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TELECOM REGULATORY AUTHORITY OF INDIA
Notification

New Delhi, 27th November, 2026

The Telecommunication Interconnection (Reference Interconnect Offer) (Amendment) Regulations, 2026
(12 of 2026)

No. RG-1/(3)/2026-NSL-I ----- In exercise of the powers conferred upon it under section 36, read with sub-clauses (ii), (iii) and (iv) of clause (b) of sub-section (1) of section 11, of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997), the Telecom Regulatory Authority of India hereby makes the following regulations to amend the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 (2 of 2002), namely:-

1. (1) These regulations may be called the Telecommunication Interconnection (Reference Interconnect Offer) (Amendment) Regulations, 2026.
(2) They shall come into force with effect from 1st January 2027.

2. In regulation 1 of the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 (hereinafter referred to as the principal regulations),--
   (a) in clause (i), the brackets and the words ", (The Regulation)" shall be deleted;
   (b) in clause (ii), for the words "annex 'B'", the words "Annexure-I" shall be substituted.

3. In regulation 2 of the principal regulations,--
   (a) for clause (i), the following clause shall be substituted, namely:-
   "(i) "access service" means the telecommunication service provided by an authorised entity to users for conveyance of voice or non-voice messages through wireline or wireless telecommunication network, and the words "wireline access service" and "wireless access service" shall be construed accordingly;";
   (b) after clause (i) so substituted, the following clause shall be inserted, namely:-
   "(i a) "Act" means the Telecom Regulatory Authority of India Act, 1997 (24 of 1997);";
   (c) for clause (ii), the following clause shall be substituted, namely:-
   "(ii) "Activity" means and includes any one or more of the following:—
      (a) Adjusted Gross Revenue;
      (b) Subscriber Base;
      (c) Voice Call Handling Capacity of the Network;
      (d) Volume of Traffic.
      Explanation: For the purpose of these regulations, -
         (a) Adjusted Gross Revenue shall be as provided under the applicable licence or authorisation;
         (b) Subscriber Base shall mean the number of voice subscribers in PSTN or PLMN, as the case may be;
         (c) Voice Call Handling Capacity of the Network shall mean the maximum number of simultaneous voice call sessions that the telecommunication network of a service provider is designed to establish and maintain in a licensed or authorised telecommunication service area, under normal operating conditions, while meeting applicable quality of service standards, without double counting the capacity of shared or overlapping network resources; and
         (d) Volume of Traffic shall mean the aggregate minutes of usage (MoUs) of voice calls comprising:
            (i) for access services, on-net originating, on-net terminating, off-net originating and off-net terminating voice calls; and

27/11/2026
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(ii) for national long distance and international long distance services, voice calls received and handed over for carriage.";

(d) after clause (vii), the following clauses shall be inserted, namely:-

"(vii a) "international long distance (ILD) network" means a telecommunication network that interconnects with the telecommunication network of foreign carrier;

(vii b) "international long distance (ILD) service" means a type of telecommunication service provisioned over ILD network;

(vii c) "national long distance (NLD) network" means a telecommunication network that carries bearer telecommunication traffic, within the boundaries of the national service area;

(vii d) "national long distance (NLD) service" means a type of telecommunication service provisioned over NLD network;";

(e) after clause (viii), the following clauses shall be inserted, namely:-

"(viii a) "public land mobile network (PLMN)" means a land based public telecommunication network established, operated, maintained or expanded by an authorised entity for the provision of wireless access services to users;

(viii b) "public switched telephone network (PSTN)" means a switched public telecommunication network established, operated, maintained or expanded by an authorised entity for the provision of wireline access services to users;"

4. In regulation 3 of the principal regulations,--

(a) for sub-regulation 3.1, the following sub-regulation shall be substituted, namely:-

"3.1 A service provider with significant market power shall, within thirty days of the determination of significant market power by the Authority, submit its reference interconnect offer to the Authority for approval, unless a reference interconnect offer published by it under this sub-regulation is already in force, and shall, within fifteen days of the approval by the Authority, publish on its website such reference interconnect offer, describing, *inter alia*, the technical and commercial conditions for interconnection based on the model reference interconnect offer specified at Annexure-I and the guidelines specified at Annexure-II, as amended from time to time and the reference interconnect offer so published by the service provider, shall form the basis for all interconnection agreements executed thereafter.";

