

**Reliance Communications Limited's Response to the Consultation Paper on
"Approach Towards Sustainable Telecommunications"**

EXECUTIVE SUMMARY

- A. Telecommunications sector in India should not be subject to any obligation like carbon reduction, however; considering global commitments made by the Country, we support the adoption of Green Policy for telecom sector in India.
- B. A light touch regulatory approach needs to be adopted for green technology in telecom sector rather than mandating any particular kind of technology.
- C. The carbon abatement/ reduction in Carbon intensity should be the only target for the Telecom industry. Operators should be allowed to decide the method/ technology best suitable for their networks in achieving the carbon reduction targets.
- D. There are various practical constraints in deployment of RET due to which Renewable energy solutions have not taken off in the substantial manner till now. Therefore, deployment of RET should not be mandated.
- E. Hybrid Power systems i.e. Grid-DG-Battery-RET needs to be encouraged by the Government.
- F. Offset against the electricity generated by RET project funded/maintained by a TSP should be allowed in proportion of the electricity used for energizing telecommunication infrastructure only.
- G. Existing formula should be continued for calculation of carbon footprint in the networks.

$$\begin{aligned} C (\text{TOTAL}) &= C (\text{GRIDPOWER}) + C (\text{DGSET}) \text{ in tonnes of CO}_2\text{e per year} \\ \text{Where, } C (\text{GRIDPOWER}) &= 0.365 (0.84 * P * X) \text{ in tonnes per year,} \\ C (\text{DGSET}) &= 0.365 [(0.528 * Y * Z) / \eta] \text{ in tonnes per year} \end{aligned}$$

- H. As the Grid Emission Factor is estimated to improve over a period of time with use of energy efficient technologies in Grid power generation, we recommend that the Grid Emission Factor should be reviewed downwards every year. In any situation it should not be more than the average value of 0.82 as mentioned by TRAI in the CP.
- I. In case the above is not possible, we recommend that the usage of Grid Power should not be considered for calculation of carbon footprint. This will ensure that emissions of other sectors are not counted towards the telecom sector.
- J. There is no need for setting any accuracy or threshold level as the information used for calculating carbon footprint is taken from audited/ auditable sources like invoices from tower owners like IP-1/ TSPs.
- K. Third party audit for determination of carbon footprint is not required once there is a commonly agreed methodology and data is derived from the audited sources.

- L. Since the targets are on annual basis, annual reporting is recommended for the same.
- M. Carbon Intensity should be prescribed on per unit of traffic 'Exabyte' basis to cover both voice and data. Formula for the same can be prescribed as:
$$C \text{ (Total) per Unit Traffic} = C \text{ (Total)} / T \text{ in tones Co2e per unit Exabyte}$$
- N. Government should provide Power to the cell-sites at the Industrial rates on priority basis.
- O. Government should also introduce fuel subsidies for operators either through USOF or any other alternative mechanism till electricity Board connections become available at Industrial rates.
- P. Government should consider rebate of 1%, 2% and 3% in USOF contribution, on subsequent years of achieving the Carbon Reduction Targets by a TSP.

PREAMBLE

We welcome the consultation paper issued by the TRAI for seeking stakeholder's views on the issue of Approach towards Sustainable Telecommunications. This paper was long awaited by the stakeholders like us who were largely impacted by the DoT's direction of year 2012 which required Service providers to deploy Renewable Energy Technologies (RET) on the basis of TRAI recommendations on the matter.

Industry has been in continuous dialog with DoT & TRAI on the requirements which are impractical to implement due to various technical and financial challenges. DoT finally constituted an Inter-Ministerial Committee for Implementation of Renewal Energy in Telecom Sector having participation from other Ministries including MNRE, Industry Associations, RESCO companies, Individual Organizations, which submitted its report to DoT. Based on the findings and recommendations of the Committee, DoT has sought TRAI's recommendations on the matter. In this regard, we would like to make following submission for your kind consideration before presenting our response to the specific issues raised in the Consultation paper.

Provisions under NTP-2012 for Green Telecom Policy and Deployment of RET

1. One of the objectives enunciated under NTP-2012 regarding RET is:

Enhanced and continued adoption of green policy in telecom and incentivize use of Renewable energy sources for sustainability.

