

F.No.815-3/2012-TD
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg, Next to Zakir Hussain College,
New Delhi – 110 002

.....

New Delhi, Dated 18th November, 2013

DIRECTION

Subject: Direction under section 13, read with sub clause (i) of clause (b) of sub-section (1), of section 11 of Telecom Regulatory Authority of India Act, 1997 to implement green technology in the telecom sector and submission of the carbon footprint report.

F. No. 815-3/2012-TD----Whereas the Telecom Regulatory Authority of India (hereinafter referred as the Authority), established under sub-section (1) of section 3 of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997), has been entrusted with discharge of certain functions, *inter alia*, to regulate the telecommunication services; to ensure compliance of terms and conditions of license;

2. And whereas the Department of Telecommunication accepted the recommendation of the Authority on green technology in the telecom sector and vide its letter No. 16-6/2011-CS-III dated the 4th January, 2012 decided to adopt measures to green the telecom sector, setting broad directions and goals to achieve the desired reduction in the carbon emission through the use of renewal energy technology and energy efficient equipments and, directed the National Long Distance service providers to submit to the Authority, carbon footprint of their network operations, twice in a year i.e. half yearly report for the period ending September to be submitted by the 15th November and the succeeding half yearly report for the period ending March to be submitted by the 15th of May each year, in the format prescribed by the Authority **(a copy of the letter is annexed as Annexure I)**;

3. And whereas certain issues regarding the implementation of the green technology in the telecom sector were raised by the associations of telecom service providers which was discussed by the Department of Telecommunication with the said associations and after deliberations the Department of Telecommunication, vide its letter No. 16-6/2011-CS-III dated the 18th September, 2012 and 19th November, 2012, informed the associations that there is no change in the directive issued on the implementation of green technology and directed the telecom service providers to implement the directives as per prescribed schedule and prescribed norms **(a copy of each of the letters are annexed as Annexure-II)**;

4. And whereas the Authority, vide its letter No. 815-3/2012-TD dated the 4th February, 2013, *inter alia*, directed M/s to furnish the requisite compliance of the directions issued by the Department of Telecommunication, referred in para 2 above, and declare the carbon footprint in the format enclosed with the said letter **(a copy of the letter is annexed as Annexure-III);**

5. And whereas the Authority, vide its letter No. 815-3/2012-TD dated the 1st March, 2013, *inter alia*, directed the National Long Distance service providers to furnish by the 15th March, 2013, the carbon footprint report as per the format specified by the Authority **(a copy of the letter is annexed as Annexure-IV);**

6. And whereas the Authority held a meeting with the National Long Distance service providers on the 19th March, 2013 wherein various aspects of carbon foot print reports and voluntary code of practice were discussed and it was decided that the service providers shall furnish to the Authority, compliance report of directions, referred to in para 2, and declare by the 31st March, 2013 positively, the revised carbon footprint report as per the format specified by the Authority;

7. And whereas, pursuant to the meeting, referred to in the proceeding para, the Authority, vide its letter No. 815-3/2012-TD, dated the 15th April, 2013, again asked the service provider to furnish the requisite compliance report and declare the carbon foot print report for the base year 2011-12 and first half yearly report for the year 2012-13 immediately **(a copy of the letter is annexed as Annexure-V);**

8. And whereas the Authority, vide its letter No. 815-3/2012-TD dated the 10th May, 2013, advised M/s..... to furnish carbon footprint report for the year 2011-12 and first half yearly report for the year 2012-13 immediately and also send a soft copy of the same **(a copy of the letter is annexed as Annexure-VI);**

9. And whereas the Authority, vide its letter No. 815-3/2012-TD dated the 16th May, 2013, asked the service provider to furnish the requisite compliance report and declare the second half yearly carbon foot print report for the base year 2012-13 immediately **(a copy of the letter is annexed as Annexure-VII);**

10. And whereas the Authority, vide its letter No. 815-3/2012-TD dated the 28th June, 2013, again directed M/s..... to submit the carbon footprint report for the periods mentioned in the said letter **(a copy of the letter is annexed as Annexure-VIII);**

11. And whereas M/s....., despite several reminders, failed to submit to the Authority the carbon footprint report of their network;

