

22

**RAILWAY CONVENTION COMMITTEE  
(2014)**

**MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

[Action Taken by Government on the Observations/  
Recommendations of the Committee contained  
in their Twelfth Report (Sixteenth Lok Sabha)  
on Green Energy Initiatives in  
Indian Railways]

**(SIXTEENTH LOK SABHA)**



**LOK SABHA SECRETARIAT  
NEW DELHI**

**March, 2018/Phalguna, 1564 (Saka)**

**TWENTY-SECOND REPORT**  
**RAILWAY CONVENTION COMMITTEE**  
**(2014)**

**(SIXTEENTH LOK SABHA)**

**MINISTRY OF RAILWAYS**  
**(RAILWAY BOARD)**

**[Action Taken by the Government on the Observations/Recommendations of  
the Committee contained in their Twelfth Report (Sixteenth Lok Sabha) on  
Green Energy Initiatives in Indian Railways]**

*Presented to Lok Sabha on 15.03.2018*  
*Laid in Rajya Sabha on 15.03.2018*



**LOK SABHA SECRETARIAT**  
**NEW DELHI**

*March, 2018/Phalguna, 1939-40 (Saka)*

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## **CONTENTS**

	<b>PAGE</b>
<b>COMPOSITION OF THE RAILWAY CONVENTION COMMITTEE (2014) .....</b>	<b>(iii)</b>
<b>INTRODUCTION .....</b>	<b>(v)</b>
<b>CHAPTER - I Report .....</b>	<b>1</b>
<b>CHAPTER - II Observations/Recommendations which have been accepted by the Government .....</b>	<b>5</b>
<b>CHAPTER - III Observations/Recommendations which the Committee do not desire to pursue in view of the Government replies .....</b>	<b>16</b>
<b>CHAPTER - IV Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration .....</b>	<b>17</b>
<b>CHAPTER - V Observations/Recommendations in respect of which replies of the Government are of interim in nature .....</b>	<b>18</b>

### **APPENDICES**

<b>I. Minutes of the Forty-sixth sitting of the Railway Convention Committee (2014) held on 14 March, 2018 .....</b>	<b>19</b>
<b>II. Analysis of Action Taken by the Government on the Observations/Recommendations contained in the Twelfth Report of the Railway Convention Committee (2014) .....</b>	<b>21</b>

COMPOSITION OF THE RAILWAY CONVENTION COMMITTEE  
(2014)

Shri Bhartruhari Mahtab, MP — *Chairperson*

MEMBERS

*Lok Sabha*

2. Shri Abhishek Banerjee
3. Shri Sanganna Amarappa Karadi
4. Shri K. Ashok Kumar
5. Shri Kamalbhan Singh Marabi
- \*6. Vacant
- \*\*7. Vacant
8. Shri Janak Ram
9. Shri Rahul Ramesh Shewale
10. Shri Bharat Singh
11. Shri Liladharbhai Khodaji Vaghela
12. Shri K.C. Venugopal

*Rajya Sabha*

- \*\*\*13. Vacant
14. Shri T.K. Rangarajan
15. Shri Prem Chand Gupta
16. Shri Abdul Wahab
17. Smt. Vandana Chavan
18. Shri Ranvijay Singh Judev

SECRETARIAT

1. Smt. Kavita Prasad — *Joint Secretary*
2. Shri M.K. Madhusudhan — *Director*
3. Shri D.R. Mohanty — *Additional Director*

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\* Vacancy occurred w.e.f. 05th July, 2016 *vice* Smt. Anupriya Patel was appointed MoS.

\*\* Vacancy occurred w.e.f. 14th December, 2017 *vice* Sh. Nana Patole resigned from Lok Sabha.

\*\*\* Vacancy occurred w.e.f. 18th August, 2017 *vice* Sh. Derek O' Brien retired from Rajya Sabha.

## INTRODUCTION

1, the Chairperson, Railway Convention Committee (2014), having been authorized by the Committee, present this Twenty-second Report on Action Taken by Government on the Observations/Recommendations of the Committee contained in their Twelfth Report (Sixteenth Lok Sabha) on Green Energy Initiatives in Indian Railways.