(b) for sub-regulation 3.2, the following sub-regulation shall be substituted, namely:-

"3.2 The published reference interconnect offer may be changed only with the prior approval of the Authority:

Provided that if the Authority considers that a published reference interconnect offer requires modifications, it may direct a service provider to modify its reference interconnect offer and submit such modified reference interconnect offer to the Authority, within fifteen days of such direction, for its approval:

Provided further that any modified reference interconnect offer, after its approval by the Authority, shall be published within fifteen days from such approval.";

(c) after sub-regulation 3.2, the following sub-regulation shall be inserted, namely:-

"3.2A All interconnection agreements shall be entered into between the service providers in accordance with the published reference interconnect offer:

Provided that the service providers may, by mutual consent, modify the terms and conditions of the published reference interconnect offer and enter into the interconnection agreement on such modified terms and conditions.";

(d) for sub-regulation 3.3, the following sub-regulation shall be substituted, namely:-

"3.3 A Service Provider shall be deemed to have significant market power if it holds a share of thirty per cent or more in any one or more of the parameters specified under Activity in a licensed or authorised telecommunication service area:

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Provided that the share of thirty per cent or more in any one or more of the applicable parameters under Activity shall be determined with reference to Wireline Access Service, Wireless Access Service, National Long Distance Service and International Long Distance Service, as may be applicable, being provided by the service provider in a licensed or authorised telecommunication service area.";

(e) after sub-regulation 3.3, the following sub-regulation shall be inserted, namely:-

3.3A (a) Every service provider shall furnish data in respect of its Subscriber Base, Voice Call Handling Capacity of the Network and Volume of Traffic, as may be applicable, in respect of each Service in each licensed or authorised telecommunication service area, by the end of the first quarter of every financial year.

(b) Adjusted Gross Revenue shall be obtained from the financial reports submitted under the Reporting System on Accounting Separation Regulations, 2016, as amended from time to time and a service provider who is not required to submit such financial reports, shall furnish its duly audited Adjusted Gross Revenue to the Authority by the end of October every year.

(c) The Authority may seek additional information or clarification from a service provider, particularly in relation to the Voice Call Handling Capacity of the Network, and such service provider shall furnish the same within fifteen days from the date of such communication from the Authority.

(d) The Authority shall determine significant market power on the basis of the data furnished under clause (a) and information or clarification obtained under clause (c), after the end of the first quarter of every financial year.

(e) The Authority may make a subsequent determination of significant market power taking into account the Adjusted Gross Revenue obtained or furnished under clause (b) and such determination shall not affect the significant market power status of service providers determined under clause (d) for that financial year.

(f) Each determination shall be made in respect of each Service in each licensed or authorised telecommunication service area:

Provided that for the purposes of sub-regulation 3.3 and sub-regulation 3.3A, Adjusted Gross Revenue of the preceding financial year, Subscriber Base as on the 31st day of March of the preceding financial year, the maximum Voice Call Handling Capacity of the Network during the month of March of the preceding financial year and Volume of Traffic for the month of March of the preceding financial year shall be considered:

Provided further that a service provider determined to have significant market power shall continue to be treated as such until its significant market power status is modified by the Authority.";

(f) sub-regulation 3.4 shall be deleted.

5. After regulation 3 of the principal regulations, the following regulations shall be inserted, namely:-

"**3A. Consequences for contravention of the provisions of these regulations.**— (1) If any service provider contravenes the provisions of regulation 3, it shall, without prejudice to any penalty which may be imposed under the terms and conditions of its license or authorisation or any other action that may be taken under any Act, or the rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive as provided in the Schedule-I to these regulations.

(2) No order for payment of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention observed by the Authority.

(3) The Authority may decide not to impose any financial disincentive, or impose a lower amount of financial disincentive, for reasons to be recorded in writing.

3B. Payment of financial disincentives.— (1) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority.

(2) If the service provider fails to make payment of financial disincentive under regulation 3A, within a period of twenty-one days from the date of issue of the order for payment of financial disincentive or as stipulated in the

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order for payment of financial disincentive, it shall be liable to pay simple interest at a rate which shall be two percent above the one year Marginal Cost of Funds-based Lending Rate (MCLR) of the State Bank of India prevailing as on the beginning of the Financial Year in which the last day of the stipulated period falls.

Explanation: For the purposes of this regulation, a part of the month shall be reckoned as a full month for calculation of interest and a month shall be reckoned as an English calendar month."