The strategy proposed to be adopted for achieving this objective is as under:

*To **facilitate** increased use of alternative sources (Renewable Energy Technologies) of energy for powering telecom networks through active participation of all the stakeholders – the government, the telecom industry and the consumer for green telecommunications. Sector specific schemes and targets for promotion of green technologies will be finalised in consultation with Ministry of New and Renewable Energy (MNRE) and other stakeholders.*

2. Objectives and Strategies as mentioned above clearly shows that the **intent of the policy was never the adoption of green telecommunications through mandating deployment of RET in the sector**. Considering various factors such as ecosystem of Renewable energy technologies, technical feasibility for their deployment, technological advancements and availability of other viable sources of energy, we believe that a **light touch regulatory approach needs to be adopted to promote adoption of green technology in telecom sector rather than mandating any particular kind of technology or deployment such as RET**.

Need for Green Telecom Policy

3. It is important to note that as per estimates shared by TRAI in CP, ICT sector worldwide is responsible for around 2% of global GHG emissions and for only 0.7% of global carbon emissions which is very low as compared to other sectors like transportation and construction. Further, **India's ICT sector in India contribution only 0.38% the global Carbon footprint. If we consider only Telecommunication sector out of entire ICT which also includes other related sectors such as IT & ITes, e-Commerce etc, the share of telecom in India in carbon emission would be very negligible.**
4. In view of this present situation, we strongly advocate that **ideally telecommunications sector in India should not be subject to any such obligation or target like carbon reduction, however; considering global commitments made by the country, we support the adoption of green policy by India for achieving energy efficiency in the telecom sector**. This not only indicates our efforts towards global commitments but also provides an effective tool for ongoing energy, environmental and cost management.

Single Target based Objectives of Green Telecom Policy

5. DoT vide its Direction of January, 2012 prescribed multiple targets for the industry which includes the target on reduction in carbon intensity (17% by FY 2019), Implementation of RETs by 2015 and 2020, Carbon Credit Policy, Green Passports for all telecom equipment and services.
6. While the ultimate objective of the Green telecom policy is to reduce carbon footprint reduction of the sector, various ways and means were prescribed for achieving the same objective. **We believe that a consolidation of emission reduction target will enable the operators to adopt a focused and cost effective approach towards emission reduction**. This will also be in line with the recommendations of the IMC Committee to DoT that the *“Overall objective of Green Telecom policy should be to achieve the overall carbon reduction targets”*.
7. In view of the above, we recommend that **the carbon abatement/ reduction in Carbon intensity should be the only target for the Telecom industry to achieve the objective of Carbon Emission reduction**.

RET should not be Mandated

8. As per the license conditions, a **telecom operator needs to maintain a network availability higher than 99.5%**. To ensure this benchmark, there is a need of availability of 24x7 power supply at all areas of operations; however, the same is not available. In order to meet network availability benchmark, DG sets and back up batteries have been installed by operators to ensure required energy supply for telecom towers. **Diesel used on the telecom towers is the last preference due to commercial and operational considerations.**
9. **In spite of the compulsion for using Diesel, Industry is vary of its increasing use in the sector and already adopting various initiatives/ methods to reduce its consumption. Some of these various initiatives includes infrastructure sharing, outdoor BTS, Battery improvement, deployment of RET, Distributed antenna system, Free cooling units etc.** Amongst the 12 sectors consuming diesel and considered as a part of the study by MoPNG in 2013, telecom towers are amongst the lowest sectors in diesel consumption.
10. Based on TRAI recommendations, DoT vide its Direction in January 2012, mandated deployment of RET. It is highlighted by us in the past that **there are various constraints in deployment of RET due to which Renewable energy solutions have not taken off in the substantial manner till now.** A PwC study in 2014 examined various RET choices for deployment in telecom sector and revealed the following:
 - a. Solar solutions offer the best ranking in terms of applicability to telecom towers. The technology for implementation is mature and supply chain exists to take on larger implementation. O&M for the technology is the missing link in the supply chain.
 - b. Biomass technology is in nascent stage for off-grid micro installations. In the coming times also biomass technology will remain concentrated in states with fuel availability. As of yet biomass solutions have not been implemented on a large scale on telecom towers.
 - c. Newer technologies like Fuel Cell, Fossil Diesel and Wind etc currently offer marginal scope for implementation and will need further evaluation as their supply chain improves and commercial solutions are available.

