members are the nodal officers who would be coordinating for arranging the required input for the scheme.
 - c. The Central PTCC members from the power sector are nodal officers for this scheme would be attending /present in OCC meetings for a follow-up of data required once the system integrator/developer is appointed.
 - d. The nodal officer of BSNL and Railway would also be required to present / represent SLPTCC meeting for data requirement after developer is in place.

All the members agreed to identify the officers to be nominated for the training and forward the same to CEA.

At the end Dr. G.C.Manna, CGM Inspection Circle, BSNL suggested to organize an orientation programme for the senior officers of the rank of CGM of BSNL. The purpose of the orientation programme shall be to apprise the senior officers about the importance and role of PTCC in protection and safety of the personnel and equipment of BSNL. The benefits to be drawn by Computerization of PTCC process should be highlighted. Chief Engineer(LD&T) CEA thanked Dr. Manna for the suggestion and agreed to conduct an orientation programme in New Delhi.

(Action: CEA, BSNL, Railways, All Power Utilities)

2.4 <u>Supply of software for calculation of Induced Voltage and related technical</u> <u>guidance to SEBs/Power utilities</u>

Upgraded version of software for calculation of Mutual Coupling, required for PTCC route approval has been developed by CEA and was offered to the interested state Govt. power utilities / PSU for their own use. Now CEA has suggested that rather using the software the power utilities who are interested in calculation of Mutual Coupling (MC) can follow the new method (for calculating MC) given in PTCC Manual 2010. The procedure is given step by step with appropriate examples. In case of any difficulty, CEA offered to arrange training for the interested power utilities at their head office or at New Delhi.

(Action: Power Utilities)

2.5 <u>Arranging State Level PTCC meeting at regular intervals</u>

It has been reported to the Central PTCC that State level PTCC meetings in Eastern region and Northern region are not being conducted regularly. In certain States, these meetings have not been held since long even after repeated reminders to the concerned officials of the Power Utilities/BSNL.

The chairman Central PTCC took it seriously and asked all the four DET's to ensure that SLPTCC meetings are held in all the states at regular intervals He said that the SLPTCC meetings have become important as the progress made in collection of legacy data shall be monitored by representative of CEA in these meetings. He further offered full help and co-operation to all the four DETs(PTCC) wherever there is any difficulty in arranging SLPTCC meetings.

(Action; All DETs PTCC)

2.6 Non-submission of investigation report by the Chief Electrical Inspector, Government of Orissa

The matter has been under discussion since last several PTCC meetings. On the basis of the report given by Chief Electrical Inspector, it has been established that the accident had occurred since no guarding had been provided at the crossing of power and telecom line and it has emerged that this is a case of violation of PTCC code of practice as it is the responsibility of the later entrant to provide the guarding. The later entrant has not been fixed so far because the dates of existence/date of PTCC approval of the 11 kV line from Khari to Sagarpalli and the telecommunication line emanating from Khameshwarpalli telephone exchange could not be established.

To find out the later entrant a sub-committee was constituted by Central PTCC by inducting one member each from CEA, BSNL (Inspection Circle), WESCO and Orissa Telecom Circle. The job entrusted to the sub-committee was to look into the available records and give its recommendations to central PTCC. In the last Central

PTCC meeting the following terms of reference (TOR) of the sub-committee were finalized :-

- 1. To check the PTCC route approval of the 11kV Khari to Sagarpalli power line.
- 2. To check the PTCC Route Approval of the telecom line emanating from Khameshwarpalli telephone exchange, involved in the accident
- 3. In case, no PTCC Route Approval is available then the sub-committee can verify the old records of OSEB to establish the date of existence of the 11kV Khari to Sagarpalli power line.
- 4. Similarly by verifying the old records of BSNL the date of existence of the telecom line involved in the accident can be established.
- 5. The committee shall verify the authenticity & credibility of the records produced by the power and telecom authorities. Records should be certified by the senior level officer of concerned utilities.
- 6. Submit a report before the Chairman, Central PTCC clearly indicating the agency which is the later entrant by 30.6.2011.
- 7. Orissa Telecom Circle shall be convener for the sub-committee.

In line with the above a meeting of the sub-committee was held on 14 Sept 2011 at Bhubneshwar and was attended by all the four members of the sub-committee. After verifying all the available records and establishing their authenticity the subcommittee concluded as below:

- 1. PTCC approval could not be submitted by the concerned electricak authority i.e. WESCO for 11 kV linefrom Khari Sagarpalli.
- 2. BSNL could not submitthe PTCC approval for the concerned subscriber line 282052 from Khameswarpalli Telephone Exchange.
- 3. The 11 kV line from Khari to Sagarpalli was commissioned in year 1974 and the same was upgraded in year 1988. It was verified from the Asset Register maintained by WESCO.
- 4. BSNL exchange at Khameswarpalli was commissioned on 30.03.1994.
- 5. From the above it is found that BSNL is the later entrant.

A copy of the above was forwarded to all concerned by Director (PTCC) CEA on 19.09.2011.

The Committee looked into the facts submitted by the sub-committee in its enquiry report and concluded that "Since BSNL was the later entrant the responsibility of providing the guarding was of Orissa Telecom Circle. Since the accident happened due to lapse on the part of Orissa Telecom Circle so the demand for compensation should be withdrawn by them.'

This item is closed for future agenda.

2.7 <u>Nomination of member from DISCOMs (Distribution Companies) for State</u> <u>Level PTCC.</u>

In order to achieve strict compliance of PTCC guidelines, involvement of all the power distribution companies/ DISCOMs is necessary at the state level PTCC. While discussing this agenda point during the 94th Central PTCC meeting it was noticed that many distribution companies/ DISCOMs in most of the states have failed to forward their nominations for SLPTCC. All the four DETs were requested to intimate the names of the DISCOMs who have failed in forwarding their nominations so that issue can be taken up with them at the higher level.