6. In regulation 4 of the principal regulations, for the words "public network operators", the words "service providers" shall be substituted.

7. For regulation 5 of the principal regulations, the following regulation shall be substituted, namely:-
"**5. Review**.— The provisions of these regulations may be reviewed by the Authority as and when required."

8. After regulation 5 so substituted, the following regulation shall be inserted, namely:-
"**5A. Removal of Difficulties**.— In order to remove any difficulties in the interpretation or application of the provisions of these regulations, the Authority may issue necessary clarifications or guidelines, which shall be final and binding."

9. In regulation 6 of the principal regulations, the words "at Annex 'A' " shall be deleted.

10. After regulation 6 of the principal regulations, the following Schedule shall be inserted, namely:-

"**Schedule-I**
(See regulation 3A)

Sl. No.	Contravention under the regulation	Amount of financial disincentive for each instance of contravention
1.	Contravention of sub-regulation 3.1 of regulation 3 or sub-regulation 3.2 of regulation 3	(a) Up to fifty thousand rupees per day per instance of contravention for delay up to fifteen days; and (b) Up to one lakh rupees per instance of contravention for each day of delay beyond fifteen days: Provided that the financial disincentive under item (a) and item (b) above put together shall not exceed rupees twenty-five lakh per Service Area for each instance of contravention.
2.	Contravention of sub-regulation 3.3A of regulation 3	(a) Up to twenty-five thousand rupees per day per instance of contravention for delay up to fifteen days; and (b) Up to fifty thousand rupees per instance of contravention for each day of delay beyond fifteen days: Provided that the total amount of financial disincentive under item (a) and item (b) above put together shall not exceed rupees fifteen lakh per Service Area for each instance of contravention.

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11. After Schedule-I so inserted, the following Annexure shall be inserted, namely:-

"Annexure-I

Model Reference Interconnect Offer

Preamble

This Agreement is made on the day of _____, 20___ between _____, having its registered office at _____ hereinafter referred to as Party <XXXXX>, which term shall include, unless contrary to the context, its successor in business, legal representatives and/or its assignees of the one part and _____ , having its registered office at _____; hereinafter referred to as the Party <YYYYY> which term shall include, unless contrary to the context, its successor in business, legal representatives and/or its assignees, of the other part, together referred to as the parties.

Whereas, Party<XXXXX> is authorised under the Telecommunications Act, 2023 for the provision of _____ Services in India in _____service area; or Party <XXXXX> is licensed under the Indian Telegraph Act, 1885 with authorisation for the provision of _____ Services in India in _____service area (strikeout which is not applicable); and

Whereas, Party<YYYYY> is authorised under the Telecommunications Act, 2023 for the provision of _____ Services in India in _____service area; or Party <YYYYY> is licensed under the Indian Telegraph Act, 1885 with authorisation for the provision of _____ Services in India in _____service area (strikeout which is not applicable); and

Whereas, in order to provide the specified services to their customers in their service areas, the parties to the agreement are required to interconnect their networks,

Now, therefore, this Agreement, witnesseth as follows:

1. Article 1 - Scope and definition of services

1.1. Scope

This agreement covers technical and commercial arrangements for interconnection between the network of Party <XXXXX> and the network of Party <YYYYY> and stipulates conditions under which the respective networks of the parties shall be interconnected to provide for exchange of uninterrupted telecom traffic and the manner in which interconnection and other mutually agreed services shall be provided and invoiced, to each other, subject to the terms and conditions of the Authorisation granted by the Government of India under Section 3 of The Telecommunications Act, 2023 or License granted by the Government of India under Section 4 of the Indian Telegraph Act, 1885 (strikeout which is not applicable) and the Regulations, Orders and Directions issued by TRAI under the Telecom Regulatory Authority of India Act, 1997.

This agreement covers the following:

a) Point(s) of interconnection (Schedule 1)
b) Charges for services (Schedule 2)
c) Charges for sharing of infrastructure elements (Schedule 3)
d) Interest rates (Schedule 4)

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All attached Schedules shall form part of this Agreement. In case of conflict or variance, the terms set out in the main body of the Agreement shall prevail.

1.2. Commencement

1.2.1. This agreement shall commence on _____ and continue [for a period of ____ years or up to_____], subject to the relevant clauses relating to termination.