2. The Twelfth Report was presented to Lok Sabha and also laid in Rajya Sabha on 31 March, 2017. The Ministry of Railways (Railway Board) furnished their replies on 31 October, 2017 indicating Action Taken on the Observations/Recommendations contained in the Twelfth Report. The Committee at their sitting held on 14 March, 2018 considered and adopted this Report.

3. An analysis of the action taken by the Government on the Observations/Recommendations contained in the Twelfth Report (Sixteenth Lok Sabha) of the Railway Convention Committee (2014) is given at Appendix-II.

4. For ease of reference, the Observations/Recommendations of the Committee have been printed in bold letters in the Report.

NEW DELHI;  
14 March, 2018  

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23 Phalguna, 1939-40 (Saka)

BHARTRUHARI MAHTAB,  
*Chairperson,*  
*Railway Convention Committee.*

## **CHAPTER I**

### **REPORT**

This Report deals with action taken by Government on the Observations/Recommendations of the Committee contained in their Twelfth Report (Sixteenth Lok Sabha) on the subject 'Green Energy Initiatives in Indian Railways'.

2. The Twelfth Report was presented to Lok Sabha on 31st March, 2017 and also laid in Rajya Sabha on the same day. It contained 20 Observations/Recommendations. Replies of Government in respect of all the Observations/Recommendations have been received and are categorized as under:—

- (i) Observations/Recommendations which have been accepted by the Government:

Rec. Para Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 & 19.

Total: 19

Percentage: 95

- (ii) Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies:

Rec. Para No. Nil

Total: Nil

Percentage: Nil

- (iii) Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration:

Rec. Para No. 20.

Total: 01

Percentage: 5

- (iv) Observations/Recommendations in respect of which replies of the Government are of interim in nature:

Rec. Para No. Nil

Total: Nil

Percentage: Nil

3. The Committee desire that Action Taken Note in respect of the Observations/Recommendations contained in Chapter-I of this Report be furnished to them at the earliest.

4. The Committee will now deal with some of their earlier Recommendations which either require reiteration or merit further comments based on the replies received from the Government.

## **I. Provision of Wind Power Plants**

### **Recommendation (Para No. 7)**

5. In their Twelfth Report, the Committee had observed that the Railways were planning to set up 150 MW Wind Power Plants by 2020 and they had already installed about 36 MW power plants. Taking into consideration the fact that about 72 per cent of total green energy was being contributed by wind energy which was available even at night, the Committee exhorted the Ministry to accord top priority to wind energy and set up the Wind Power Plants by the targeted date.

6. The Ministry, in their Action Taken Note, have stated as under:—

"Provision of 200 MW Wind Power Plants by 2020-21.

One of the reasons of slow progress in wind power is the high transmission cost. This needs to be brought down to make it more viable.

Current Status

Present installed capacity - 37 MW.

Bids invited- 20 MW

Under Planning - 150 MW"

7. The Committee are concerned to find that one of the reasons of slow progress in setting up Wind Power plants is the high transmission cost. As a substantial percentage of total green energy is being contributed by wind energy, the Committee desire that the Railway Board should take up the high transmission cost matter at the appropriate fora so that wind power becomes viable and the envisaged 200 MW Wind Power Plants are installed by 2020-21.

## **II. Energy Efficient Fittings in Stations/Coaches**

### **Recommendation (Para No. 16)**

8. In their earlier Report, the Committee had observed that out of a total number of 8500 Stations, about 1500 stations had already been provided with 100 per cent LED luminaire. The Committee had also noted that instructions had been issued for provision of LED lightings in all the newly manufactured coaches. The Committee had recommended the Railway Board to monitor effective implementation of their instructions.

9. In their Action Taken Note, the Ministry have submitted as under:—

"Out of a total of 8500 stations, about 2469 stations have already been provided with 100% LED luminaire. LED lightings are being provided in newly manufactured coaches."



