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THE ELECTRONIC AND POSTAL COMMUNICATIONS ACT  
(CAP.306)

**REGULATIONS**

*(Made under section 165)*

THE ELECTRONIC AND POSTAL COMMUNICATIONS (ACCESS, CO-LOCATION AND  
INFRASTRUCTURE SHARING) REGULATIONS, 2018

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THE ELECTRONIC AND POSTAL COMMUNICATIONS ACT  
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*(Made under section 165)*

THE COMMUNICATIONS (ACCESS, CO-LOCATION AND  
INFRASTRUCTURE SHARING) REGULATIONS, 2018

PART I  
PRELIMINARY PROVISIONS

- Citation                    1. These Regulations may be cited as the Electronic and Postal Communications (Access, Co-location and Infrastructure sharing) Regulations, 2018.
- Application                2. These Regulations shall apply in relation to provision of electronic communications services and communications networks.
- Interpre-                    3. In these Regulations, unless the context otherwise  
tation                        requires:-
- Cap.306                    “Act” means the Electronic and Postal Communications Act;
- “access” means the technically feasible means of reaching network facilities for purposes of interconnection, leasing or sharing of network facilities;
- “Authority” means the Tanzania Communications Regulatory Authority established under the Tanzania Communications Regulatory Authority Act;
- Cap.172                    “co-location” means the accommodation of two or more licensee’s switches, antennas or other electronic communications equipment in, or on a single building, tower or other structure;
- “dominant licensee” means a licensee who has been determined by the Authority to have more than thirty five percent of the electronic communication or postal services market;

- “essential infrastructure” means an electronic communication facility of a communication network licensee which cannot feasibly, whether economically or technically be substituted and is declared to be an essential facility by the Authority;
- “facilities” means network facilities or other facilities which facilitate the provision of network services or applications services, including content services;
- “firm” means a licensed or non licensed person who hosts contents for electronic accessibility or carries internet traffic;
- “infrastructure” means a communications network facility whether tangible or intangible used for the provision of network services or application services and for the avoidance of doubt:-
- (a) tangibles include lines, cables, or wires whether fibre optic or other, equipment, apparatus, towers, masts, tunnels, ducts, risers, manholes, pits, poles, landing stations, huts, lands, access roads, buildings or facilities and
  - (b) intangibles include agreements, arrangements, licences, franchises, rights of way, easements and other such interests.
- “infrastructure seeker” means a network service licensee who has leased or shared facilities or has requested to lease or share facilities from a facilities provider;
- “infrastructure provider” means a network facilities licensee who has been requested by a facilities acquirer to lease or share facilities;
- “infrastructure sharing” means the provision to licensees the co-location to tangibles used in connection with a public electronic communications network or intangibles facilitating the utilization of a public electronic communications network and for the avoidance of doubt:-
- “network facilities” means any element, or combination of elements, of physical infrastructure used principally for, or in connection with, the provision of one or more network services, but not including customer premise equipment;
- “network facilities licence” means an electronic communications licence entitling the holder to construct, maintain, own and

- make available one or more network facilities;
- “network facilities licensee” means a holder of a network facilities licence;
- “network service” means a service for the carrying of information in the form of speech or other sound, data, text or images, by means of guided and/or unguided electromagnetic energy but does not include services provided solely on the customer side of the network boundary;
- “network service licence” means an electronic communications licence entitling the holder to provide one or more network services;
- “network service licensee” means a holder of a network service licence;
- “physical co-location” means a type of co-location where the party controlling the building, tower, or other structure in or on which another party switches, antennas, or other electronic communications equipment are accommodated, also allows the other party to operate those switches, antennas, or other electronic communications equipment;
- “remote co-location” means co-location where the equipment of the interconnection demanding operator is installed in a location near the premises of the interconnection providing operator and a transmission medium is used to realize the physical interconnection;
- “site” means a place where a wireless communications network facility or group of similar facilities are located;
- “sharing agreement” means an agreement between an infrastructure provider and a infrastructure seeker for sharing the infrastructure provider’s communication network facilities;
- “sharing request” means a written request from the infrastructure seeker to the infrastructure provider to share a communications network facilities; and
- “virtual co-location” means co-location where equipment is placed in the equipment line-up of the interconnection providing operator and is maintained by that operator.