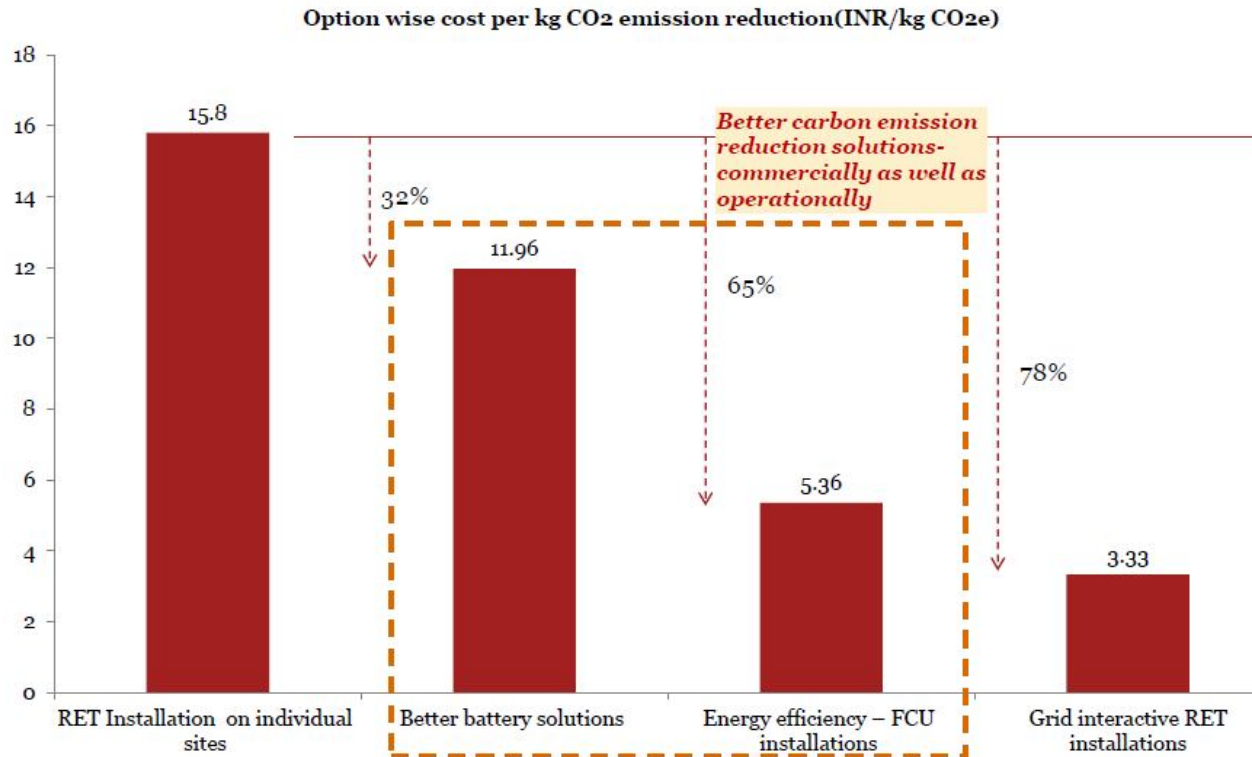
Details of its findings are reproduced below for more details:

Choice of RETs - Comparison of RETs for telecom implementability

Green Choice	Stage of Adoption	Resource potential	Barriers for adoption	Risks of adoption
Solar	Commercial	High	<ol style="list-style-type: none"> 1. High initial CAPEX 2. Space requirements 3. Scarcity of external funding 	<ol style="list-style-type: none"> 1. Operational risk in terms of local challenges in theft and breaking of solar panels 2. Reliability issues due to variation in weather
Wind	Pilot	Coastal Regions	<ol style="list-style-type: none"> 1. Reliability of power generation 2. Low scalability 3. High investment 	<ol style="list-style-type: none"> 1. Operational risk in terms of variability in wind speeds and unreliable power generation characteristics
Biomass	Pilot	Medium	<ol style="list-style-type: none"> 1. Operational complexity 2. Supply challenges 3. Pre-pilot stage and unproven operational feasibility 	<ol style="list-style-type: none"> 1. Biomass supply and sustainability 2. Reliability issues due to breakage in supply links
Fuel Cell	Pre-Pilot	Medium	<ol style="list-style-type: none"> 1. High initial CAPEX 2. Hydrogen fuel supply 3. OPEX Savings not yet established 	<ol style="list-style-type: none"> 1. High replacement cost of fuel cells 2. Reliability of fuel supply
Pico-Hydro	Pre-Pilot	Untested	<ol style="list-style-type: none"> 1. Low market awareness 2. Availability of water body close to tower locations 3. Cost of technology 4. Regulatory clearance 	<ol style="list-style-type: none"> 1. Operational risks associated with limited knowledge and readiness