12. And whereas clause 10.1 of license agreement for provision of the National Long Distance License provides that the licensee shall submit information to the Authority as per any order or direction or regulation issued from time to time;

13. Now, therefore, in the exercise of powers conferred upon it under section 13, read with sub-clauses (i) of clause (b) of sub-section (1) of section 11, of the Telecom Regulatory Authority of India Act, 1997, the Authority hereby directs M/s.....:-

- (a) to comply with the provisions of directions dated the 4th January, 2012 issued by the Department of Telecommunications;
- (b) to furnish, within 30 days of issue of this Direction, the carbon footprint report of their network operations in the format annexed with this direction, beginning from the financial year 2011-12;
- (c) to submit the carbon footprint report twice in a year i.e. half yearly report for the period ending September to be submitted by the 15th November and the succeeding half yearly report for the period ending March to be submitted by the 15th of May each year, beginning from the financial year 2013-14; and
- (d) to submit element wise details of calculations of the carbon footprint report in softcopy.

(A. Robert. J. Ravi)
Advisor (TD)

Encl: As above.

To,

National Long Distance service providers
(as per list)

List of the National Long Distance Service Providers

1. M/s Hughes Communications India Ltd.
2. M/s Orange Business Services India Network Pvt Ltd.
3. M/s Pacific Internet India Pvt Ltd.
4. M/s Rail Tel Corporation of India
5. M/s Sify Communication Ltd.
6. M/s Tata Communications Ltd.
7. M/s Telestra Telecommunications Pvt Ltd.

Government of India
Ministry of Communications & IT
Department of Telecommunications
Sanchar Bhawan, 20-Ashoka Road, New Delhi-110001
(Carrier Services Cell)

No. 16-6/2011-CS-III

Dated 04.01.2012

To.

The Secretary
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road)
New Delhi-110002.

Subject: TRAI Recommendations on 'Approach towards Green Telecommunications'.

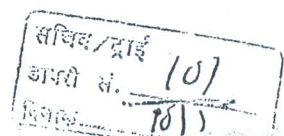
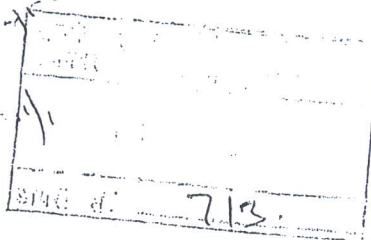
Kindly refer to TRAI Letter no. 305-7/2011-QOS dated 12.4.2011 and 02.09.2011 vide which TRAI has issued recommendations on 'Approach towards Green Telecommunications'.

2. In this regard, it is to intimate that DoT has accepted the TRAI recommendations as revised by TRAI vide letter dated 02.09.2011 and has decided to adopt measures to green the telecommunication sector setting broad directions and goals to achieve the desired reduction in carbon emission through the use of Renewable Energy Technologies and energy efficient equipments as per TRAI recommendations.

3. Accordingly, directions have been issued to the telecom service providers vide letter dated 04.01.2012 for implementation of the same with immediate effect. A copy of the said letter is enclosed as Annexure for information and necessary action.

Encl: A/A

S.T. Abbas
04.01.2012
(S.T. Abbas)
Director (CS-III)



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adit (CS-III)

Government of India
Ministry of Communications & IT
Department of Telecommunications
Sanchar Bhawan, 20-Ashoka Road, New Delhi-110001
(Carrier Services Cell)

No. 16-6/2011-CS-III

Dated 04.01.2012

To.

All NLD Service Providers

Subject: Implementation of Green Technologies in Telecom Sector.

To promote Green Telecommunications, TRAI had issued recommendations on 'Approach towards Green Telecommunications'. Government of India has accepted the TRAI recommendations and decided to adopt measures to green the telecommunication sector setting broad directions and goals to achieve the desired reduction in carbon emission through the use of Renewable Energy Technologies and energy efficient equipments.