PART II  
REQUIREMENTS ON INFRASTRUCTURE SHARING

Provision of infrastructure sharing

4.-(1) Any licensee who owns, leases or manages infrastructure is obliged to negotiate and enter into a sharing agreement, upon request with respect to sharing of tangible or intangible communications facilities.

(2) An infrastructure provider shall be obliged to share communication facilities with infrastructure seekers on first-come first served basis and in accordance to technical requirements set out in the First Schedule to these Regulations.

(3) Facilities sharing shall be provided based on the principles of impartiality and non-discrimination.

Infrastructure sharing and Licensees Rollout Obligations

5. The licensees shall meet rollout obligations contained in individual licences irrespective of infrastructure sharing agreements.

Categories of Infrastructure Sharing

6.-(1) Subject to the provisions of these Regulations licensees shall, except for infrastructure which allows Radio Frequency Spectrum sharing, share passive and active infrastructure set out in the Second Schedule to these Regulations.

(2) Nothing contained in this regulation shall prevent a licensee from sharing any passive infrastructure not specifically set out in the Second Schedule to these Regulations.

(3) Nothing contained in these Regulations shall prevent a licensee from sharing any active infrastructure not specifically set out in the Second Schedule to these Regulations.

(4) The sharing of infrastructure pursuant to this Regulation shall not compromise quality of service or competition.

Procedure and requests for infrastructure sharing

7.-(1)A request for infrastructure sharing shall be in writing and include the:-

- (a) date of the request;
- (b) dates when the sharing or co-location is required;

- (c) type of infrastructure required for sharing or co-location;
- (d) technical and physical requirements of infrastructure to be shared;
- (e) location of the infrastructure so requested, where applicable (including Global Positioning System coordinates).

(2) An Infrastructure Provider shall, within twenty one (21) days of the request stating minimum requirements for sharing respond to a request submitted by Infrastructure Seeker pursuant to regulation.

(3) The minimum requirements referred to in sub-regulation (1)(c) shall include:-

- (a) availability of sharing capacity;
- (b) applicable charges;
- (c) installation and processing charges; and
- (d) such other necessary requirements to effect infrastructure sharing.

(4) Where within twenty one (21) days no response to the request submitted pursuant to sub-regulation (3) is received, the Infrastructure Seeker shall refer the matter to the Authority for intervention.

Standard Equipment and Quality of Services for infrastructure sharing

8.-(1) All licensees shall, when sharing infrastructure, ensure that standard equipment and technical interfaces are used.

(2) A licensee shall ensure that the quality of service provided to an Infrastructure Seeker does not differ from the quality of service within the Infrastructure Provider's own infrastructure network.

Submission of information on infrastructure sharing

9.-(1) Where infrastructure sharing is approved pursuant to these Regulations, a licensee shall, from time to time, submit information on infrastructure sharing as requested by the Authority.

(2) The Authority shall maintain an up to date data base of information regarding infrastructure sharing, which shall include a data base of all infrastructure sharing agreements.

(3) The Authority shall not approve an infrastructure sharing agreement that:-

- (a) is not consistent with the law, scope, terms and conditions of licences, applicable regulations, regulatory decisions, directives or specifications and other guidelines as prescribed by the Authority;
- (b) is anti-competitive;
- (c) may endanger life and safety;
- (d) may cause irreparable damage to property or affect interoperability;
- (e) is against public interest or national security; and
- (f) is not technically feasible to share such infrastructure.

PART III  
PROVISIONS ON ACCESS AND CO-LOCATION

Co-Location agreements

10.-(1) Licensees who host other licensed network facilities providers shall negotiate agreements for co-location to their respective network facilities on commercial terms.