All DETs (PTCC) will compile the list of distribution companies/ DISCOMs and apprise the Committee about the status in their region.

(Action; All DETs PTCC)

2.8 PTCC clearance of HVDC lines

ITEM CLOSED

2.9 AGENDA FROM INSPCTION CIRCLES, BSNL

2.9.1 DET PTCC, New Delhi

This agenda item is same as that of 2.16 so it is merged with it.

2.9.2 AP Telecom Circle, BSNL, Hyderabad

Due to falling of 11kV power line on Telecom line(s), some equipment at Dubacherla Telephone Exchange and Pothavaram Telephone Exchange got damaged. A.P. Telecom Circle has asked the power authorities (APPEDCL) to pay the compensation of ₹ 2,77,356/- and ₹ 89,400/- respectively for the damage caused. After discussing the issue the Central PTCC established that the accident had occurred since inadequate guarding had been provided at the crossing of power and telecom line. As per the PTCC code of practice it is the responsibility of the later entrant to provide the guarding. The later entrant could not been fixed so far because the dates of PTCC approval of the 11 kV line and the telecom lines are not traceable.

In the 91st Central PTCC Meeting, a sub-committee was formed by inducting one member each from CEA, BSNL (Inspection Circle), APEPDCL and A.P. Telecom Circle to look into this incident. The committee could not make much progress in the absence of terms of reference (TOR) from Central PTCC. While discussing this agenda item during the 93rd Central PTCC meeting following terms of reference (TOR) of the sub-committee were formulated:

1. To check the PTCC route approval of the 11kV power line involved in the accident.

- 2. To check the PTCC Route Approval of the telecom lines emanating from Dubacherla & Pothavaram telephone exchange that got involved in the accident.
- 3. In case, no PTCC Route Approval is available then the sub-committee can verify the old records of APSEB/AP Transco to establish the date of existence of the 11kV power line.
- 4. Similarly by verifying the old records of BSNL the date of existence of the telecom line involved in the accident can be established.
- 5. The committee shall verify the authenticity & credibility of the records produced by the power and Telecom authorities. Records should be certified by the senior level officer of concerned utilities.
- 6. Submit a report before the Chairman, Central PTCC clearly indicating the agency which is the later entrant by 30.7.2011.
- 7. A.P.Telecom Circle shall be convener for the sub-committee.

A meeting of the sub-committee was held on 13.10.2010 in the office of CGM, AP Telecom Circle, Hyderabad and the conclusion of the meeting is as follows:

- 1. *PTCC approval from power authorities could not be submitted in both Dubacherla & Pothavaram cases.*
- 2. PTCC approval from the BSNL authorities could not be taken for both the exchanges as it was a overhead line at both the exchange areas.
- 3. There are no records brought by power authorities (APEPDCL) for verification and identification of commissioning of the power line.
- 4. As per BSNL records the telecom overhead lines was existing before 17.04.1992 and 08.06.1992.
- 5. BSNL has submitted all the required documents duly certified by the competent authority. The certified copies of the documents were given to the representative of the power authority and he requested for one month time to authenticate the documents furnished by BSNL and to trace the record in their office. Therefore it was decided that the power authority shall trace their records and furnish certified copies of the same to the sub-committee on or before 30.11.2011. After getting the records from the power authorities the sub-committee will meet again in the month of December 2011 to finalize the case.

A letter was written by CEA to APEPDCL on 08.12.2011 reminding them to submit the documents regarding date of existence / date of PTCC route approval of the 11 kV power lines.

During the discussions Director(PTCC) CEA drew the attention of the committee towards the joint inspection reports prepared by BSNL and APSEB officers immediately after the incident. He requested the sub-committee members to consider the cause of the accident given in the inspection reports made jointly by BSNL & Power utility immediately after the incident, in their next meeting.

The next meeting of the sub-committee is to be convened by AP Telecom Circle, BSNL at the earliest.

(Action; AP Telecom Circle)

2.10 Agenda from Powergrid, WR-II, Vadodra

This agenda item is closed.

2.11 DET (PTCC), NEW DELHI

DET (PTCC), New Delhi had submitted that the proposals of PTCC Route approval for 33 KV D/C and above, up to 400 KV power lines have not been submitted by the concerned power authorities of UP (West) and UP (East).

CEA had requested the concerned officers of UP (East) & UP (West), Uttaranchal and Punjab.for seeking PTCC route approval for all the HT/ EHT lines already charged without PTCC Route Approval and to seek PTCC Route Approval for future HT/ EHT lines as well.

DET(PTCC) informed that PSTCL and PTCUL have started forwarding the proposals for PTCC RA..

This agenda item is proposed to be closed.

2.12 Agenda from Railways

Director (Telecom) Railway Board brought to the notice of Central PTCC that the annexure regarding induced voltage calculation are being received from power utilities without any Authorized Signature. He wanted that the annexure should be properly signed by the concerned officers.

CEA agreed to comply and also agreed to issue a circular to all the Power Utilities for compliance. Director(Telecom) Railway board confirmed that all the power utilities are putting their signatures along with their seal on the Induced Voltage Calculations sheet before forwarding it to Railways for PTCC route Approval.

This agenda item is proposed to be closed.

2.13 Assam Telecom Circle

A list of 33kV Power lines was submitted for which the PTCC clearance is pending since proposals at the office of CGMT, Assam Circle are not traceable. It was proposed by the Assam telecom circle that ASEB should resubmit the cases or duplicate copies of the proposals may be submitted:

Representative from Assam Telecom Circle clarified that all the above proposals have either been re-submitted or traced, therefore this agenda may be dropped from future agenda.

This agenda item is proposed to be closed.

2.14 Powergrid, NER

In the last meeting Powergrid, NER informed that PTCC clearance is pending with Railways in respect of 8 new cases.