**10. The Committee note that so far 2469 stations have already been provided with 100 per cent LED luminaire and LED lightings are being provided in newly manufactured Coaches. The Committee impress upon the Railways to make concerted efforts to provide LED luminaire in the remaining 6031 Stations within a definite time frame besides ensuring provision of LED lightings in all the newly manufactured coaches.**

### **III. Green Rating Certification**

#### **Recommendation (Para No. 17)**

**11. In their earlier Report, the Committee had noted that pursuant to the issuance of Policy instructions of the Railway Board towards Green Rating Certification efforts had been initiated to construct convert some Railway establishment into green Buildings. Opining that Green Rating Certification would provide for substantial savings in energy, fuel and water, the Committee had impressed upon the Railways to intensify their efforts for converting maximum possible establishment into Green Buildings.**

**12. In their Action Taken Note, the Ministry have deposed as under:—**

**"Policy for Green Rating Certification for Railway establishments have been issued for all Zonal Railways and not only a few selected Zones. Continuous efforts are being made by Indian Railways in this regard covering different establishments of Railways. At present 2 Production Units, 6 Railway workshops, 2 stations and 1 railway school have already been certified as green."**

**13. The Committee appreciate that Policy for Green Rating Certification for Railway establishments have been issued to all the Zonal Railways as a result of which 11 different establishments have already been certified as green. The Committee would like the Railway Board to evolve an effective monitoring mechanism for assessing the performance of all the Zonal Railways in converting various Railway establishments into Green Buildings so that more Workshops, Production Units, Stations, Schools etc. are certified as green in the coming years.**

### **IV. Separate Budget Allocations for Green Energy Initiatives**

#### **Recommendation (Para No. 20)**

**14. In their Twelfth Report, after observing no exclusive budget allocation for the Green Energy initiatives, the Committee desired that the Ministry should consider the provision of a separate budget allocation for the purpose so as to ensure that no Green Energy initiative was stuck due to want of funds.**

**15. In their Action Taken Note, the Ministry have responded as under:—**

**"Policy guidelines have been issued for provision of 1% of the estimated cost of all new projects for environment related works. At present, this provision is considered sufficient."**

**16. The Committee are not convinced with the reply of the Ministry because prescribing a uniform provision of one per cent of the estimated cost of all new projects for environment related works might either result in accumulation of more funds than the requirement leading to under-utilisation or there might be shortage of funds for the purpose during a particular financial year. The Committee, therefore, are of the considered opinion that based on a scientific study/approach, a specific amount be earmarked for green energy initiatives and utilisation thereof be kept track of so as to enable the Railway Board to take recourse to corrective measures, as and when warranted.**

## **CHAPTER II**

### **OBSERVATIONS/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT**

#### **Recommendation (Sl. No. 1, Para 1)**

The Committee note that Indian Railways are 2.8 times energy efficient for passenger traffic and 12.4 times efficient for freight movement, implying thereby Railways are one of the least polluting modes of transport. In their efforts to reduce carbon emission and make railway operation environment friendly, the Indian Railways are embarking upon a number of measures like Solar Energy, Wind Energy, Water Conservation, Use of Alternate Fuels like Bio-diesel, CNG and LNG, installation of Energy Efficient Equipment, Green Buildings, Tree Plantation etc. The Committee appreciate the commitment of the Railways towards Green Energy initiatives and would like to encourage them to keep up the good work besides exploring more such measures for environment improvement.

#### **Reply of Government**

Noted.

[Ministry of Railways, Railway Board O.M. No. 2015/ RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

#### **Recommendation (Sl. No. 2, Para 2)**

The Committee note that Indian Railways are contemplating to set up grid connected solar power installations of about 1000 MW by the year 2020 by providing solar PV modules as a part of Green Energy initiatives. In this context, the Committee are concerned to find that so far only 14 MW solar power has been installed, leaving 986 MW to be set up in the remaining three years. However, taking note of the assurance of the Chairman, Railway Board in evidence, the Committee trust that the Ministry would take recourse to all requisite and effective measures to ensure that the projected 1000 MW solar power is set up by 2020.