(2) Every co-location agreement shall specify in writing the contractual terms and conditions agreed by the parties.

Co-location to Internet Exchange Points (IXPs)

11 Any licensee who hosts content for electronic accessibility or transmits or carries internet traffic shall make available within the nearest located Internet Exchange Point premises, an interface, equipment or facility that shall enable connectivity with the Internet Exchange Point.

Connectivity between Internet Exchange Points (IXPs)

12.-(1) All Internet Exchange Points deployed in the United Republic shall be directly connected to one another.

(2) Any licensee who hosts contents for electronic accessibility or transmits or carries Internet traffic shall connect to the nearest located Internet Exchange Point.

Procedure and requests for access to Co-location

13.-(1) A licensee who seeks access to co-location is required to submit a request for access to co-location provider by providing relevant information to enable the co-location access provider to carry out a feasibility study for the requested co-location.

(2) The co-location access provider shall, within twenty one days from the date of receipt of the request per sub-



regulation (1), be required to complete the feasibility study and provide its decision to the infrastructure co-location access seeker in writing on any of the following:-

- (a) confirming the availability of the facilities and proposal to start the procedure to complete a co-location agreement;
- (b) confirming the availability of the facilities with suggested amendments to the application and proposed date to start the procedure to complete a co-location agreement; or
- (c) rejecting a co-location request.

(3) After negotiation of co-location agreement, parties shall be required to sign the co-location agreement within twenty one days from:-

- (a) the date of the acceptance letter of the co-location access provider; or
- (b) the date the co-location access provider receives the letter from the co-location access seeker accepting the suggested amendments.

(4) Parties to an infrastructure co-location agreement shall, file a copy of the final agreement with the Authority within fourteen days of signing the agreement.

#### PART IV GENERAL PROVISIONS

Agreements for infrastructure sharing and co-location

14.-(1) Infrastructure sharing shall be commercially agreed between the infrastructure seeker and the infrastructure provider.

(2) All negotiations for sharing agreements shall be conducted by all parties in good faith such that the infrastructure provider shall not:-

- (a) obstruct or delay negotiations; and
- (b) refuse to provide information relevant to an agreement, including information necessary to identify facilities needed.

(3) The licensee shall submit to the Authority the signed

	<p>infrastructure sharing agreements referred to in sub-regulation (1), for record purpose.</p>
Restriction on construction of new infrastructure	<p>15. Prior to construction of new infrastructure, a licensee shall seek approval from relevant Authorities and notify the Authority.</p>
Construction, installation and inspection of telecom towers	<p>16.-(1) The licensee with telecommunications towers shall install towers in accordance with International and Local standards and best practice as prescribed or established by Tanzania Bureau of Standards (TBS) and other conditions specified in the First Schedule to these Regulations and submit the report to the Authority within thirty days after installation and commissioning for recording purpose.</p> <p>(2) The licensee shall inspect the structural integrity of telecommunication towers using certified professional engineers at least once every three years, and submit the report to the Authority within thirty days after inspection for recording purposes.</p> <p>(3) The Authority shall, from time to time, inspect telecommunication towers and review the submitted reports as per regulations (1) and (2).</p>
Rights and obligations of Licensees	<p>17.-(1) Every infrastructure licensee shall have right and, when requested by other licensees, an obligation to negotiate co-location and infrastructure sharing services in order to ensure the provision and operability of services throughout the country.</p> <p>(2) The infrastructure seeker shall be responsible for the reasonable costs incurred by facility provider in processing the request.</p> <p>(3) The facility provider shall acknowledge receipt of each request and provide the Authority with the copy of acknowledgement receipt within twenty one days.</p> <p>(4) The following actions or practices shall be construed to violate the obligation to act in good faith if they are:-</p> <p>(a) intentionally misleading or coercing another party into entering an agreement that it would otherwise not have been made;</p>

- (b) intentionally refusing to provide or delaying the provision of information necessary to reach an agreement;
- (c) obstructing or delaying negotiations, the provision of services according to a final co-location and infrastructure sharing agreement, or the resolution of pre-contract disputes.