On this issue, representative from NE Railways informed that out of 8 cases, NOC for 3 has been issued, for 2 cases NOC is under issue, for one case clarification has been sought and remaining cases are under process.

Railway representative stated that all the pending proposals have been cleared by the Railways so this agenda may be dropped.

This agenda item is proposed to be closed.

2.15 Agenda from CEA on 'Cyber Security'

Additional Secretary, Ministry of Power has desired that issue of cyber security may be flagged in Central PTCC forum so that Constituent members of PTCC may convey the message in their respective organizations down the line.

Regarding cyber security, it is informed that MOP, in view of the security concerns for IT networks in the Power sector, has directed the utilities to draw up their own security programme for their IT systems and networks already created or likely to be created. This is of more significance for Distribution utilities where in large scale IT applications are likely to be created under R-APDRP, Smart Grid etc. The necessary assistance may be taken from organizations like STQC (Standardization Testing and Quality Certification) and CERT-In (Indian Computer Emergency Response Team). STQC has already created necessary infrastructure for security test/evaluation of IT products as per the international Common criteria standard ISO 15408. This facility is capable of carrying out security test/evaluation of IT products up to level 4 of the Common Criteria standard. The numeric rating describes the depth and rigor of an evaluation. Each level corresponds to a package of security concern and requirement. The Common criteria list 7 levels.

In view of above, the utilities may utilize the enabling/facilitation services available at STQC and CERT-In organizations for establishment of Information Security Management System.

All the utilities are therefore requested that the issue may also be discussed at State and District level PTCC meetings and action taken in this regard may be indicated at the earliest so that MOP can be appraised accordingly.

After brief discussions it was decided that this issue may be discussed in the next meeting with full details.

2.16 <u>Agenda from Power Transmission Corporation of Uttarakhand Ltd.</u> (PTCUL)

Waiver of PTCC clearance in respect of transmission lines charged 5-6 years earlier and PTCC proposal not submitted.

In the 93rd Central PTCC meeting PTCUL had submitted a list of 14 power lines which were charged during 2005 to 2007 without seeking PTCC route approval. Out of these 14 power lines 12 are of 132 kV and 1 each of 220 kV & 400 kV. During the meeting PTCUL representative requested the Central PTCC for one time waver of PTCC clearance.

After deliberating on the request of PTCUL Central PTCC decided that the precedence of waiving off the PTCC RA should not be created. Therefore PTCUL was asked to forward PTCC RA proposals for all the 14 power lines that have been charged unilaterally without PTCC RA.

CEA vide letter dated 28.06.2011 requested GM PTCUL to apply for PTCC RA for all the power lines already charged without PTCC RA.

In the absence of any representative from PTCUL, DET(PTCC) NR informed that till date PTCUL have nor forwarded any PTCC RA proposal. CEA agreed to take up the issue once again with PTCUL authorities.

(Action: CEA)

2.17 <u>Agenda Item from DE PTCC,Inspection Circle,Southern Region,Chennai.</u> Item Closed.

2.18 Agenda from DET(PTCC) Northern Region New Delhi.

Item Closed.

2.19 Agenda from DET(PTCC) Western Region Mumbai.

During the last Central PTCC meeting DE (PTCC) WR reported about non reference of proposal for 11KV/33kV power line / cable by power authority in Maharashtra state. It is also seen that construction of 11KV power line / cable are under progress in most of places of Maharashtra state without maintaining safe separation as well as without obtaining PTCC approval from concerned BSNL authority.

During the last meeting the representative from MSPTCL was requested to issue necessary instructions to the distribution companies to seek PTCC RA before charging their EHT power lines.

The representative from MSPTCL informed that all the distribution companies have been advised to adhere to PTCC norms and guidelines but they have no means to monitor the implementation of these guidelines. During deliberation it was suggested that the issue of charging the power lines without PTCC clearance should be brought in the notice of state Regulatory Commission and they should be requested to instruct all the distribution companies to adhere to PTCC guidelines/norms. CEA may examine the possibility to take up the issue with the State Regulatory Commission requesting them to instruct all the power distribution companies to adhere to the PTCC guidelines.

2.20 Agenda from Orissa Power Transmission corporation limited (OPTCL)

PTCC Route Approval for two power lines of OPTCL is awaited. It was decided that the issue shall be discussed in SLPTCC meeting for early disposal of the case.

The agenda item is proposed to be closed.

2.21 Agenda from POWERGRID SRTS-II, Bangalore.

- 1. East Cochin-Trichur line Charging permission for the above line has been issued.
- 2. 400 kV Hassan-Mysore D/C Line IV comments issued by CEA
- 3. LILO of both ckts of 400kV Nelamangla-SomanahallyD/C line at 400kV Hubli - Proposal not received by CEA
- 4. LILO of both ckts of Udumalpet Madakatheraat 400kV chullar Proposal not received by CEA
- 5. 230kV D/C KFBR-Sirucheri Proposal not received by CEA
- 6. 400kV Tuticorin- Madurai D/c Quad line IV comments issued by CEA

The current status of all the proposals was given by CEA. The agenda item was proposed to be closed.

2.22 Agenda points from PGCIL, WR-II, Vadodara

a) 400kV D/C Bachau - Vadavi (Ranchchodpura) Tr. Line

Induced Voltage calculations sent by Director-PTCC, CEA, New Delhi on 20/10/10 to CSTE, WR, Mumbai for Issuance of No Objection Certificate.

The NOC was held up as CSTE, WR, Mumbai raised certain objections regarding the human safety since the I.V. figures was more than 100 Volts on railway O/H communication circuits.