11. Further analysis revealed that due to various technical and operational constraints, it is not feasible to implement RET based solutions on more than 90% of the telecom towers. Some of such constraints include, roof top towers, sensitive areas issues, non-standard towers such as poles etc and other operational issues. Even out of the remaining towers, only around 50% were found to be feasible commercially with very huge amount of CAPEX requirements making such deployments unsustainable for the operators.

12. Further to the above, it also examined various modes of reducing carbon footprints and estimated the cost per Kg Co2 emission reduction from various modes. For a standard telecom tower, distributed RET installations are most expensive per kg CO2 of emission reduction. Battery solutions along with FCU installations offer better solutions at similar investments. Depiction below clearly shows that solutions such as battery banks & FCUs etc gives better results and are more economic than RET deployments.



13. We are of the view that any policy for green telecommunications will bring suitable results only when it provides flexibility to the service providers to choose the best fit method for their operations. We strongly believe that a policy of carbon abatement through parameters such as carbon credits, overall reduction in carbon footprint etc will be a better policy option for the Government rather than RET deployment targets.
14. Further, it is on record and also acknowledged by TRAI in CP that the **Carbon footprints of the industry has reduced significantly over a period of time since 2011-12 on overall basis and also on individual service provider basis.**
15. Therefore, we recommend that the **operators should be allowed to decide the method/ technology best suitable for their networks in achieving the carbon reduction targets and any particular mode of deployment such as RET should not be mandated.**

Methodology for Calculation & Reporting of Carbon Footprint of a Network

16. Existing formula for calculating carbon footprint is as under:

$$C \text{ (TOTAL)} = C \text{ (GRIDPOWER)} + C \text{ (DGSET) in tonnes of Co2e per year}$$

Where, C (GRIDPOWER) = 0.365 (0.84*P*X) in tonnes per year,
 C (DGSET) = 0.365 [(0.528*Y*Z)/η] in tonnes per year

17. We understand that this existing formula is in line with ITU-T recommendations and considers only the direct sources of emissions i.e. those emissions which are in direct control of the service providers like the amount of usage of electricity and diesel. Therefore

we feel that the existing formula should be continued for calculation of carbon footprints in the networks.

18. **However, the assumption of Grid emission factor as 0.84 tonnes of Co2e/MWh in the above formula needs attention of TRAI.** The emission factor is defined as a measure of Co2 emissions intensity per unit of electricity generated in the grid system. **As the Government has already mandated power generation sector to bring in more energy efficient technologies for generating power with an intention to reduce their contribution to GHG emissions, the emission factor should improve over a period of time and the same should also be taken into consideration while quantifying carbon emission for telecom sector from usage of Grid power.**
19. **We recommend that the Grid Emission Factor should be reviewed downwards every year. In any situation, it should not be more than average value of 0.82 as mentioned by TRAI in the CP.**
20. **In case the above is not possible, we recommend that the usage of Grid Power should not be considered for calculation of carbon footprint. This will ensure that emissions of other sectors are not counted towards the telecom sector.**
21. On the reporting front, the formulae in practice for calculating and reporting carbon footprint is annual in nature and the reporting is biannual in nature. **We recommend that annual reporting is prescribed for removing this anomaly. Carbon Intensity should also be prescribed on per unit of traffic basis to cover both voice and data i.e. averaging across total amount of traffic carried by the network during the year.**

[Our response to the specific questions raised by TRAI in Consultation Paper is as under:](#)

Q1. What accuracy level may be set for collecting the data and also, what should be the basis for arriving at this threshold level? Please comment with justification.