#### **Recommendation (Sl. No. 3, Para 3)**

The Committee note that out of the total 1000 MW of solar power, 250 MW is planned from roof top solar power installations for which instructions have been issued to all the Zonal Managers. Roof top solar systems have already been installed at Katra,

Jaipur and Secunderabad stations and also on the roof top of the Rail Coach Factory at Rae Bareilly besides the Rail Bhavan Headquarters at Delhi. Since adequate space is available at all the major installations of Indian Railways, as submitted by the Chairman, Railway Board, the Committee urge the Ministry to monitor the instructions issued to the Zonal Managers so as to ensure that the projected 250 MW of solar power is obtained from the roof top arrangements by 2020.

### **Reply of Government**

#### **SL Nos. 2 & 3:**

**Provision of 1000 MW Solar Power Plants by 2020-21.**

As part of this, IR will setup solar power plants on roof tops of railway stations, buildings and on railway land as per following:

- 500 MW solar plants on roof tops of railway buildings through developer mode with Power Purchase Agreement (PPA) by Indian Railways which will be used for meeting non-traction loads.
- 500 MW solar plants through land based systems with PPAs to be signed by Indian Railways with developers primarily to meet traction loads.

In total, Railways have installed 20.06 MW Solar power plant upto Sept., 2017 including 500 KW each at Varanasi, Jaipur, Secunderabad and other 260 stations. Moreover orders are already placed for about 130 MW on roof top covering about 2000 stations. These plants are getting installed from Sept., 2017 onwards. Further, for land based solar plants (500 MW capacity), REMCL has planned for it and it is under consideration of Railway Board.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B. K. Singh)

Executive Director Finance (E)

### **Recommendation (SL No. 4, Para 4)**

The Committee note that the cost of installations of a solar plant has come down to Rs. 5 crore per MW, at par with the establishment of a Thermal Plant. The Committee further note that bulk of the solar power that the Ministry intend to source out of the projected 1000 MW will be through a Power Purchase Agreement (PPA) where a private individual establishes a plant and the Railway will source the power from him at a fixed rate over a period of say 25 years. As various State Governments are adopting such arrangements which has resulted in cost effectiveness of power tariff, the Committee endorse the decision of the Railways and believe that the projected solar plants would be installed by the deadline.

### **Reply of Government**

Noted.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Recommendation (Sl. No. 5, Para 5)**

The Committee find that the Railways have a commitment in the Paris Agreement on Climate Control that they have to reduce the carbon footprint and heat intensity by almost 30 per cent. That is possible provided the Railways go in for non-conventional sources of energy for incremental power that they need. In view of the fact that the Government of India, as a policy matter, are supporting it by Viable Gap Funding and Railways have a plan to save around Rs. 40,000 crore over a period of ten years in energy bill through various energy saving measures, the Committee recommend that the initiatives for non- conventional sources of energy should be intensified by the Indian Railways.

### **Reply of Government**

Viability Gap Funding (VGF) from MNRE have been received for 177 MW and VGF is still awaited for 323 MW.

- (i) The savings of Rs. 40,000 Cr. will primarily come from reduction in traction energy cost under open access.
- (ii) However, use of Renewable Energy will also contribute (at a much smaller scale) in this area.
- (iii) The solar progress of railways is depending upon VGF through MNRE, which is being pursued.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 13.10.2017]

Sd/-

(B. K. Singh)

Executive Director Finance (E)

### **Recommendation (Sl. No. 6, Para 6)**

The Committee note that due to non-monetization of carbon credits, the Railways have not been processing the same, as they used to do earlier. However, taking note of 26 the Ministry's submission that sale of 9,462 carbon credits earned from the CDM projects will be made at an appropriate time with the approval of associate finance, the Committee trust that requisite action will soon be taken by the Railways in this regard.