Note: The parties may specify terms and conditions to be fulfilled before the Agreement becomes effective.

1.3. Amendments

1.3.1. Any modification to this agreement or schedules shall be based on mutually agreed amendments signed by both parties and registered with the Authority. The changes necessitated by amendments to the regulations, directions, orders, license or authorisation conditions shall be deemed to be immediately effective and shall be incorporated as amendments as soon as possible. The instruments listed above shall take precedence in the order stated. All such amendments shall be registered with the Authority.

1.4. Definitions

1.4.1. Definitions included in the Telecom Regulatory Authority of India Act, 1997 (as amended from time to time), and Regulations, Directions and Orders published under the Act, the Telecommunications Act, 2023, or the Indian Telegraph Act, 1885, as applicable; License agreements or Authorisation shall apply wherever prescribed and shall take precedence.

1.4.2. In addition, as used in this Agreement, the following terms shall have the meanings indicated hereunder:

1.4.2.1. "access service" means the telecommunication service provided by an authorised entity to users for conveyance of voice or non-voice messages through wireline or wireless telecommunication network, and the words "wireline access service" and "wireless access service" shall be construed accordingly.

1.4.2.2. "Act" means the Telecom Regulatory Authority of India Act, 1997 (as amended from time to time).

1.4.2.3. "apparatus" means telecommunication apparatus.

1.4.2.4. "authorisation" means a permission, by whatever name called, granted under the Telecommunications Act, 2023 for -

(i) providing telecommunication services;

(ii) establishing, operating, maintaining or expanding telecommunication networks; or

(iii) possessing radio equipment;

1.4.2.5. "Authority" means the Telecom Regulatory Authority of India (TRAI).

1.4.2.6. "CCS" means common channel signaling

1.4.2.7. "CDR" means call data record

1.4.2.8. "directions" means the directions issued by the Authority under Section 12(4) or 13 of the Act.

1.4.2.9. "E1 level" means a primary pulse code modulation (PCM) bandwidth of 2.048 Mb/s.

1.4.2.10. "effective date" means the commencement date of the Agreement

1.4.2.11. "GOS" means grade of service

1.4.2.12. "interconnection" means commercial and technical arrangements under which authorised entities or licensees, as the case may be, connect their telecommunication equipment, telecommunication network and telecommunication services to enable their users to have access to users, telecommunication services and telecommunication networks of other authorised entities or licensees

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1.4.2.13. interconnection charges" means the charges payable by one service provider to another service provider for provision, operation and maintenance of the interconnection facilities and resources provided by such other service provider for interconnection.

1.4.2.14. "interconnection provider" means the service provider to whose network an interconnection is sought for providing telecommunication services.

1.4.2.15. "interconnection seeker" means the service provider that seeks interconnection to the network of the interconnection provider.

1.4.2.16. "interconnect usage charge" or "IUC" means the charge payable by one service provider to one or more service providers for usage of the network elements for origination, transit or termination of the calls and short message service.

1.4.2.17. "international long distance network" means a type of telecommunication network for interconnecting with telecommunication networks of foreign carriers.

1.4.2.18. "international long distance service" means a type of telecommunication service provisioned over the international long distance network.

1.4.2.19. "IP" means internet protocol.

1.4.2.20. "IP interconnection" means interconnection using internet protocol.

1.4.2.21. "license" means a license, registration, or permission, by whatever name called, granted under the Indian Telegraph Act, 1885 for provision of telecommunication services or telecommunication network and the word "licensee" shall be construed accordingly.

1.4.2.22. "licensed service area" or "LSA" means the geographical area of a telecom circle or metro service area.

1.4.2.23. "national long distance (NLD) network" means a telecommunication network that carries bearer telecommunication traffic within the boundaries of the national service area.

1.4.2.24. "national long distance (NLD) service" means a type of telecommunication service provisioned over the NLD network.

1.4.2.25. "national standards" means the standards set by the Department of Telecom [Telecommunication Engineering Centre (TEC)].

1.4.2.26. "originating network" means the network to which an originator of a telecommunication message is proximately connected.

1.4.2.27. "originating/ transit/ carriage/ terminating service provider" means the service provider whose network is used for originating/ transit/ carriage/ terminating a telecommunication message, respectively.

1.4.2.28. "point of interconnection" or "POI" means a mutually agreed point of demarcation (based on TRAI determination/ regulations) where the exchange of traffic between the two parties takes place.