RCOM's Response:

1. As per the current practice the Electric Supply in kWh and Diesel consumption in litres are determined by using the invoice values and the tariff cards of Electricity and Diesel. **The invoices are raised by the IP1/tower owner w.r.t. Grid Power & Diesel and respective Tariff Cards are taken from the published data of respective Electricity Distribution companies and Oil Marketing Companies.**
2. Since these are audited financial figures and the derived value of Electricity and Diesel are fairly accurate, **there is no necessity to set a threshold limits.**

Q2. Is there a need for auditing the carbon footprint of a telecom network by a third party auditor? If yes what is the mechanism proposed? Please comment with justification.

RCOM's Response:

1. We are of the view that **there is no need for having the third party audit for determination of carbon footprint. Once there is a common and agreed methodology in the industry**, the results and reports are more credible. For a common approach, it is desired that a standardized methodology is adopted.
2. The information required for determination of the Carbon footprint such as the units EB consumed, DG run hours, power capacity of DG set are taken from respective audited/ auditable sources as mentioned in response to Q1 above.

Q3. Do you agree with the given approach for calculating the carbon footprint? If not, then please comment with justification.

RCOM's Response:

We agree with any approach for calculating the carbon footprint subject to the following submission is considered:

1. Since the data for calculation of carbon footprint is taken from audited/ auditable sources, third party audit should not be required. A mutually agreed standardized formula should be adopted to ensure uniformity and credibility of calculation and reports.
2. Any particular solution for carbon emission such as RET should not be prescribed/ mandated.
3. Emissions from usage of renewable energy sources to be taken as Zero.

Q4. Whether the existing formulae for calculation of Carbon footprints from Grid (given in paras 1.16, 1.17 and 1.1.8) of Chapter I need to be modified? If so, please comment with justification.

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Q5. Which emission factors as mentioned in Table 1.2 of Chapter I need to be used for the calculation (Average/OM/BM/CM)? Is there any other factor(s) needs to be considered in the calculation? Please comment with justification.

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Q6. Is the formula mentioned in para 1.22 of Chapter I suitable for calculation of Carbon footprints from Grid supply? Please comment with justification.

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Q7. Which of the formula, (i) or (ii) as given in para 1.23 of Chapter I is to be used for the calculation of carbon footprints from the Diesel generator along with views on

possible values of 'power factor of DG set' and 'efficiency factor of DG set'. Please comment with justification.

RCOM's Response:

1. As already mentioned in the previous sections, we suggest that the **existing formula should be continued for calculation of carbon footprint** in the networks. Existing formula as prescribed by the TRAI is as under:

$$C \text{ (TOTAL)} = C \text{ (GRIDPOWER)} + C \text{ (DGSET)} \text{ in tonnes of CO}_2\text{e per year}$$

Where, C (GRIDPOWER)= 0.365 (0.84*P*X) in tonnes per year,
C (DGSET) = 0.365 [(0.528*Y*Z)/η] in tonnes per year
2. However, **the assumption of Grid emission factor as 0.84 tonnes of Co2e/MWh needs consideration of TRAI**. We believe that the emission factor will improve over a period of time and the same should also be taken into consideration while quantifying carbon emission for telecom sector from usage of Grid power.
3. **We recommend that the Grid Emission Factor should be reviewed downwards every year. In any situation, this should not be more than the average value of 0.82 mentioned by TRAI in the CP.**
4. **In case the downward review as suggested above is not possible, we recommend that the usage of Grid Power should not be considered for calculation of carbon footprint.**
5. On the reporting front, the formulae in practice for calculating and reporting carbon footprint is annual in nature and the reporting is biannual in nature. **We recommend that annual reporting is prescribed for removing this anomaly.**

Q8. For calculation of average carbon footprint, which of the options mentioned in para 1.25 of Chapter I is to be used? Please comment with justification.

RCOM's Response

1. Since the future networks are going to be data converged networks, we recommend that average carbon footprint of the telecom network should be calculated by **averaging across total amount of traffic carried**. Formula for the same as suggested by TRAI in CP is appropriate.

$$C \text{ (Total) per Unit Traffic} = C \text{ (Total)} / T \text{ in tones Co}_2\text{e per unit Exabyte}$$

Where, T = traffic carried by telecom network in 'Exabytes'

Q9. What are the options available for renewable energy solutions which may be harnessed to their maximum potential to power the telecom sector? Please comment with justification.