### Reply of Government

Observations/recommendations of the Committee have been noted. Further, Ministry of Railways has earned 13194 Carbon Credits (CERs) so far against the Project "Improving energy efficiency in lighting loads in railway's residential quarters over Indian Railway Zones, Production Units & Workshops by replacing an estimated number of 26 lakh incandescent lamps with compact fluorescent lamps (CFLs) under Clean Development Mechanism", as per details below:

Year	Carbon Credits (CERs)
2013	2571
2014	4888
2015	2003
2016	2233
2017	1499
<b>Total</b>	<b>13194</b>

The prices of Carbon Credits (CERs) have crashed in the international market since 2012.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-  
(B. K. Singh)  
Executive Director Finance (E)

### Recommendation (Sl. No. 7, Para 7)

The Committee note that the Railways have a plan to set up 150 MW of wind mill power plants by 2020 and they have already installed about 36 MW power plants so far. In view of the fact that about 72 per cent of total green energy is being contributed by wind energy which is replacing the coal based power and available even at night, the Committee exhort the Ministry to accord top priority to wind energy and take requisite and effective measures to set up the remaining wind mill power plants by 2020.

### Reply of Government

#### Provision of 200 MW Wind Power Plants by 2020-21

One of the reasons of slow progress in wind power is the high transmission cost. This needs to be brought down to make it more viable.

#### Current Status

Present installed capacity - 37 MW.

Bids invited-20 MW

Under Planning - 150 MW

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Comments of the Committee**

Please see Para No. 7 in Chapter-I.

### **Recommendation (Sl. No. 8, Para 8)**

The Committee are concerned to find that as of now no State Governments/ PSUs have entered into Energy Purchase Agreements (EPAs) with the Indian Railways. It is a matter of equal concern that there are no investment partners in the PPP model for installation/development of wind farms. However, taking into consideration the Ministry's submission that the process for EPAs with some State Governments and tenders for PPP model is in progress, the Committee desire the Railway Board to accelerate the process so that more wind farms are set up and the energy sourced from them is gainfully utilized.

### **Reply of Government**

Railway's have already entered in EPA for about 50MW with long term PPA and 75MW EPA with developers will be signed soon.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance(E)

### **Recommendation (Sl. No. 9, Para 9)**

The Committee appreciate that for water conservation, the Railways are taking a number of measures which *inter-alia* include waste water treatment plants, waste disposal system in workshops, rain water harvesting, water recycling plants, bio-toilets and tree plantation. In this context, the Committee find that at present 28 Waste Water treatment plants are operational treating around 1.26 crore liters of water every day. Similarly, out of the 47 Rolling Stock Workshops, 37 are in compliance with the Pollution Control Board (PCB) approved hazardous waste disposal system. Moreover, 2294 Rain Water Harvesting Systems and 39 Water Recycling Plants have been provided/commissioned. While taking note of the

commendable measures of the Indian Railways towards water conservation, the Committee desire that efforts be made to install more waste water treatment plants, rain water harvesting systems and water recycling plants across the Zones so as to ensure conservation of more water. The Committee also recommend that requisite measures be taken to make the remaining 10 Rolling Stock Workshops conform to the PCB approved hazardous waste disposal system.

### **Reply of Government**

Efforts are being made to provide more waste water treatment plants and rain water Harvesting plants across railways for ensuring conservation of water. During 2016- 17, 39 water recycling plants were commissioned and Rain Water Harvesting facilities on 907 buildings were completed.

At present 40 out of 47 workshops have obtained EMS/IMS certification which includes implementation of PCB approved guidelines. Further remaining 7 workshops are also conforming to norms regarding PCB approved guidelines for disposal of hazardous waste disposal.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31. 10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Recommendation (SL No. 10, Para 10)**

The Committee note that water audits have been carried out in 157 stations/ centres under various Zonal Railways, except Southern Railway. The Ministry have subsequently clarified that at 11 locations in Southern Railway water audit has been completed and in 14 more locations it is being done. Since water audits help in detecting misuse/wastage of water enabling the Zonal/Divisional Railways to take remedial/corrective action, the Committee urge that water audits be carried out in more stations/centres including the remaining 14 locations at Southern Railway.

### **Reply of Government**

Water Audit for balance 14 locations of Southern Railway has also been completed as on Sept., 2017.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31. 10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)



**Recommendation (Sl. No. 11, Para 11)**

The Committee note that the target for fitment of bio-toilets in coaches has been 30,000 during 2016-17 out of which 23,000 bio-toilets have already been installed. The target for 2017-18 is 40,000 bio-toilets. Since all new coaches which are being manufactured will come out with bio-toilets, the Committee impress upon the Railways to accelerate the process of retro fitment of bio-toilets in all the old coaches so that the mission is accomplished as per target.