(5) No licensee shall:-

- (a) obstruct and or delay negotiations;
- (b) refuse to designate proper representative to take part in negotiations;
- (c) refuse to provide relevant information; or
- (d) misrepresent facts.

Licensee's right to reserve capacity for future use

18.-(1) Notwithstanding the provisions of these Regulations, licensees shall have the right to reserve capacity for future use based on future network roll out plans which shall be approved by the Authority.

(2) The right of a licensee referred to in sub-regulation (1) shall, at all times, be recognized and balanced against the need to promote the network roll-out or expansion plans of new market entrants or other licensees.

(3) Where a licensee exercises the option to reserve some rights in circumstances of spare capacity:-

- (a) the reserve period shall not exceed two years after which the right will cease from being operational; and
- (b) Not more than fifty percent of spare capacity shall be reserved.

(4) Information regarding the reservation and extent thereof in accordance with this regulation shall be held by the licensee and upon request be made available to the Authority.

The Authority's Mandate on Co-Location and Infrastructure

19.-(1) The Authority may, in the national interests, direct network facilities licensee to enter into co-location or infrastructure sharing arrangements.

Sharing

(2) An infrastructure provider who has been mandated to provide co-location to network facilities shall be entitled to charge for such co-location for recovery of economic costs and ensure a reasonable rate of return.

(3) In promoting efficient, economic and harmonized utilization of infrastructure, the Authority may inquire into and require modification of any agreement or arrangement entered into between licensees who have the effect of limiting either efficient and harmonized utilization of infrastructure or the promotion of competition in the provision of services.

(4) The Authority may, from time to time, require information to be filed by infrastructure providers for purposes of evaluating the provision of infrastructure sharing services to infrastructure seekers on a non-discriminatory basis.

Non-discrimination treatment

20. An infrastructure provider shall treat each:-

(a) infrastructure seeker on a basis that is non-discriminatory in its provision of network facilities and no less favorable than the treatment which the infrastructure provider affords to its subsidiaries, its affiliates, or other similarly situated communications service providers;

(b) communication network service of an infrastructure seeker on a basis that is non-discriminatory and no less favorable than the treatment which the infrastructure provider affords to the electronic communications network services of itself, its affiliates, or other similarly situated communications licensees; and

(c) customer of an infrastructure seeker on a basis that is non-discriminatory and no less favourable than the treatment which the infrastructure provider affords to its own customers of the customers of its subsidiaries, its affiliates, or other similarly situated communications licensees.

Facilities charging structure for infrastructure sharing and co-

21.-(1) Charges for co-location or sharing of network tangible or intangible facilities shall be structured to distinguish and separate price on:-

- location
- (a) the establishment and implementation of the facilities including testing;
  - (b) rental charges for use of tangible facilities, equipment and resources; and
  - (c) variable charges for ancilliary and supplementary services.
- (2) The infrastructure seeker shall be obliged to pay to the infrastructure provider a payment to compensate for the proportion of costs efficiently incurred by the infrastructure provider in carrying out the upgrade and alteration works to the facilities requested for sharing and co-location.
- Refusal of co-location and infrastructure sharing
- 22.-(1) An infrastructure provider may refuse unreasonable requests for co-location or infrastructure sharing to its network facilities.
- (2) A request for sharing/co-location to network facilities shall be unreasonable if it:-
- (a) is not economically or technically feasible;
  - (b) may result in the infrastructure provider being unduly prejudiced;
  - (c) sharing/co-location would endanger life or safety or irreparable damage property or threaten the integrity, security of public electronic communications network and service; and
  - (d) there is insufficient space.
- (3) Where an Infrastructure Seeker is not satisfied with the basis for any refusal pursuant to sub-regulation (1), he shall refer the matter to the Authority for resolution.
- (4) Subject to these regulations, all licensees shall share infrastructure provided that no licensee shall be required to share infrastructure:-
- (a) if the Authority determines that the infrastructure is not sharable for the reason that:-
    - (i) it is not technically feasible;
    - (ii) it is not in the interest of national security;
    - (iii) there is insufficient capacity; or