Considering fresh doubts raised by WR involving human safety, Chairman Central PTCC proposed to set up a sub-committee drawing one member each from Railways, CEA and Powergrid to dig out information on the issue from reference books, journals, CCIIT guidelines, etc. The term of reference (TOR) for the sub-committee is to determine voltage limit from human safety point of view for working

on over headlines. Sh. NP Gupta, Dy. CSTE, Western Railway was made the Convener of the Sub-Committee.

It was also decided that till the sub-committee reaches any conclusion, the WR will not hold up PTCC RA and continue to issue NOC as has been done in the past.

The Sub-committee held its meeting at CEA New Delhi on 23.08.2011 and the minutes of the meeting are placed before the committee for acceptance. The MoM are annexed at Annexure-II. however the Conclusion of the meeting is reproduced below for ready reference.

Conclusion:

It can therefore be concluded that induced voltage of up to 430V is safe for human working on overhead railway telecom circuits. In fact, as per para 6.5.2 and para 6.5.3, even 650 V of induced voltage is considered non-hazardous to human working on railway communication circuits for EHT (66KV and above) lines because of protective devices used in the power line to limit the induced voltage duration to 0.2 seconds and in no case is more than 0.5 seconds in the event of SLG fault conditions. However, for communication circuits the provisions as contained in para 6.5.3 (ii) of the PTCC manual must be adhered to for this be applicable.

For block circuits the safe limits as prescribed for various types of block circuits as per Appendix XVII to Chapter I and para 6.11.4 of the PTCC Manual shall be followed.

The report submitted by the sub-committee was accepted by the Central PTCC including Director(Telecom) Railway Board, New Delhi. It was also agreed that the above report shall be circulated by Director (Telecom), Railway Board to all the zones of Railway for their information.

The current status of all the proposals of Powergrid, WR-II was given by CEA.

| (b) | 400kV D/C Mundra - Jetpur Tr. Line | IV issued by CEA |
|-----|---|---------------------------------|
| (c) | 400kV D/C Mundra - Limbdi (Chorania) Tr. Line | IV issued by CEA. |
| (d) | 400kV D/C Gandhar - Navsari transmission Line | Rly. Details awaited. |
| (e) | LILO of 2200kV D/C Kawas - Navsari at Navsari | . Power details awaited. |
| (f) | 765kV S/C Bina - Indore Tr. Line. | Power and Rly. Details awaited. |
| (g) | 400kV D/C (QUAD) Indore - Indore Tr. Line. Rly. d | details awaited. |
| (h) | 765kV S/C Satna - Bina Ckt#1 Tr. Line. | IV issued by CREA. |
| (i) | 765kV S/C Satna - Bina Ckt#2 Tr. Line. | IV issued by CEA. |
| (j) | LILO of 400kV D/c V'chal - J'pur Ckt#3 & 4 at SAS | SAN Rly. Details awaited. |
| (k) | 765kV S/C Sasan - Satna Ckt#1 Tr. Line | Under computation in CEA. |
| (I) | 765kV S/C Sasan - Satna Ckt#2 Tr. Line | Under computation in CEA. |

The agenda item is proposed to be closed.

2.23 Agenda points from PGCIL, WR-I, Nagpur

PTCC Route Approval of the following proposals is awaited.

- a) 400kV Korba- Raipur
- b) 400kV Wardha-Parli-II
- c) 400kV Raipur-Wardha.
- d) 765kV Seoni-Wardha-II
- e) LILO of Lonik;d-Kalwa at Mumbai.
- f) 400kV Vapi-N.Mumbai
- g) 765kV Ranchi-Sipat.
- h) 400kV Wardha-Wardha.

IV issued by CEA. IV issued by CEA. IV issued by CEA IV issued by CEA IV issued by CEA Rly. Details awaited. Under computation Proposal not received.

The current status of all the proposals was given by CEA.

The agenda item is proposed to be closed.

3.0 NEW AGENDA ITEMS

3.1 Agenda items from CEA.

Monitoring by CEA regarding progress made in collection of legacy data required for Computerization of PTCC Process.

It is proposed that a representative from CEA shall be present in the SLPTCC meetings, and shall monitor the progress made by BSNL, Railways and Power authorities in collecting the legacy data.

The proposal from CEA was accepted by the committee and all the four DET's were requested to include the following agenda point in all the future SLPTCC meetings.

"Progress made in collection of legacy data required for Computerization of PTCC Process."

(Action: All the four DET's)

3.2 Agenda from KPTCL.

a. Regarding NOC from STR for PTCC cases with O/H lines.

In the 291st SLPTCC meeting it was proclaimed by STR (Southern Telecom Region) that a decision has been taken that "only cases involving laying of power cables need to be referred to STR and NOC of STR for cases of O/H power lines is not required. However CGM/GM STR confirmation is required in this regard." Now CGM STR Chennai has confirmed the nomination of GMM STR Bangalore for accepting and clearing all the forthcoming PTCC proposals with U/G power cables vide letter dated 14.09.2011.

The Central PTCC appreciated and welcomed the decision of CGM STR to reduce the processing time for according PTCC route Approvals. The chairman Central PTCC wished that the same decision be adopted in other regions as well. The decision of CGM STR was accepted and vetted by Central PTCC. (This item is closed)

b. Insisting upon submission of EPR details for the existing Substations when PTCC proposals for new substations are submitted.

It was stated by KPTCL that DET, PTCC Chennai is now insisting upon submission of EPR details for the existing Substations as per para 2.1(1) Section A clause 80 (PTCC questionnaire-1) of the revised PTCC manual. As there are many of RA power lines of KPTCL are held up due to EPR details. KPTCL raised the issue.

The issue was discussed in detail and the need behind the submission of EPR details was clarified by Director (PTCC) CEA. As per the guidelines given in the PTCC Menual 2010 it was clarified that:

a. <u>EPR distance/details submitted by Power Transmission Utilities of Centre /</u> <u>Public / State sector undertakings.</u>

All EPR distance/details are to be accepted as given by the above utilities along the PTCC RA application. No further details/information should be asked.

b. EPR Distance/details submitted by the private transmission utilities.