**Reply of Government**

During 2016-17, Indian Railways have installed 34,134 bio-tanks in the passenger carrying coaches against the target of installation of 30,000 bio-tanks. In current financial year 2017-18, 24,215 bio-toilets have been installed till 30.09.2017 and the target of installation of 40,000 bio-toilets will be achieved. The process of retrofitment of bio-toilets in entire coaching fleet of Indian Railways has already been accelerated and earnest efforts are being done to accomplish the mission as per target.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance(E)

**Recommendation (Sl. No. 12, Para 12)**

The Committee are pleased to note that during the year 2016-17 (as on 31 January, 2017), as many as 1.18 crore saplings have been planted in 39542 hectares of railway land, as a part of Railway's commitment towards environmental improvement. In this context, the Committee observe that with a view to enhancing afforestation, the Ministry have finalised a model agreement to be entered by the Zonal Railways with the State Forest Departments in consultation with the Ministry of Environment and Forests. The Committee are of the considered view that it is a step in right direction and should be persisted with so that afforestation is enhanced for environmental improvement as well as to safeguard the precious Railway land against unauthorized occupation/encroachment.

**Reply of Government**

Noted.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance(E)

### **Recommendation (Sl. No. 13, Para 13)**

As per a decision taken in the year 2015, the Railways are blending five per cent bio-diesel with the conventional normal high speed diesel in their Rail Consumer Depots (RCDs) with a view to saving fossil fuel and precious foreign exchange substantially. In this context, the Committee find that out of the total number of 300 RCDs, blending facility has been provided in 48 RCDs and such facility is proposed to be provided in 80 more RCDs during 2017-18. According to the Chairman, Railway Board, earlier the thinking was that by blending bio-diesel, the overall cost of energy or fuel will go down which has not really happened. But as per the policy of the Government of India, the Railways are blending five per cent bio-diesel from the environmental point of view and to save the fossil fuel, which according to the Committee is a prudent action. The Committee, therefore, recommend that blending of bio-diesel in the remaining 252 RCDs be initiated at an early date from the environmental point of view, quantum of savings on energy bill notwithstanding.

### **Reply of Government**

Zonal Railways are facing problem of inadequate supply of bio-diesel due to high fluctuations in international prices of feed stock for bio-diesel and high taxation over the same. Notwithstanding, Blending facility has so far been provided in 63 RCDs. This shall be extended to balance RCDs in due course.

[Ministry of Railways, Railway Board O.M. No. 2015/11.CC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Recommendation (Sl. No. 14, Para 14)**

The Committee note that because of limited availability of bio-diesel and highly volatile nature of its prices, the speed of blending bio-diesel has suffered a setback. In order to overcome the impediments, the Railways are proposing to set up two bio-diesel manufacturing plants at Tondiarpet (Chennai) and Raipur (Chhattisgarh). While the Tondiarpet Plant is expected to commence production in 2017-18, the Raipur Plant contract is under finalisation. The Committee impress upon the Ministry to expedite the finalisation of the Raipur Plant contract besides exploring the feasibility of setting up of similar plants at other places so that the basic constraints are tackled and blending of bio-diesel progresses as per planning.

### **Reply of Government**

Bio-diesel plant at Tondiarpet is planned to commence production in 2017-18. The contract for bio-diesel plant at Raipur has been awarded. After the

successful commissioning of these two plants, the feasibility of setting up similar plants shall be explored.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)  
Executive Director Finance (E)

#### **Recommendation (Sl. No. 15, Para 15)**

The Committee note that Indian Railways have already started running four CNC based cars on two DEMUs on Northern Railway and proposed to convert a total of 100 DEMUs to run on dual fuel *i.e.* CNG and Diesel. Out of these 100 DEMUs, 17 DEMUs have been converted to dual fuel mode. In view of the CNG's environment friendly character and cost effectiveness, the Committee call upon the Ministry to make efforts for converting the remaining targeted 87 DEMUs to dual fuel mode in a time bound manner. The Committee also desire that requisite measures be taken in unison with other appropriate Departments to develop suitable technology for use of LNG on Diesel Locomotives.