2. Accordingly, the following directions are hereby issued to the licensees for implementation with immediate effect:

- (i) At least 50% of all rural towers and 20% of the urban towers are to be powered by hybrid power (Renewable Energy Technologies (RET) + Grid power) by 2015, while 75% of rural towers and 33% of urban towers are to be powered by hybrid power by 2020.
- (ii) All telecom products, equipments and services in the telecom network should be Energy and performance assessed and certified "Green Passport [GP]" utilizing the ECR's Rating and the Energy 'passport' determined by the year 2015.
- (iii) TEC shall be the nodal centre that will certify telecom products, equipments and services on the basis of ECR ratings. TEC may either appoint independent certifying agencies under its guidance or shall certify the same through their Quality Assurance teams. TEC shall prepare and bring out the 'ECR Document' delineating the specifics of the test procedures and the measurement methodology utilized.

(iv) All service providers should declare to TRAI, the carbon footprint of their network operations in the format prescribed by TRAI. This declaration should be undertaken after adopting the formulae and procedures prescribed by TRAI. The Declaration of the carbon footprints should be done twice in a year i.e. half yearly report for the period ending September to be submitted by 15th of November and the succeeding half yearly report for the period ending March to be submitted by 15th of May each year.

(v) Service providers should adopt a Voluntary Code of Practice encompassing energy efficient Network Planning, infra-sharing, deployment of energy efficient technologies and adoption of Renewable Energy Technology (RET) including the following elements:

(a) The network operators should progressively induct carefully designed and optimized energy efficient radio networks that reduce overall power and energy consumption.

(b) Service providers should endeavour to ensure that the total power consumption of each BTS will not exceed 500W by the year 2020 for 2+2+2 configuration of BTS. TEC shall regularly standardize and prescribe specifications for Telecom Equipments of different Technologies with respect to power consumption levels. Service providers should adhere to the TEC specifications in order to reduce the total power consumption of BTS.

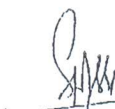
(c) A phased programme should be put in place by the telecom service providers to have their cell sites, particularly in the rural areas, powered by hybrid renewable sources including wind energy, solar energy, fuel cells or a combination thereof. The eventual goal under this phased programme is to ensure that around 50% of all towers in the rural areas are powered by hybrid renewable sources by the year 2015.

(d) Service providers through their associations should consensually evolve the voluntary code of practice and submit the same to TRAI within three months from the date of issue of this letter.

(vi) Service providers should evolve a 'Carbon Credit Policy' in line with carbon credit norms with the ultimate objective of achieving a maximum of 50% over the carbon footprint levels of the Base Year in rural areas and achieving a maximum of 66% over the carbon footprint levels of the Base Year in urban areas by the year 2020. The base year for calculating all existing carbon footprints would be 2011, with an implementation period of one year. Hence the first year of carbon reduction would be the year 2012.

(vii) Based on the details of footprints declared by all service providers, service providers should aim at Carbon emission reduction targets for the mobile network at 5% by the year 2012-2013, 8% by the year 2014-2015, 12% by the year 2016-2017 and 17% by the year 2018-2019.

3. Necessary compliance be reported to DoT and TRAI as mentioned above from time to time.


04.01.2012
(S.T. Abbas)
Director (CS-III)

Copy to:

1. PPS to Member(T).
2. Secretary, TRAI.
3. Advisor(T) / Advisor(O) / Advisor(Finance), DoT.
4. Sr. DDG(TEC), Sr. DDG(BW), Sr. DDG(AS).
5. JS(T), DDG(CS), DDG(DS), DDG(LF-I), DDG(LF-II)

Annexure - II

Dated 18.09.2012

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Any in this regard
Dy. No. 3430
Date 25/9/12

Principal Advisor (NSL)
Dy. No. 753
Date 24/9/12

(iv) The formula to assess the carbon footprint includes the consumption of Grid Power as well as the Power generated through Diesel Generator sets. As the complete footprint of the entire network is to be calculated, it is imperative to include all sources of power other than renewable sources for calculation of carbon footprint. Accordingly, the carbon footprint of the network is due to the emission of carbon content because of consumption of Grid Power and the Diesel Power only.


(v) The formula for calculation of carbon footprint given by TRAI is very simple. To have a benchmark, TRAI has used the rated capacity of the DG Sets in the formula. Finding the quantity of diesel consumed for calculating the carbon footprint shall be a non-standard and non-verifiable method. The carbon footprint of a shared tower site is equally distributed amongst the telecom service providers sharing the site. All these issues have already been explained to the telecom service providers during the workshop organized by TRAI in this regard.