1.4.2.29. "point of presence" or "POP" means a system of telecommunication networks of appropriate capacity established by the authorised entity to provide authorised telecommunication services.

1.4.2.30. "public land mobile network" or "PLMN" means a land based public telecommunication network established, operated, maintained or expanded by an authorised entity for the provision of wireless access services to users.

1.4.2.31. "public switched telephone network" or "PSTN" means a switched public telecommunication network established, operated, maintained or expanded by an authorised entity for the provision of wireline access services to users.

1.4.2.32. "QOS" means quality of service

1.4.2.33. "regulations" means the regulations issued from time to time by the Authority pursuant to the power granted to it under section 36 of the Telecom Regulatory Authority of India Act, 1997.

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1.4.2.34. "service area" means the geographical area in respect of which authorisation for provision of telecommunication services is granted, which may be national service area or telecom circle or metro.

1.4.2.35. "terminating network" means the network to which a receiver of a telecommunication message is proximately connected.

1.4.2.36. "transit network" means the intermediate network through which telecommunication messages from originating networks or other transit networks are transmitted and delivered to terminating networks.

1.4.2.37. "user" means a natural or legal person using or requesting a telecommunication service, but does not include person providing such telecommunication service or telecommunication network.

2. Article 2 - Point of interconnection and interconnection principles

2.1. Point of interconnection

2.1.1. The parties agree:

2.1.1.1. to connect and keep connected their systems at mutually agreed feasible points of interconnection set up in accordance with the Authority's determination / regulations. Such interconnection shall be provided as detailed in Article 3. The agreed points of interconnection for each class of service are indicated in Schedule 1 of this agreement. This may be amended from time to time on mutual agreement.

2.1.1.2. to supply the requested telecommunication services, facilities and information, relating to interconnection, to the other party as provided in this Agreement or otherwise mutually agreed. Such facilities shall only be used for the agreed purpose and shall not be resold to other parties. These services and facilities are indicated in Schedule 2 and Schedule 3.

2.2. Traffic routing principles

2.2.1. Each party shall carry traffic offered by the other party through its network up to the designated point. In case the traffic cannot be so carried due to temporary network conditions, suitable tones or announcements shall be provided as agreed to between the two parties.

2.2.2. The levels and points at which interconnections may be provided for various classes of traffic shall be as per the Regulations / Determinations/ Directions/ Orders of the Authority.

2.2.3. Reference Interconnect Offer Guidelines and Interconnection Tables given therein, as applicable, would provide details on various interconnection and delivery of inter operator traffic/services.

2.3. Arrangements at the POI

2.3.1. The types of traffic to be carried across the POI are indicated in Schedule 1. Interconnection shall be based on IP. Interconnection between networks of both the parties shall conform to the standards published by Telecommunication Engineering Centre, and in the absence of such standards, relevant ITU recommendations shall be complied with.

2.4. Co-location of apparatus and plant

2.4.1. Wherever feasible, physical co-location of the apparatus and plant owned or leased by one party and used for interconnection shall be on the premises of the other party.

2.4.2. Wherever such co-location has been mutually agreed, essential accommodation and auxiliary infrastructure shall be made available for this purpose within the time schedules for interconnection. When a party uses the premises and/or uses facilities of the other party, such as infrastructure, apparatus, duct,

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lease line, power, etc., it shall pay the relevant charges to the other party. Details of such rents are included in Schedule 3.

3. Article 3 - Interconnection provisioning procedures

3.1. Both parties shall interconnect as per the Telecommunication Interconnection Regulations, 2018 (as amended from time to time). The timelines for interconnection, procedure for entering into interconnection agreement, provisioning and augmentation of ports at POIs, etc., shall be as per the Telecommunication Interconnection Regulations, 2018 (as amended from time to time).

4. Article 4 - Network and transmission requirements

4.1. Both the parties shall adhere to the Telecommunication Interconnection Regulations, 2018 (as amended from time to time) for traffic forecast, projection of utilization capacity, quality of service, etc.

4.2. Network changes

4.2.1. The parties shall, wherever necessary, inform each other in advance of any changes to network configuration or facilities that may have a significant impact on the engineering of the other party's network.