(iv) would endanger life or safety or irreparable damage property or function or threaten the integrity, security or interoperability of public electronic communications network and service;

(b) if the Authority, in the case of existing infrastructure, has approved reserve capacity for the licensee.

Charges for Infrastructure sharing and co-location

23.- Infrastructure sharing and co-location charges shall be transparent, non-discriminatory, justifiable and reasonable in that:

(a) licensees shall not offer more favourable rates to affiliate companies to the prejudice of other Infrastructure Seekers; or

(b) licenses shall offer infrastructure at reasonable rates which are not less favourable than those provided by the Infrastructure Provider to itself.

Model Terms and Conditions for co-location and infrastructure agreement

24.- (1) Co-location and Infrastructure agreements shall include the Model Terms and Conditions set out in the Third Schedule to these Regulations.

(2) Services detailed in the co-location and infrastructure sharing agreement shall be sufficiently unbundled to ensure that infrastructure provider does not provide network elements or infrastructure sharing services that are neither required nor requested by the infrastructure seeker.

(3) Information contained in the co-location and infrastructure sharing agreement shall not be designated as confidential to the parties.

(4) The Authority may, in its discretion, direct a licensee to amend co-location or infrastructure sharing agreement to reflect the terms of its licence, relevant rules, regulations, or any directives the Authority may issue.

Capacity or space for co-location and infrastructure sharing

25.- (1) A licensee shall be obliged to share or co-locate infrastructure provided that there is capacity or space to enable the sharing or co-location.

(2) Capacity or space shall be considered available where the existing facility or site is technically or physically capable of accommodating extra communications facilities and equipment.

(3) The infrastructure provider shall have the right to reserve reasonable capacity or space for future use, provided there is evidence showing a clear development plan to use such capacity or space within two years of reserving the capacity or space.

(4) An infrastructure provider shall remove from any space or facility that may be shared any unnecessary, abandoned or obsolete equipment or facilities which is or will be no longer necessary for any sharing purposes.

Resolution of disputes on access, co-location and infrastructure sharing

26.-(1) Where there is a dispute on co-location or infrastructure sharing issues either party to the dispute may submit a written complaint to the Authority stating the:-

- (a) nature of the dispute;
- (b) position of the parties with respect to the dispute; and
- (c) remedy sought.

(2) The Authority shall make Rules for Settlement of Disputes on Access, Co-location and Infrastructure Sharing.

(3) The Authority shall, within thirty days determine the dispute referred under this regulation according to the Settlement of Disputes on Access, Co-location and Infrastructure Sharing Rules made by the Authority.

(4) Where a party is not satisfied with the decision of the Authority, he may, within thirty days from the date of receiving the decision, appeal to the Fair Competition Tribunal.

Penalties

27.-(1) Any person who contravenes the provisions of these Regulations commits an offence and shall, on conviction, be liable to a fine not less than five million shillings or to imprisonment for a term not less than twelve months or to both.

(2) Notwithstanding sub regulation (1), where a person commits an offence under these Regulations, the Director General may, where such person admits in writing compound

such offence by collecting from that person a sum of money not exceeding the amount of the fine prescribed for the offence.

Revocation  
GN No. 429 of  
2011.

28. The Electronic and Postal Communications (Access, Co-location and Infrastructure Sharing), 2011 Regulations are hereby revoked.