(vi) As per direction issued to all CMTS / UASL / Basic Service licensee, vide DoT letter no. 800-61/2012-VAS dated 23.01.2012, the base year for calculating all existing carbon footprints is the year 2011. Accordingly, all service providers should declare to TRAI, the carbon footprint of their network operations in the format prescribed by TRAI. The carbon footprint should be submitted to TRAI as per prescribed schedule and as per prescribed formula as no revision in the schedule of submission has been made by DoT / TRAI.

(vii) It is hereby clarified that the formula and procedure for calculation of the carbon footprint has already been provided by TRAI and there will be no change in the formula, procedure and prescribed carbon emission targets.

(viii) DoT has no objection to the Renewable Energy Supply Companies (RESCO) model of green power supply. However, it was already clarified in the meeting held on 14.06.2012 that representative of DoT would not be a member of the industry's Multi Stakeholders Committee. The industry may approach BSNL to get a representative included in the committee, as BSNL is also a telecom service provider.

4. Therefore, it is to reiterate that there is no change in the DoT directives on implementation of Green Technologies in Telecom Sector. All the telecom service providers should implement the directives as per prescribed schedule and as per prescribed norms.


18.9.2012
(S.T. Abbas)

Director(Carrier Services-III)
Tel: 011-23722444

Copy to:

- ✓ 1. The Secretary, TRAI for information please.
2. Sr. DDG(TEC), for information please.

Government of India
Ministry of Communications & IT
Department of Telecommunications
Sanchar Bhawan, 20-Ashoka Road, New Delhi-110001
(Carrier Services Cell)

No. 16-6/2011-CS-III

Dated 19.11.2012

To.

The AUSPI, TAIPA, COAI
New Delhi

Subject: Implementation of Green Technologies in Telecom Sector.

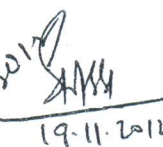
Kindly refer to your letter dated 21.09.2012 seeking a discussion with DoT regarding implementation of Green Technologies in Telecom Sector.

2. I have been directed to state that in a meeting held with the Industry Associations on 14.06.2012 under the Chairmanship of Secretary (T), the associations were asked to make out a workable plan with clearly defined timelines and achievable targets. The industry has not submitted the same till date. Instead, the Industry has raised certain issues vide letter dated 31.07.2012, which have already been clarified to the Industry vide DoT's letter dated 18.09.2012.

3. As the issues have already been deliberated with the Industry at every stage, further discussion may not be desirable now. However, the Industry may submit their points in writing so that the same may be considered by DoT.

4. It may be noted that there is no change in the DoT directives on implementation of Green Technologies in Telecom Sector. All the telecom service providers are required to implement the directives as per prescribed schedule and as per prescribed norms.

Advisor (TD)
Dy. No. 3553
Date 27/11/12


 19.11.2012
 (S.T. Abbas)
 Director (Carrier Services-III)
 Tel: 011-23722444

26/11/12
 Pr. Adv (TD) REP
 22/11/12
 Asst (TD) Sec (TD)

Copy to:

1. The Secretary, TRAI for information please.
2. Sr. DDG(TEC), for information please.

Received today
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(Fax sent to Pr. Adv (TD) on 22/11/12 as it was sent by CP) 22/11/12

भारतीय दूरसंचार विनियमन प्राधिकरण महानगर दूरसंचार भवन, नई दिल्ली-2
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डाकरी सं 6498



भारतीय दूरसंचार विनियामक प्राधिकरण
TELECOM REGULATORY AUTHORITY OF INDIA

महानगर दूरसंचार भवन, जवाहर लाल नेहरू मार्ग (पुराना मिन्टो रोड),
Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg,
नियर डॉ. ज़ाकिर हुसैन कॉलेज, नई दिल्ली-110002.
(Old Minto Road), Near Dr. Zakir Husain College, New Delhi - 110 002.