#### **Reply of Government**

In first phase, contract awarded for conversion of 25 DPCs out of which 21 DPCs have been converted into CNG based dual fuel engines. Tender has been invited for converting 30 nos. more DPCs into CNG based dual fuel engines. Tender has also been invited for conversion of 10 Nos. DPCs into LNG based dual fuel Engines. Timelines have been finalized for development of LNG locomotives. The first such prototype is expected to be rolled out within 2 years.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)  
Executive Director Finance (E)

#### **Recommendation (Sl. No. 16, Para 16)**

Energy efficient fittings in Stations/Coaches is another important Green Energy initiative undertaken by the Indian Railways. In this context, the Committee find that out of a total number of 8500 stations, about 1050 stations have already been provided with 100 per cent LED luminaire. Further, instructions have been issued for use of LED lightings in all newly manufactured coaches in various production units including EMU/MEMUs and Kolkata Metro Coaches. The Committee recommend that the Railway Board should monitor the effective implementation of their instructions so as to ensure that the remaining 7450 stations and all the newly manufactured coaches are fitted with energy efficient LED lightings within a definite time line.

### **Reply of Government**

Out of a total of 8500 stations, about 2469 stations have already been provided with 100% LED luminaire. LED lightings are being provided in newly manufactured coaches.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Comments of the Committee**

Please see Para No. 10 in Chapter-I.

### **Recommendation (Sl. No. 17, Para 17)**

The Committee appreciate that the Railway Board have issued 'Policy instructions' for undertaking Green Rating Certification for different types of Railway establishments. As a result, efforts have been initiated to construct/convert some establishments under North East Frontier Railway, South East Central Railway, East Central Railway etc. into Green Buildings. As the Green Rating Certification endorses various parameters having direct relation to environment improvement, the Committee impress upon the Railways to intensify their efforts for converting maximum possible establishments into Green Buildings which would provide for a substantial savings in energy, fuel and water besides establishing the image of Indian Railways as a 'Green Organization'.

### **Reply of Government**

Policy for Green Rating Certification for Railway establishments have been issued for all Zonal Railways and not only a few selected Zones. Continuous efforts are being made by Indian Railways in this regard covering different establishments of Railways. At present 2 Production Units, 6 Railway workshops, 2 stations and 1 railway school have already been certified as green.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Comments of the Committee**

Please see Para No. 13 in Chapter-I.

### **Recommendation (Sl. No. 18, Para 18)**

The Committee note that so far, 643 energy audits have been carried out across Indian Railways at different places/installations subsequent to which the findings/recommendations are being implemented. The Technical Directorates in Railway Board regularly monitor the progress of various Green Energy initiatives including Energy Audits on periodic basis. In view of the import of energy audits to suggest corrective measures towards energy saving, the Committee exhort the Railways to conduct more such audits periodically. The Committee further desire the Railway Board to issue policy directives for a separate performance audit of the Green Energy initiatives to have an objective assessment.

### **Reply of Government**

Noted. Instructions for monitoring performance audit of green energy initiatives have already been issued separately to Zonal Railways.

[Ministry of Railways, Railway Board O.M. No.2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **Recommendation (Sl. No. 19, Para 19)**

The Committee note that so far 8 Production Units, 37 Workshops, 25 Diesel Loco Sheds, 4 major Coaching Depots and 2 major Freight Depots have been certified with Integrated Management System/Environment Management System. The Railways are planning to get some more workshops, Diesel Loco sheds, Coaching Depots and Freight Depots certified environmentally by March, 2018. The Committee desire that steps be taken to environmentally certify all the major Railway Workshops, Sheds etc. in a progressive and time-bound manner.