5. Article 5 - Technical service commitments and fault repairs

5.1. General commitments.

5.1.1. Each party shall:

5.1.1.1. be responsible for operating its own system and ensuring its safety and security;

5.1.1.2. ensure that the Services provided to the other party are of a quality comparable to that provided by it to itself and its affiliates;

5.1.1.3. maintain and repair faults on Interconnection Links in the same manner as it maintains plant and repairs faults within its own Network;

5.1.1.4. The QoS standards that shall apply to the various types of interconnecting links between two Networks are indicated in Schedule 1.

5.2. Quality of service

5.2.1. The parties shall ensure that the respective interconnect facilities delivered at each Point of Interconnection (POI) conform to the applicable Quality of Service (QOS) standards set by the Authority, and the Technical Specifications set out by the relevant agency [Telecommunication Engineering Centre (TEC)]. The agreed QOS (including GOS) are indicated in Schedule 1.

5.3. Fault reporting

5.3.1. Fault reporting mechanism for interconnect operational problems will be worked out jointly by both parties and updated from time to time.

5.3.2. Each party shall advise its customers to report all faults to its own Fault Reporting Centre. If a fault report is received at an incorrect center, the complainant shall be directed to the correct center.

5.3.3. The party who first becomes aware of the fault shall promptly notify the fault to the other.

5.3.4. If a party identifies a fault in its system, or if a major fault occurs that may have an adverse effect on the other party's system, it shall promptly inform the other party of the actions being taken to resolve the fault.

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5.4. Network restoration

5.4.1. The parties will manage their Networks to minimize disruption to Services and, in the event of interruption or failure of any Services, they will restore those Services as soon as is reasonably practicable in accordance with the schedule jointly set by both the parties. Each party shall manage, notify and rectify faults arising in its Network, which may affect the provision of any Services by the other party, as it would in the ordinary course for similar faults affecting the provision of Services by itself.

5.5. Operating instructions:

5.5.1. The parties will develop and record in the form of operating instructions, a series of agreed response times for different network fault conditions on the basis of the following principles:

5.5.1.1. Clearance of faults affecting the network shall take priority over the clearance of individual faults.

5.5.1.2. Each party shall automatically deploy any available standby capacity and/or carry out necessary network management actions to restore services.

5.5.1.3. Each party shall monitor equipment alarms and carry out testing to identify the nature and location of the fault, in cooperation with the other party, where necessary.

5.5.1.4. Each party shall keep the other party continually informed of the progress of fault restoration during any breakdown.

5.5.1.5. If temporary repairs are carried out by a party, the other party shall be informed of such repairs. The other party shall also be informed of the service impact of such temporary repairs and the estimated time for full restoration.

5.6. Planned maintenance work

5.6.1. Each party will give at least 7 days' notice of any planned maintenance work that may affect the other's system.

5.6.2. Each party shall make its best efforts to minimize disruption and where possible alternative routing will be provided. Network design and link engineering should have such redundancy that for any planned work the prescribed quality of service is maintained.

6. Article 6 - Technical specifications and standards

6.1. National standards

6.1.1. Interconnection between service providers of Networks and Systems shall conform to National Standards as set by the Telecommunication Engineering Centre, Rules and Regulations applicable to Telecommunications Services in India. In the absence of National Standards set by the TEC, Rules and Regulations, they shall conform to the relevant recommendations of the ITU.

6.2. Signaling and synchronization

6.2.1. Inter-network Signaling shall be based on technical standards issued by Telecommunication Engineering Centre for IP based interconnections. Both parties shall comply with these standards. The systems shall be synchronised in a manner required to meet National Standards.

6.3. Interface approval

6.3.1. Neither party shall connect or knowingly permit the connection to its System of any equipment that has not been approved by the competent authority for attachment to such party's System. Both parties shall ensure that the equipment at the POI has been approved by the competent authority in accordance with National Standards.

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6.4. Transmission standards

6.4.1. The normal interface for network interconnection shall be IP based. The parties shall convert circuit switched traffic to IP based traffic before sending circuit switched traffic to the telecommunication networks of the other party. The parties shall complete migration from E1/TDM based interconnection to IP based interconnection no later than the timelines specified in the Telecommunication Interconnection (Third Amendment) Regulations, 2026.

6.5. Voice performance

6.5.1. Voice over the telecommunication network shall conform to the standards issued by the Telecommunication Engineering Centre. In the absence of such standards, relevant International Telecommunication Union Recommendations shall be complied with by both parties.