- i. If EPR Distance/details submitted by the private transmission utilities is on the letterhead of **the Power Transmission Utilities of Centre / Public / State sector undertakings** and is duly signed, then all EPR distance/details are to be accepted as given along the PTCC RA application. No further details/information should be asked.
- ii. If EPR Distance submitted by the private transmission utilities is on their own letterhead then further details/information can be asked.

c. While applying for PTCC RA only the EPR details/distance of NEW sub-station is to be submitted. EPR details of the old/existing sub-stations should not be insisted upon.

The above clarifications ate applicable for future and all the pending PTCC RA proposals.

Central PTCC had ruled that no route approval of PTCC cases should be held up due to requirement of additional information. The additional information may be requested separately from the utilities. The utility may furnish if the same is available with them.

(The agenda item is closed)

3.3 <u>Agenda from Chief Engineer (Dist.) Maharashtra State Electricity</u> <u>Distribution Co. Ltd.</u>

Review of PTCC Standards for power lines approval (upto 33 kV) in respect of special cases mentioned below

Construction of New power lines / Sub-Stations are under progress at a large scale in Maharashtra & in order not to hold up the progress of these Important Projects, CLPTCC is requested to review the PTCC standards in Special Cases where the Objectives of PTCC i.e. ensuring and enhancing overall safety of precious human life & equipments will also not be hampered.

As it takes minimum 3 to 4 months of time for approval after submission of proposal completed in all respect to SLPTCC, it is felt that special cases can be approved by simplifying the procedure for obtaining approval.

Short Distance Lines :- All the proposed power lines where the length of power lines are short & does not have any interference situation & Induction does not exist approval for such lines can be issued by adopting proposed simplified procedure.

Proposed Power Lines not in proximity to Telecommunication Lines or Railway lines:- Proposed power lines which are not in the vicinity of telecom lines or Railway Lines such type of lines can be approved by adopting the simplified procedure as there is no question of Induced Voltage or interference. It is also observed in many of the proposals the proposed power lines are not in the vicinity of either Telecom or Railway lines.

The proposal from Chief Engineer (Dist.) Maharashtra State Electricity Distribution Co. Ltd. was patiently listened by all the members of the Central PTCC. The idea for reducing the time period for PTCC RA was appreciated by the committee and the representative from Maharashtara was advised that, since the power lines involved are of SLPTCC therefore the proposal should first be discussed in SLPTCC and after getting acceptance by the Railways and BSNL, it should be brought in Central PTCC for discussion..

(Action: Maharashtra State Electricity Distribution Co. Ltd.

3.4 Agenda from Western Region Transmission (Gujarat) Pvt. Ltd.

₹ 80.35 lakh has been deposited by the above company to Western Railway for arranging the protection work on certain Block sections which were likely to get affected under SLG conditions on 400 kV Vadavu – Kansari power line. Subsequently, after careful consideration the company if of the view the estimate submitted by WR is on the higher side The company has further requested the Chairman Central PTCC to get the estimate scrutinized by the Protection/Re-Engineering Supervisory Sub-Committee formed as per clause 6.14 of the PTCC manual.

The request from Western Region Transmission (Gujarat) Pvt. Ltd. was accepted by Central PTCC and a five member Re-Engineering Supervisory Committee was setup as per clause 6.14 of PTCC manual 2010 comprising the following members;

- 1. Director (PTCC), CEA,
- 2. Director (Telecom), Railway Board.
- 3. AGM (PTCC) Inspection Circle, BSNL Jabalpur.
- 4. Member from the affected power utility Western Region Transmission (Gujarat) Pvt. Ltd.
- 5. A Member from the agency who has given the re-engineering estimatei.e. Western Railways.

The meeting shall be chaired by Director (PTCC) CEA and will be convened by the Western Region Transmission (Gujarat) Pvt. Ltd.

4.0 Any fresh agenda item with the permission of the chair.

4.1 Agenda from M.P. Power Transmission Co. Ltd.

Representation of Railways in SLPTCC meetings.

MP is covered by five zones of Railways namely NCR, WCR, WR, CR and SER. It was reported by the representative from MPPPTCL that SLPTCC meetings are attended by the representatives from WCR & SECR only. He requested that the SLPTCC should be represented by other Railways also. Director (Telecom) Railway Board assured that necessary instructions/guidelines shall be issued to all the zones for attending the SLPTCC meetings in all the states.

(Action: Director (Telecom) Railway Board)

The meeting ended with a vote of thanks to the Chair.

The 95th Central PTCC meeting will be organized by BSNL, Inspection Circle, Jabalpur the agenda points for the next meeting may be sent directly to Chief General Manager, Inspection Circle, BSNL, Sanchar Vikas Bhawan, Residency Road, Jabalpur, with a copy to Director (PTCC), Central Electricity Authority, NRPC Complex, 18A, SSJ Marg, Katwaria Sarai, New Delhi-110016 or e-mailed at dirptcc.cea@gmail.com.

Annexure-II

<u>Minutes of the meeting of the Sub-Committee held on</u> 23rd August 2011 at CEA, New Delhi

While deliberating on the Agenda Item No. 3.9 during the 93rd Central PTCC Meeting held on 29th April 2011 at Daman the Central PTCC took a note of the concern expressed by POWERGRID regarding delay in issuing NOC by the Western Railway and the doubts raised by Western Railway regarding the human safety whenever the Induced Voltage on the O/H communication circuits exceeds 100 Volts due to Single Line to Ground fault on the paralleling power lines. The representative from Western Railway (WR) stated that protection arrangements are required for human safety where Induced Voltage is more than 100 V for working on overhead lines. Considering fresh doubts raised by WR involving human safety, Chairman Central PTCC proposed to set up a subcommittee drawing members from Railways, CEA and Powergrid to extract latest information on the safe voltage for working on the O/H telecom lines CCIIT directives etc.