**FIRST SCHEDULE**

*(Made under regulation 4)*

**TECHNICAL REQUIREMENTS FOR INFRASTRUCTURE SHARING**

Minimum  
Tower Sharing  
Requirements

1.-(1) Towers shall be designed to accommodate a minimum of two other licensees calculated on the licensee's initial loading.

(2) The tower structure shall be in accordance with International and Local standards and best practice as published or established by Tanzania Bureau of Standards (TBS):-

- (a) the design of structures for towers shall be determined by the landscape;
- (b) the tower shall be free standing tower;
- (c) in designing towers, wind loading shall be the predominant dynamic loading to be considered outside dead weights;
- (d) wind load rating shall be based on the height of the tower and where it is located;
- (e) the loading on a tower shall be analyzed under wind, soil and seismic conditions in areas prone to earthquakes;
- (f) the wind effect on a tower shall take cognisance of a number of external conditions that may change the dynamics of the wind, such as terrain, gusts, the method of wind-speed determination and the value of safety factors needed for a specific tower type;
- (g) the design philosophy shall be based on two limiting factors: strength limit, which considers the loading of a tower under extreme conditions and serviceability limit, which ensures that the tower will provide the proper service under normal conditions;
- (h) the tower foundation shall withstand equipment and wind loading parameters depending on the measurement done in respective areas; and this shall accommodate basic and survival wind speeds;
- (i) tower design must take care of the safety issue which defines the impact a failure would have on the operational integrity of a tower, human life and property;



- (j) the tower foundation shall take into account the wind, seismic and other loading at each specific site giving full consideration to the following:-
  - (i) location, terrain type and category;
  - (ii) topographical effects and vortex shedding;
  - (iii) potential seismic loading;
  - (iv) fatigue effects on the tower;
  - (v) tower structural design;
  - (vi) foundation design allowing for soil conditions as per test certified by soil specialists from relevant authority or institutions;
  - (vii) certification that the construction of all aspects of the tower and foundation has been erected in accordance with the design and specifications as per standards prescribed by the relevant authority.
- (k) the tower shall be designed to carry all types of antennae stacked one above the other and side by side and the clearance between antennae shall depend on type of technology;
- (l) the parameters of the antennae referred in (f) above shall be obtained from the infrastructure Provider at design stage;
- (m) the Infrastructure Provider shall have the right to select the appropriate position of his/her antennae and the other licensees shall be stacked in order of application;
- (n) solid parabolic microwave antennae/dishes may be placed on the tower according to the line of sight (LOS) and shall not obstruct other antennas for different services;
- (o) other types of antennae (for other technologies) may be installed as required provided the total weight can be accommodated by the tower and the position shall not affect other installed equipment;
- (p) the towers shall be painted with alternating colour fringes and adhere to anti-corrosion standards in accordance with statutory requirements and Tanzania Civil Aviation Authority (TCAA) standards;
- (q) the Tower shall be provided with obstruction lighting in accordance with TCAA standards;
- (r) the towers shall be equipped with continued straight ladder fixed inside the tower structure;

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- (s) the ladder shall be protected by hoops or anti-fall devices and shall have resting platforms;
- (t) the tower and site equipment shall be properly grounded and protected against lightning;
- (u) an Anti-Climbing System may be installed on the tower legs and on the ladder (as door or cage);
- (v) any permitting Agency may inspect the site during the construction of a tower before its operations;
- (w) the owner of a tower shall make sure that the tower is certified by a registered engineer confirming that the structure will support antenna and associated equipment prior and after installation of the tower;
- (x) structural integrity assessment on each tower shall be conducted, at least once every three years, by a certified Engineer, and submit the report to the Authority.