RCOM's Response

1. Renewable energy domain presents an exciting array of solutions. **Each possibility requires careful analysis with respect to their strengths, limitations, applicability to the unique requirement of telecom towers in terms of supply chain, past experience, maturity of solution etc.**
2. In view of the reasons explained in preamble above, **we recommend that at present, Hybrid Power systems i.e. Grid-DG-Battery-RET needs to be encouraged by the Government** rather than prescribing/ mandating any particular solution for implementation at telecom towers.
3. **Hybrid Power Systems uses the best of energy sources and ensure quality and stable power supply. This will ensure that the solutions deployed by the industry in achieving targets are technologically and commercially sustainable.**

Q10. If electricity generated by a RET project (funded/ maintained by TSP) is also used for community, should it be subtracted from overall carbon emission of a TSP? Please comment with justification.

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Q11. If the RET project is funded/ maintained by other agency, should that emission be counted? Please comment with justification.

RCOM's Response

1. **Offset against the electricity generated by RET project funded/maintained by a TSP should be allowed in the proportion it is being used for energizing telecommunication infrastructure.**
2. **Same should also be applicable in case RET project is run by other agencies and TSP are just the end user of it.**

Q12. Please comment with justification on the approach suggested by the DoT committee.

RCOM's Response

1. **Our para-wise response to the recommendations made by the DoT Committee is as under. Justification for our comment is already discussed in the preamble part of our response.**

S. No.	Committee Recommendations	RCOM's submission
1.	The overall objective of a green telecom policy should aim towards reducing the diesel consumption of the telecom	a. Single target based Green Telecom policy with an aim to reduce overall carbon footprint is required.

	networks and achieving the overall carbon reduction targets for the mobile network at 8% by the year 2014-15 and 17% by the year 2018-19 from base year 2011-12.	b. Means for achieving the same should not be prescribed/ mandated. c. There is no need for the separate target for deployment of the RETs.
2.	The methodologies for measuring carbon emission should be aligned with international practices.	
3.	The directives issued by DoT in 2012 may be calibrated taking into account current status of RET deployment & learnings and significant changes in technologies including optimum energy solutions now available for telecom networks.	
4.	In new mobile tower installations, the backup power to grid shall be based on Energy Efficient solutions/ RET power to the extent feasible such as to make the site diesel free.	a. Overall reduction in Carbon Footprint of entire network should be the only target.
5.	In urban areas, the outdoor BTS installations should be made diesel free to the extent feasible with required capacity of efficient storage battery backup and RET systems.	a. We are okay with the Recommendation; however there should not be any targets for deployment of RETs.
6.	In the first phase, the Non-EB (Non-Electricity Board) sites & the sites having grid power availability up to 8 hours and DG set more than 5 years old may be converted to RET by 2015-16.	a. Deployment of RET or any particular solution should not be mandated. b. TSPs should be allowed flexibility to adopt best suited method for running their network.
7.	The diesel free sites that contribute to the overall objective of reducing diesel consumption in telecom networks may be recognized as contributing towards the overall objective of the policy.	a. We agree with the Recommendation.
8.	Telecom Service Providers (TSP) and Internet Service Providers (ISP) may optimize their power requirements by adopting more energy efficient strategies in the BTSs and ensure that the total power Consumption of each BTS does not exceed 500 W by the year 2020 for 2+2+2 configuration of BTS.	a. In an effort to reduce carbon emission and the cost of operations, TSPs are already adopting such measures.
9.	In line with the objective of National Telecom Policy 2012, use of outdoor DAS (Distributed Antenna Systems) in uncovered, isolated, scattered and small locations including buildings is recommended.	a. We agree with the Recommendation.
10.	Active sharing of network infrastructure,	