In line with the above, a sub-committee was set up comprising the following members:

From CEA :

- 1. Sh. D.K.Malik, Director (PTCC) CEA.
- 2. Sh. Naresh Bhandari, Director (LD&T) CEA.

From POWERGRID:

1. Sh. S. Balakumar, Manager (Engg.), POWERGRID,, WRTS-II. Vadadora..

From Western Railway:

1. Sh. N.P.Gupta, Dy. CSTE (Tele), WR, Mumbai.

The sub-committee held its first meeting on 23rd August 2011 at CEA, New Delhi, and discussed the issue for an amicable solution.

Sh. N.P.Gupta drew the attention of the members towards the para 6.5.3 (ii) of the recommendations issued by Central PTCC during its meeting held on 15.06.1956

Para 6.5.3 (ii) of PTCC Manual is reproduced below:

For control and Deputy control circuits on which operating personnel work continuously the operators' telephonic sets should be fitted with suitable acoustic shock absorbers and in addition, proper protective device like gas and carbon arresters may be fitted on the circuits whenever they enter an office

To this it was clarified by Shri D. K. Malik that, the protections recommended above are to be provided whenever the induction is likely to exceed 650 volts on the communication circuits under Single Line to Ground fault conditions on paralleling EHT power lines. This is as per para 6.5.3(i) of the PTCC manual.

Sh. N.P.Gupta further produced Various papers downloaded from WEB sites for hazardous voltage premier and shock physiological effects as per that electricity

kills or injures more than 1000 people a year in the United States. Voltages of 100 to 250V ac in wall outlets are the most common and can be lethal. This voltage range can cause significant current flow through the body. Under shock physiological effects:-

| Electric Current (1 second contact | Physiological Effect | Voltage required to pro assumed boo | oduce the current with dy resistance |
|---|--|--|---|
| | | 100,000 Ohms | 1000 ohms |
| 1 mA | Threshold of feeling, tingling sensation | 100 V | 1 V |

To this it was again clarified by Shri D. K. Malik that Central PTCC follow the recommendation/directives issued by CCITT/ITU which is an international body constituted by the UN. Hence, any paper downloaded from various Web Sites without any authority/authenticity cannot be considered. It was further stated that the duration of fault condition is power lines in India is limited to 0.2 seconds and according to CCITT recommendations induced Voltage upto 650V during that period is non-hazardous.

Shri N. P. Gupta was not satisfied with the clarification given above regarding Para 6.5.3 of PTCC Manual which does not restrict for provision of protective devices whenever the induction is likely to exceed 650 V.

Shri N. P. Gupta further drew the attention on Para 6.5.2 (b) of PTCC Manual, which states that :-

the CCIF recommendation raising the limit of longitudinal induction to 650 V do not in generally apply to cases of Signaling circuits of Railway Systems and the value of 430 V would be in forced for such circuits.

This has been further confirmed during Minutes of the Meeting held on 10.12.1976 to discuss problem relating to protection of Railway telecom and block circuits. Para – 4 of (iii) [reproduced at Appendix-XVI to Chapter – 1 on Page 160 of PTCC manual) of same is states as :-

"Wherever the railway electrification has been carried out, the paralleling railway circuits (including block circuits) can be cleared as for telecom lines without additional protective measures being prescribed for the block circuits subject to the condition that the induced voltage does not exceed 430V. In case the induced voltage exceeds 430V, case has to be coordinated and discussed with Railway Board for a decision."

Sh. Malik further referred to a circular issued by the Railway Board dated 03.04.1978 to all GM's (S&T) containing guidelines regarding PTCC Route Approvals of EHT Power Lines. (Reproduced at Appendix-XVII to Chapter-1' on page-164 of PTCC Manual). In this circular letter, regarding protection of communication circuits it is recommended that:-

As for the protective measures on railway communication circuits whether owned or maintained by Railways or P&T,(now BSNL) the standards followed by P&T will be adopted for railways, telecom circuits as well."

Regarding protection of Railway Block Circuits, the recommendations for proactive measures on railway block circuits is also enclosed with the above circular issued by the Railway Board.

Attention was further drawn towards a circular issued by P&T (now BSNL) reproduced as Appendix –IX to chapter -1, para 1.0 of PTCC manual which states that;-

Owing to vast expansion in power & Telecommunication sectors number of power lines happen to run parallel to telecommunication lines. **Telecommunication lines, therefore, need to be protected from low frequency induction in the event of single line to ground fault on paralling power lines when the induced voltage exceeds the prescribed safe limit of 430 volts.** Thus personnel working on these circuits and the equipment installed need also to be protected from the influence of hazardous potentials.

Railways overhead/underground lines are used for both signaling and communication. Railway Board has clearly laid down the induced voltages that can be tolerated by the signaling circuits depending upon the block instruments being used in a section.

For communication circuits, Railway Board's guidelines are clear that standards followed by P&T (now BSNL) shall be adopted by Railways as well.

It was explained by Shri D. K. Malik that SLG (Single to Ground) faults on EHT (66KV and above) lines do not exceed 0.2 seconds. The Power authorities provides protective devices to see that the duration of SLG fault do not exceed 0.2 seconds and in no case is more than 0.5 seconds. For this duration, 430V induced voltage is not hazardous to human being. This is also substantiated by Appendix IX to chapter I of PTCC

manual where 20 GD Tubes formula has been discussed. As per para 6.3.7 of PTCC manual this has been accepted by DoT as well.