फैक्स/Fax : +91-11-23213294



सत्यमेव जयते

Annexure-IV 213

F. No. 815-3/2012-TD

Date: 1.3.2013

To,

1. All NLD Service Providers
2. Association of Competitive Telecom Operators (ACTO),
601, Nirmal Tower,
26, Barakhamba Road,
Connaught Place,
New Delhi - 110001

Subject: Compliance in respect of DoT's Direction vide its letter No 16-6/2011-CS-III dated 04.01.2012 for implementation of Green Technologies in Telecom Sector.

Sir,

It is reiterated that as per DoT's direction No 16-6/2011-CS-III dated 04.01.2012, all NLD service providers have to evolve a 'Carbon Credit Policy' in line with carbon credit norms and have to declare to TRAI the carbon footprint of their network operations in the format prescribed by TRAI twice in a year i.e. half yearly report for the period ending September to be submitted by 15th November and the succeeding half yearly report for the period ending March to be submitted by 15th of May each year. The direction of DoT dated 04th January 2012 also mandate the service providers to consensually evolve, through their Associations, a Voluntary Code of Practice encompassing energy efficient Network Planning, infra-sharing, deployment of energy efficient technologies and adoption of Renewable Energy Technology (RET) and submit the voluntary code of practice to TRAI within three months of the date of direction.

2. In accordance with the directions of DoT, vide TRAI's letter No 815-3-2012-TD dated 04.02.2013, all NLD service providers were requested to furnish the requisite compliance in respect of DoT's Direction vide its letter 16-6/2011-CS-III dated 04.01.2012 and declare the carbon footprint (for the year 2011-12 and first half yearly report for the year 2012-13 by 15th November 2012) as per the format prescribed by TRAI. In addition, it was also requested to evolve the voluntary code of practice through associations and submit the same to TRAI.

3. In this regard, carbon footprint report received from some of the service providers are not as per the TRAI's format. TRAI is also yet to receive the voluntary code of practice from service providers. Hence, all the NLD service providers are again requested to submit the voluntary code of practice and carbon footprint report as per the TRAI's format by 15th March 2013 positively.

11/3/2013

(A.R. Gupta)

Sr. Research Officer (TD)

o/L



भारतीय दूरसंचार विनियामक प्राधिकरण
TELECOM REGULATORY AUTHORITY OF INDIA

महानगर दूरसंचार भवन, जवाहर लाल नेहरू मार्ग (पुराना मिनटो रोड),
 Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg,
 नियर डॉ. जाकिर हुसैन कॉलेज, नई दिल्ली-110002.
 (Old Minto Road), Near Dr. Zakir Husain College, New Delhi - 110 002.
 फैक्स/Fax : +91-11-23213294



सत्यमेव जयते

F. No. 815-3/2012-TD

Date: 15.4.2013

To,

NLD / ILD Service Providers
 (As per list)

Subject: Implementation of Green Technologies in Telecom Sector

- Reference:** i) DoT's direction No 16-6/2011-CS-III dated 04.01.2012
 ii) TRAI's letter No 305-7/2011-QOS dated 17.7.2012
 iii) TRAI's letter No. 815-3-2012-TD dated 04.02.2013 & 1.3.2013
 iv) TRAI's letters No. 815-3-2012-TD dated 08.03.2013

Sir,

Please refer to the meeting held in TRAI's Conference Hall on 19th March 2013 on the above mentioned subject.

2. During the meeting, various aspects of carbon footprint reports and voluntary code of practice were discussed. In the meeting, it was decided that the NLD/ILD service providers have to furnish the requisite compliance in respect of DoT's direction and declare the revised carbon footprint report as per the format prescribed by TRAI alongwith voluntary code of practice by 31st March 2013 positively.

3. In this regard, TRAI is yet to receive the carbon footprint report as discussed in the meeting. Therefore, you are advised to furnish the requisite compliance and declare the carbon footprint report for the base year 2011-12 and first half yearly report for the year 2012-13, immediately.