Minimum  
Site  
requirements

2. Every site shall have the following minimum specifications:-
- (a) the site floor shall be covered by gravel as per TANROADS or Local Authority Standards;
  - (b) in order to retain the gravel used to cover the site, appropriate ground beams shall be provided, including an adequate weep holes to allow water to drain from the site. If the site is not level, these weep holes shall only be on the downward facing sides of the site and must be indicated on the site diagrams;
  - (c) a self- contained weather proof and equipment room where this is required for indoor equipment;
  - (d) sanitary facilities and a guard room, if required, shall be provided as part of the complete site as per Local Authority requirements;
  - (e) all sites shall be adequately secured by a steel palisade fence as per respective Local Authority Standards;
  - (f) the Palisade shall be neatly constructed from new materials and all steelwork shall be hot-dip galvanized;
  - (g) the fence shall be fitted with-flat wrap razor wire, securely mounted on top of the fence;
  - (h) the steel palisade shall be earthed with the earthing extended to each corner of the fence as per TANESCO standards. The fence structure shall be connected through into the hinged gates by way of flexible connecting leads or a suitable sliding connection for non-hinged gates, while the earthing shall be extended to the Site Earth System/Ground;

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- (i) a suitable opening gate adequate for vehicle entry shall be provided. These gates shall be of steel palisade construction and shall be securely mounted onto the fence structure; and
- (j) the locking system shall be agreed upon by all licensees at each site.
- Minimum Site Access Requirements
3. A site shall have the following minimum access specifications:-
- (a) all sites shall be accessible;
- (b) minimum requirements for access road shall be gravel or paving or both where necessary. The access road shall be all weather with adequate erosion prevention; and
- (c) site access roads shall be constructed such that the entrance onto any major rural, town or private road is consistent with the local authority requirements for safety and proper drainage.
- Minimum Power Requirements
4. A site shall have the following minimum power specifications:-
- (a) each Site shall be supplied with adequate commercial or alternative power;
- (b) each licensee shall be responsible for their batteries;
- (c) the commercial power shall be drawn to the site and the rating shall be as per TANESCO standards;
- (d) licensee shall be responsible for the application and connection to the commercial power supply from the power utility and individual commercial power meters at the site;
- (e) a secondary standby power shall be provided on each site as back-up power system. In the event of non-availability of primary power, The standby power shall be dimensioned to match the requirement for commercial power at the site;
- (f) all terminations to the standby power supply shall be easily accessible. AC distribution shall have a common earth to be connected to the Site common Earthling System as per TANESCO standards; and
- (g) the specific requirements for a standby generator shall be as follows:-
- (i) the generator unit shall be capable of satisfactory operation with fully loads. The unit shall have an automatic voltage regulator and be capable of running extended periods of light load for a minimum of 8 hours without severe glazing;
- (ii) the unit shall be running in a silent mode;
- (iii) the unit should be capable of self-starting from Automatic Transfer Switch (ATS) or manually with a 12V battery

system with charger located in the generator, which shall be chargeable by both mains and alternator. The default setting shall be automatic starting;

- (iv) where a diesel generator is used, the exhaust shall be silenced and adequately protected against corrosion (externally and internally). Ingress of rain water shall be prevented. It shall be routed so that no discolouring or soot deposits are caused against any other part of the site or surroundings. The generator shall comply with stage 3 emission standards;
- (v) the entire unit shall be earthed to the common site earth system as per TANESCO standards and marked earthing point shall be provided on the body of the unit;
- (vi) the ATS panel shall be an outdoor weather unit with mechanical by-pass facility. All alarms shall be fully displayed and adequate instrumentation shall be supplied to enable the safe and effective operation of the unit;
- (vii) the ATS shall operate under the following conditions:-
  - (aa) total mains failure;
  - (bb) phasing where one or two phases are lost, or a serious imbalance between the voltages on each phase is experienced;
  - (cc) high or low voltage conditions on any phase;
  - (dd) frequency deviations from TANESCO standard;
  - (ee) the ATS unit shall be designed so that the load is disconnected from the mains supply when the ATS is operated;
  - (ff) all terminations to the generator set must be easily accessible; and
  - (gg) all external interconnection piping to be approved by TANESCO before use. Only flexible piping shall be used for connecting to the unit.