Conclusion:

It can therefore be concluded that induced voltage of up to 430V is safe for human working on overhead railway telecom circuits. In fact, as per para 6.5.2 and para 6.5.3, even 650 V of induced voltage is considered non-hazardous to human working on railway communication circuits for EHT (66KV and above) lines because of protective devices used in the power line to limit the induced voltage duration to 0.2 seconds and in no case is more than 0.5 seconds in the event of SLG fault conditions. However, for communication circuits the provisions as contained in para 6.5.3 (ii) of the PTCC manual must be adhered to for this be applicable.

For block circuits the safe limits as prescribed for various types of block circuits as per Appendix XVII to Chapter I and para 6.11.4 of the manual shall be followed.

Minutes of 94th Central PTCC Meeting

| | Organization - | Office address | State No. | g | FAX No. | email D | Signature | |
|-----|-------------------|------------------------------------|----------------|---------|---------|--------------------------|---------------------------------------|---|
| SDE | Bent | Telephone Guesh Emr) mA-1. | dured 20795 | LLSEST | 23374 | mgasa Grediffmail | e e e e e e e e e e e e e e e e e e e | |
| SOF | BSNL. | Tallakulam MAZ | 94 861 | 2532677 | 2323766 | mbadros veditjenni | Thespec | |
| SDE | BSNL | Telefleone Kgs, Viscudhernogg | 94841- | 04562 | 1 | verinamani Osencleana | 6 Lawing | ç |
| cam | BSNL Tamil Nod | Tamil Nadr Cinde | 1ab achtha | 285133 | 6696158 | alliafte | Now . | |
| 570 | BSNL | Tele phone Exchange Emn MA-1 | 94861 | 2323777 | 2523766 | jtoat @ ladiat.com | A.S. P.W | |

| - |
|------|
| |
| |
| |
| 2 |
| 1. T |
| =1 |
| |
| |
| - |
| |
| |
| 31 |
| H |
| ł |
| - |
| 1 |
| |
| Ē |
| |
| - |
| E |
| Y |
| 11. |
| - |
| 1 |
| |
| |
| * |

-

| | Designation | Organization | Office address | Mobile No. | Office phone no. | FAX No. | email ID | Signature |
|------|-----------------------|----------------------|---|--------------|------------------|---------------|-------------------------|---------------|
| 2 | PTCC PTCC | t C.D.87 Division | LDST Dr | 98 H.24 22 | y6565183 | 26 5 65 18 3 | l | Ruy |
| ff S | ABR 1710 | TNEB | K. P. due | Edizozzhyb | 55135 | 855155C | Pound | J. J. |
| R | DGH | BSA L | Ist Plen, J. Let Plen, Ray Bhavan Tele Bachamary Quindy | Eccabostitib | 11008666 | विवेडर मेहरू। | dg mat er Ogmat | R |
| ALL | A/T MADUCH | BSNC | Earliner, Br. | 9444979567 | | | be all surves | |
| Ĕ | GM BSML Madurai | BSWL | 2. V. P. Rathna Samy Nadar Madurai -1 | 1000015HHD | 2533232 | 2531515 | Serrajam @ yahar con | · 3 - 5 Kaper |

STOE PARTICEANTS FOR THE MALCENTRAL PICCI

| | Designation | Organization | Office address | Mobile No. | Office phone no. | FAX No. | email ID | Signature |
|-------|----------------------------|--------------------------|--|-------------------|------------------|---------|------------------------------|-----------|
| | Director / | Ministry of Railworks | Roo m- 124, Roil Ethenew Reizine Mary New Delli | 9 & P310 486 | 23382504 | 011 - | drale l | -ton |
| ×. | sse) Berisn Srey. | Smillern Railways. | CSTE office. Cim/S'Rb. HQ, chinai 3 | 09002160 819. | 2 535 7471 | 044- | Sultrajj B Maros Coin. | C A |
| dan | Den 4 head hav Denju | MPTC Liniter | DG ond new Than Oen MANN TCL, Hawither | 416243146 | · 74610 | 26 410 | ۰ ۱ | Orada- |
| Ithen | 22 | UHBUN | SE (g) Concle UHOV ~, Panep | 20192 -4 22220 | 2651903 | 0180- | seeputbon | Sun |
| inter | Directu/ CEA/LD&T(F | CEA True) | NRPC Office Brue Luy, Kotum | 644190615860 | 268592 | -110 | nbnerest-bk | ndan's gu |

| | and the second secon | Allahan | | | | | | 1 | | | |
|---|---|----------------|---------------|--|---------|--------------------------------------|--|----------------|---------|------------|-----------------------------------|
| | | | | | | | | 3 | | - | |
| | Signature | LIV X | 11,38 | | | 8J | Lottendl. | A CA | 7 | Bu D | in arai. |
| | 01/2012 | email | | | | redist. | Kinjodher @ Yaher .ce .in | | | Kunes 2 du | 470 Redigman |
| | NURAL ON 201 | FAX No. | ł | 2 2 2 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 | | asthlas | 13585572 | | | | l |
| 8 | MMINGE | no. | 757547 | | | 1102490 | 215 - 2180 | | í | | 1 |
| | | Mobile No. | ALEOCION | 5 | | 1(0222/6196 | 1541516116 | | the pas | | 9446304 55 |
| | MIL CENTRAL PT | Office address | I Plant, twee | Hir pourpero, | - WEREN | Poavaorges Bondag (C) 0 Mumbou | Preckoshgent Blec compley Beatwice L | Munter . 40005 | ra coc | | BI JASE Paugode. Towardrum. |
| | S FOR THE | Organization | -FANTRANS | 9 | | greau | MSETCL | | 226 | | Poner E |
| | PARTICIPAUT | Designation | uperinker | orginuer (èv | - | Sulerenter | Supe. mbnly | | SELGIC | | OIC TVM. 912BSC |
| | S | F | 100 | 50, | | 27 | | | 63 | | 8 F.J |