### **Reply of Government**

At present all 8 Production Units, 40 out of 47 workshops and 31 out of 46 diesel sheds have obtained EMS/IMS certification. Since this is a continuous process, the remaining workshops/diesel sheds will also obtain EMS/IMS certification.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

### **CHAPTER III**

#### **OBSERVATIONS/RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES**

—NIL—

## **CHAPTER IV**

### **OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION**

#### **Recommendation (Sl. No. 20, Para 20)**

The Committee note that there is no exclusive budget allocation for the Green energy initiatives. According to the Ministry the need for creating a separate and exclusive budget allotment head is not felt as business-wise the fields of Green Energy is still evolving and some measures are resorted to increasingly through PPA/PPP basis. The Committee would, however, like the Ministry to consider a separate Budget allocation for the Green Energy initiatives so as to ensure that no Green Energy initiative is stuck due to want of funds.

#### **Reply of Government**

Policy guidelines have been issued for provision of 1% of the estimated cost of all new projects for environment related works. At present, this provision is considered sufficient.

[Ministry of Railways, Railway Board O.M. No. 2015/RCC(2014)/204/9  
dated 31.10.2017]

Sd/-

(B.K. Singh)

Executive Director Finance (E)

#### **Comments of the Committee**

Please see Para No. 16 in Chapter-I.

## CHAPTER V

### OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT ARE OF INTERIM IN NATURE

—NIL—

NEW DELHI;  
14 March, 2018  
23 Phalguna, 1939-40 (Saka)

BHARTRUHARI MAHTAB,  
*Chairperson,*  
*Railway Convention Committee.*



## APPENDIX I

### RAILWAY CONVENTION COMMITTEE (2014)

#### MINUTES OF THE FORTY-SIXTH SITTING OF THE COMMITTEE

The Committee sat on Wednesday, the 14th March, 2018 from 1030 hrs. to 1100 hrs. in Room No. 215, Chairperson's Chamber, Parliament House Annexe Extension, New Delhi.

#### PRESENT

Shri Bhartuhari Mahtab — *Chairperson*

#### MEMBERS

##### *Lok Sabha*

2. Shri K. Ashok Kumar
3. Shri Janak Ram
4. Shri Rahul Ramesh Shewale

##### *Rajya Sabha*

5. Shri T.K. Rangarajan
6. Smt. Vandana Chavan
7. Shri Ranvijay Singh Judev

#### SECRETARIAT

1. Smt. Kavita Prasad — *Joint Secretary*
2. Shri M. K. Madhusudhan — *Director*
3. Shri D. R. Mohanty — *Additional Director*

2. At the outset, the Chairperson welcomed the Members to the sitting of the Committee which was convened to consider and adopt three Draft Reports on the subjects (i) Action Taken by Government on the Eleventh Report (Sixteenth Lok Sabha) on Exploring PPP Avenues in Railway Infrastructure; (ii) Action Taken by Government on the Twelfth Report (Sixteenth Lok Sabha) on Green Energy Initiatives in Indian Railways; and (iii) Action Taken by Government on the Fifteenth Report (Sixteenth Lok Sabha) on Safety Provisions at Unmanned Level Crossings. Giving an overview of the important Recommendations contained in the Draft Reports, the Chairperson solicited the views/suggestions of the Members.

3. The Committee then took up for consideration of the said Draft Reports and adopted them after some discussion.

4. The Chairperson thanked the Members for their valuable suggestions and active participation in the deliberations of the Committee.

5. The Committee, then, authorized the Chairperson to finalize the Reports and present the same to both the Houses.

*The Committee then adjourned.*

## APPENDIX II

(Vide Para No. 3 of the Introduction)

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/  
RECOMMENDATIONS CONTAINED IN THE TWELFTH REPORT OF  
THE RAILWAY CONVENTION COMMITTEE-2014  
(SIXTEENTH LOK SABHA)

	Total	Percentage
I. Total number of Recommendations	20	—
II. Observations/Recommendations which have been accepted by the Government: (Para Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19)	19	95
III. Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies: (NIL)	NIL	—
IV. Observations/Recommendations in respect of which replies of the Government have not been accepted by the Committee and which requires reiteration: (Para No. 20)	01	5
V. Observations/Recommendations in respect of which replies of the Government are of interim in nature: (NIL)	NIL	—
Total	20	100%

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