15/4/2013

(A. R. Gupta)
 Sr. Research Officer (TD)



भारतीय दूरसंचार विनियामक प्राधिकरण TELECOM REGULATORY AUTHORITY OF INDIA

महानगर दूरसंचार भवन, जवाहर लाल नेहरू मार्ग (पुराना मिनटो रोड),
Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg,
नियर डॉ. ज़ाकिर हुसैन कॉलेज, नई दिल्ली-110002.
(Old Minto Road), Near Dr. Zakir Husain College, New Delhi - 110 002.
फैक्स/Fax : +91-11-23213294



F. No. 815-3/2012-TD

Date: 10.05.2013

To,

NLD / ILD Service Providers / ISPs
(As per list)

Subject: Implementation of Green Technologies in Telecom Sector

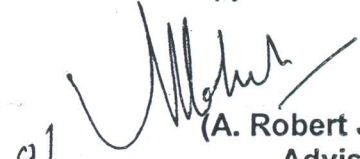
- Reference:**
- i) DoT's direction No 16-6/2011-CS-III dated 04.01.2012 (For NLDs/ILDs)
 - ii) DoT's direction No 800-61/2006-LR (Vol-II)Pt. dated 16.01.2012 (For ISPs)
 - iii) TRAI's letter No 305-7/2011-QOS dated 17.7.2012
 - iv) TRAI's letters No. 815-3-2012-TD dated 04.02.2013 and 1.3.2013
 - v) TRAI's letters No. 815-3-2012-TD dated 08.03.2013 and 15.04.2013

Sir,

Please refer above DoT's direction, TRAI's letters and meetings held on 19.03.2013 & 20.03.2013 regarding implementation of green technologies in telecom sector wherein you were advised to furnish the requisite compliance in respect of above DoT's Direction and declare the carbon footprint (for the year 2011-12 and first half yearly report for the year 2012-13) in the TRAI's prescribed format.

2. In this regard, it is noticed that carbon footprint report for the year 2011-12 and first half yearly report for the year 2012-13 is still awaited inspite of reminders from TRAI.

3. Non-submission of carbon footprint report to TRAI is non compliance of the above said DoT directions and will attract action as stipulated in the TRAI act. You are, therefore, once again advice to furnish the carbon footprint report for the year 2011-12 and first half yearly report for the year 2012-13 immediately and also send a soft copy of the same at tdra.trai@gmail.com.


(A. Robert J. Ravi)
Advisor (TD)



भारतीय दूरसंचार विनियामक प्राधिकरण TELECOM REGULATORY AUTHORITY OF INDIA

महानगर दूरसंचार भवन, जवाहर लाल नेहरू मार्ग (पुराना मिनटो रोड),
Mahanagar Doorsanchar Bhawan, Jawahar Lal Nehru Marg,
नियर डॉ. ज़ाकिर हुसैन कॉलेज, नई दिल्ली-110002.
(Old Minto Road), Near Dr. Zakir Husain College, New Delhi - 110 002.
फैक्स/Fax : +91-11-23213294



F. No. 815-3/2012-TD

Date: 16.05.2013

To,

All NLDs / ILDs / ISPs / CMTS / UASL
/ Basic Service Licensees Including BSNL and MTNL

Subject: Implementation of Green Technologies in Telecom Sector.

- Reference:** i) DoT's direction No 800-61/2012-VAS dated 23.01.2012
(For all CMTS/UASL/Basic Service Licensees including BSNL and MTNL)
- ii) DoT's direction No 16-6/2011-CS-III dated 04.01.2012
(For all NLD Service Providers)
- iii) DoT's direction No 16-6/2011-CS-III dated 04.01.2012
(For all ILD Service Providers)
- iv) DoT's direction No 820-01/2006-LR(Vol-II)Pt dated 16.01.2012
(For all Internet Service Providers)

Sir,

Please refer to the above mentioned DoT's directions issued by the Department of Telecommunications regarding implementation of Green Technologies in Telecom Sector.

2. As per the above directions, all NLDs/ILDs/ISPs/CMTS/UASL/Basic Service Licensees Including BSNL and MTNL have to declare the carbon footprint of their network operations in the format prescribed by TRAI twice in a year i.e. half yearly report for the period ending September to be submitted by 15th November and the succeeding half yearly report for the period ending March to be submitted by 15th of May each year.

3. In this regard, TRAI is yet to receive the second half yearly carbon footprint report of your network operations for the year 2012-13. Therefore, you are advised to furnish the same immediately, as per the format prescribed by TRAI.

16/5/2013
(A. R. Gupta)

Sr. Research Officer (TD)