ST OF PARTICIPANTS FOR THE MID CENTRAL PTCC MEETING HELD AT MADURAL ON 2004/2012

| | 2 | | | 2 | |
|------------------|-----------------------------------|---------------------------------------|---|-----------|---------------------------------------|
| Signature | ter 1) | A | Latter I. | 2 | Lui. |
| email ID | | eedist@ marabition | Konjadhar @ Yahar ce in | | Kumas-Sduk 470 Rodiffrai. · com |
| FAX No. | 1 | asthlas | +3585572 | | ł |
| Office phone no. | 75747 | 1102 497 | 08756592 | i B | |
| Mobile No. | ALEOCLAND | 16132227 | 1241316116 | iller has | 3446304 555 |
| Office address | J. F. Borr, Taves | Poarranges Bondair (S) 0 Mumbou | Predoshgant Blec compley Bandre CEL Mumber. 400051 | rat here | BIJESE Paugode. Torraudrum. |
| Organization | -T-ANTRANS | greau | msetc L | 226 | · Doney · E |
| Designation | Superinter) Superinter) FLE | Sulexenters | Supe. Mondy Engeneir | S ET/bre | OIC TVM. 917 BSC |
| | 57 | and the | Ve. | E.S. | Pri V |

COF PARTICIPANTS FOR THE 94th CENTRAL PTCC MEETING HELD AT MADURAL UN ZUUTIZATE

| | | - | - | | |
|------------------|---------------------------|---------------------|--------------------------------------|--|---|
| Signature | Der | Sal | B | foral | And |
| email ID | 2 | | | | ulb-raj p rediffual |
| FAX No. | | . 1 | -1920 26652332 | 011- 237/38/7 | 2645876 |
| Office phone no. | | - (| 2702164 | 0/1- | 0761- |
| Robbe Ro | hitit 00 | hs appropriate o | 14258 05241 | 09868/3834 | 280/0852260 |
| Office address | 20CBMF Apwick Novel | RHS, -seit | Shak Hi Bhan Wan, Rambur, 3BP. | Bizehoei Bhavon Jewpelh Neerbellu | of. Can, Inspection Circle Jab of pur |
| Organization | BSNL | POWERGRID | MPPTCL | BSNL | BSML |
| Designation | Addy | ch.Mr. | U U | (mate) | S DE CPTCO |
| | 4 | | | 1 | V |

| 1- |
|-----|
| 0 |
| |
| 0 |
| Ĭ |
| - |
| N |
| 5 |
| 3 |
| ō |
| 1 |
| X |
| Z |
| 17 |
| 0 |
| T |
| 12 |
| 2 |
| |
| 1 |
| |
| 2 |
| C. |
| 12 |
| 2 |
| - |
| |
| 2 |
| 2 |
| |
| 2 |
| 2 |
| X |
| 1 |
| |
| |
| 11 |
| |
| 15 |
| 40 |
| 24 |
| 111 |
| |
| |
| 1 |
| |
| 2 |
| 16 |
| Š |
| Z |
| S |
| - |
| 0 |
| 2 |
| 20 |
| X |
| 2 |
| N |
| 0 |
| 2 |

| IT Pa | 14 1.8 | 13 . A-K | 12 4.4. | II NIC | No SI. |
|---------------------------|---|----------------------------------|---------------|---------|---------------------|
| nkaj Goyey | DASH | 1-Jancon. | Bru netcett | hamly | ull Name |
| D. G. M. | AGM | Sold. 12. | ୟ ଓ୵ | SC | Designation |
| 17: C. N. L | OPTCL- Shubanes | or ICL | BSNZ | Binz | Organization |
| 0/0 DEM A/r Mumberl | Grzy Con.) Grzy Con.) Shubaneousn | office] & 6.7. (7 Pres, BREN | ofo SDE, prac | | Office address |
| 412 100 Yollp | 09437081370 | 57875456 | 728 725 | 8088 | Mobile No. |
| 1 | 0674 -25490)0 | Ĩ | 1248726 | | Office phone no. |
| 1 | | 1 | 12. | - A | FAX No. |
| Panka 1214 Cogmentis | | | 2 | | email ID |

4

Minutes of 94th Central PTCC Meeting

| and the second | | | | 15 | | |
|--|----------------|--|--|------------------------------------|---|------------------|
| | | r | | 1-10 | 12 | 3 |
| | Signature | in the Andrew | Down | Jam No | 20[1]2 | S.S. S. S. S. S. |
| | email ID | monupar chebar 2 gmail: com | l | guneseke | Tradhanaun a yahoo cum | bauadariye. |
| | FAX No. | - 050 | 1 | 0644 22,35 5,646 | 0361 2817007 | 22354646 |
| Con about | no. | 020-020 | 049- 22354546 | YAD YAD | 0 241 - 2736311 | 2235420 |
| | Mobile No. | 34 2867844 | 9444800033 | (rapped d b | 9435599 | September 2 |
| | Office address | NO.28 RACE COURSE CROSS ROAD A.R. CIRCLE, BUDOR-9 | NO.36, Sondars paled Road Ewindy, chenness - 32 | 26 Bendlow Partility Guindly | 3rd Floor BSNL Bruwan, Astam Ob CGMT1, Astam Pan Lochar, Astam | Raj Bhavan Table |
| | Organization | rprer 1 | BSNL | Baur | DUNL | BSNL |
| | Designation | AFELEU), PTC, SLDC, KPTCL, R'ID, | SDE, PTEC BSNL Chemnen: | DE Pre DE Pre | Gry CFA BUNL | SUE PITC |
| | | (1) | | 5 | | |

Minutes of 94th Central PTCC Meeting

| ANTS FOR THE 94th CENTRAL PTCC MEETING HELD AT MADURAI ON 20/01/2012 |
|--|
| FO |
| E PARTICIPANTS |
| C |

S