Minimum  
Requirements  
Trenches

5.-(1) Trenches shall have the following minimum specifications:-

- (a) for any variation to a shared trench the Infrastructure Seeker shall approach the Infrastructure Provider with a request;
- (b) the Infrastructure Provider shall comply with all statutory requirements and specifications of Local Authorities, Power Utilities and road owners;

- (c) the completed trench shall provide a clear and unobstructed bed for the ducting cables to accommodate the ducting and fibre optic cable or copper cable; and
- (d) the trenching operations shall be planned and executed in accordance with the Way leave conditions and licensee standards and procedures as provided by Local Authority.
- (2) The Infrastructure Provider shall have the responsibility for maintenance of the trench and all security issues.
- Minimum Requirements for Ducts
6. The minimum requirement for ducts shall:-
- (a) be as per Local Authority standards; and
- (b) be capable of carrying four licensee.
- (2) All licensees shall have their own network monitoring management system and diagnostic tools for their infrastructure passing in the shared environment.

**SECOND SCHEDULE**

*(Made under regulation 6)*

**INFRASTRUCTURE AMENABLE TO SHARING**

**A. PASSIVE INFRASTRUCTURE**

1. Site sharing/co-location. The following passive infrastructure shall be shared:
- (a) Space;
  - (b) Tower;
  - (c) Power;
  - (d) Shelter; and
  - (e) Security.
2. Transmission (backbone/backhaul/metro):
- (a) Optic Fibre Cable;
  - (b) Copper cable;
  - (c) Trenches;
  - (d) Ducts; and
  - (e) Poles

**B. ACTIVE INFRASTRUCTURE**

Active infrastructure that may be shared includes:

- (a) core nodes (switches, servers, database etc);
- (b) radio access nodes (e.g. BSCs, BTS, Node B,eNodeB RNCs etc.);
- (c) antenna;
- (d) Transmission equipment.

The following factors (but not limited to) need to be considered before Infrastructure Sharing in Categories A and B;

- a) availability of space;
- b) interference;
- c) Quality of Service.

### **THIRD SCHEDULE**

*(Made under regulation 24)*

#### MODEL TERMS AND CONDITIONS FOR INFRASTRUCTURE SHARING

1. An infrastructure sharing or co-location agreement shall, except where a matter is not relevant to the shared or collocated services, deal with the following matters:
  - (a) definitions of terms and abbreviations;
  - (b) the technical scope of infrastructure sharing/co-location which includes:
    - (i) A description of the purpose of the infrastructure sharing or co-location;
    - (ii) A description of the infrastructure to be shared/collocated;
    - (iii) A description of the technical specifications of the infrastructure to be shared or collocated;
    - (iv) Mechanisms for changes to the purpose, technical scope and specifications of the infrastructure being shared/collocated.
  - (c) a description of the location of infrastructure;
  - (d) infrastructure sharing and co-location requirements which include:
    - (i) availability of infrastructure;
    - (ii) infrastructure sharing and co-location procedures;
    - (iii) security procedures and requirements;
    - (iv) supplementary services required, such as power supply;
    - (v) physical access to the infrastructure.
  - (e) Billing and settlement arrangements which include:
    - (i) billing procedures;
    - (ii) payment terms and conditions;
    - (iii) billing dispute resolution procedures.
  - (f) Charges, setting out - to come before billing:
    - (i) detailed charges per infrastructure shared/collocated;
    - (ii) mechanisms for review of charges.
  - (g) Quality of service and service levels, covering:
    - (i) service levels and quality of service obligations;
    - (ii) penalties;
    - (iii) testing and maintenance procedures;
    - (iv) fault reporting and repair;
    - (v) service level dispute resolution;
    - (vi) infrastructure protection and safety measures.

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- (h) compliance with laws;
- (i) effective date;
- (j) duration;
- (k) Termination of agreement covering:
  - (i) grounds for termination;
  - (ii) termination procedures;
- (l) Dispute resolution and arbitration procedures.

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