	which involves the sharing of antennae systems, backhaul transmission systems and base station equipment, is recommended as this will allow operators to save an additional 40% beyond available savings from passive infrastructure sharing.	
11.	All projects being implemented with funding from USOF should be powered by Grid/RET only.	<p>a. We <u>disagree</u> with the recommendations</p> <p>b. TSPs should be allowed to adopt Hybrid power systems in USOF funded projects also to bring cost efficiencies.</p> <p>c. USOF has allowed Hybrid installations under the tender being issued by the DoT for North Eastern region.</p>
12.	The industry may compile the location of all tower sites with Latitude/Longitude. Other details, such as electrification status of the site, broad data of the cluster i.e. diesel consumption, RET power generated, if any etc. may be collected and this information may be provided to DoT TERM for creating a database within six months	a. This exercise requires a detailed analysis among stakeholders who may deliberate on related issues and timelines etc.
13.	The industry shall develop a monitoring & management system for efficient monitoring, controlling and optimizing the use of power consumption in to the network.	a. TSPs themselves are vary of their cost and are already equipped with such facilities required for optimizing cost of their networks.
14.	A web based Centralized Energy monitoring system needs to be developed in DoT for monitoring of various parameters and generation of reports.	a. We do not envisage any such requirement
15.	TERM cells need to monitor compliance of RET objectives of DOT.	a. Not required in view of explanations given in sections above.
16.	The committee is, however, of the view that the penalty should not be linked to achievement of RET target at present	<p>a. Agree on the recommendation. Government should adopt light touch regulation for Green Telecom policy.</p> <p>b. There should <u>not</u> be any penalty provisions under the policy.</p>
17.	In order to ensure that RET adoption in telecom networks is viable and sustainable, the service providers may adopt cluster based, long term agreements indexed to Total Cost of Operation (TCO) where-ever implementation of RET is through	<p>a. There should not be any targets for deployment of RETs.</p> <p>b. Such an arrangements should be left to the discretion of TSPs.</p>

	Renewable Energy Service Companies (RESCOs) or power management companies.	
18.	In order to enable industry to access resources for deployment of RET power solutions, DoT should facilitate in processing the industry's proposals for financial assistance, if required under various government schemes such as MNRE cluster based scheme for providing micro-grids and mini-grids with telecom as anchor load and Ministry of Power capital subsidy scheme under Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY).	a. We agree with the Recommendation. This may be examined on case by case basis.
19.	In the event of a proposal being received from industry, the Government may consider support through (National Clean Energy Fund) NCEF or bilateral financing agencies like World Bank or (Asian Development Bank) ADB to fund capital requirements for green telecom initiatives.	
20.	For realizing the impact of inclusion of Telecom as an Infrastructure sub-sector in the harmonized master list, the benefits for accelerated depreciation and concessional loans with longer tenure may be extended to telecom companies, so that the Service Providers qualify for claiming depreciation on the capital cost of PV system with associated tax benefits. This would support in faster deployment of RET in telecom sector.	
21	The Committee while taking into consideration the objectives of NTP- 2012 (National Telecom Policy) which inter-alia includes enhanced and continued adoption of green policy in telecom and incentivization of the use of renewable resources for sustainability, recommends that performance based incentives be provided to telecom licensee/ operators who deploy RET solutions in their networks.	a. We agree with the Recommendation; however the incentives or rebate in license fee should be linked with over carbon reduction. b. RET should not be the criteria for incentivization.
22	The Committee recommends a rebate of 1%, 2% and 3% in license fees in the financial year subsequent to installation to licensees (TSPs) which deploy RET solutions in 20%, 35% & 50% of their total BTS's in India respectively.	

Q13. For effective implementation of RET/Energy efficient solutions in telecom sector, how can the industry be supported? Should incentives be provided to licensees (TSPs)? If yes, what should be the milestone? Please comment with justification.

RCOM's Response

1. Industry is already doing all possible efforts in deploying Energy efficient solutions in their networks without seeking financial or any other support from the Government.
2. Government should provide Power to the cell-sites at the Industrial rates on the priority basis.
3. Government should also introduce fuel subsidies for operators either through USOF or any other alternative mechanism as may be deemed appropriate e.g. differential tax structure to the telecom operators to provide Telecom services to such areas, till electricity Board connections become available at Industrial rates.
4. Similar to the recommendations by DoT Committee, DoT should consider rebate of 1%, 2% and 3% in USOF levy, on achieving the Carbon Reduction Targets by the TSPs.

Q14. What methodology can be proposed for setting new Renewable energy targets in the telecom sector? What should be the timeframe for achieving these targets? Please comment with justification.

RCOM's Response:

1. **We recommend that there is no need for setting any Renewable Energy targets in the telecom sector.** Any target and timeline if required at all should be prescribed only for carbon footprint/ carbon intensity reduction.
2. **Operators should be allowed to decide the method/ technology best suitable for their networks in achieving the carbon reduction targets** and any particular mode of deployment such as RET should not be prescribed/ mandated.