6.6. PSTN/ PLMN/ VOIP interoperability standards

6.6.1. For interoperability between circuit-switched networks and IP-based networks, the interface shall conform to the relevant national standards or guidelines issued by the Central Government/Authority. Media Gateway, Signalling Gateway, and Gatekeeper shall conform to the standards issued by the Telecommunication Engineering Centre. In the absence of such standards, relevant International Telecommunication Union recommendations shall apply.

7. Article 7- Network management, maintenance & measurement

7.1. The parties shall provide, install, test, make operational and maintain all interconnection facilities on their respective side of point of interconnection unless otherwise mutually agreed, irrespective of technology deployed. The parties shall take full precautions to keep operational the equipment of the other party installed on their premises for interconnection purpose and shall also allow access to duly authorised representative of the other party to such equipment for provisioning, maintenance or monitoring purposes.

7.2. Each party shall employ its own network-specific network management system to ensure efficient traffic management and facility management of its network. In particular, it shall make arrangements to prevent overload of other interconnecting systems.

7.3. The network management system employed shall be non-intrusive.

7.4. Each party shall prevent any signal from its network or the network management system from interfering with the other party's network, so as to maintain network integrity.

7.5. Each party shall make traffic and link measurements and inform the other party about any foreseen degradation in traffic performance, before it manifests through deterioration of QoS, to allow the other party to initiate any viable action for diversion or rerouting of traffic through the network of a third operator.

8. Article 8- Network integrity, security, safety & protection

8.1. General principles

8.1.1. The two parties agree to take measures for adequate protection and safety.

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8.2. Maintenance of Network Integrity.

8.2.1. Integrity of a network refers to the ability of its systems to preserve and retain their original operational states and remain unaffected by interconnection with other networks. The two parties agree to maintain network integrity. Each party shall ensure:

8.2.1.1. that adequate measures are taken to prevent the transmission of any Signaling message across the connecting network, which does not comply with national specification;

8.2.1.2. that efficient arrangement for screening functions and rejection of non-compliant messages is established to detect signals outside the national specification.

8.3. Security

8.3.1. Each party shall be solely responsible for the security of its own network and shall implement adequate safeguards to ensure that no vulnerabilities, threats, or security risks are propagated or passed on to the other party's network through interconnection.

8.4. Safety and protection

8.4.1. The two parties agree to take measures for adequate protection and safety. Each party is responsible for the safe operation on its side of the Network, and shall, so far as is reasonably practicable, take all necessary steps to ensure that its side of the network and its network operations:

8.4.1.1. do not endanger the safety or health of any person, including the employees and contractors of the other party; and

8.4.1.2. do not cause physical or technical harm to the other party's network, including but not limited to causing damage, interfering with or causing deterioration in the operations.

8.4.2. It shall be ensured that in case the transmission of traffic to either party's network requires power feeding, then not only the safety of the equipment shall be ensured but also that of the personnel maintaining it. In this regard, safety requirements of accidental human touch of feeding voltage as prescribed in the relevant Bureau of Indian Standards (BIS) document shall be referred to for compliance.

9. Article 9 – Other facilities and customer services

9.1. Other facilities

9.1.1. Each party agrees to provide access to its services/facilities to the other party and its customers at fees or charges specified by the Authority for such service, or otherwise as mutually negotiated. All such fees or charges for services and facilities shall be listed in Schedule 2, which may be amended from time to time.

9.2. Customer services

9.2.1. Each party shall be responsible for making arrangements to provide prescribed Customer Services to its Customers.

10. Article 10 - Interconnection billing, payment and bank guarantee

10.1. Interconnection billing

10.1.1. Each party shall make arrangements for collection, storage, and transfer of data relating to traffic passing through its respective networks to facilitate interconnection charging, billing, and settlement. The billing system may be based on call detail records (CDRs) for voice calls and SMSs (Short Message Service). The interconnection charges and interconnection usage charges for originating, terminating, carriage, and transit traffic, as applicable and payable by one party to the other, shall conform to the relevant Telecom Regulatory Authority of India regulations, as amended from time to time.

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10.1.2. Each party shall send to the other party an invoice in respect of the previous month for the amount due for all effective traffic sent to or received from the other party. For the purposes of this clause, "Effective Traffic" shall mean answered calls and delivered SMS. Such bill/invoice shall be issued within seven (or such other period as may be mutually agreed) calendar days after the close of the month for which the bill/invoice is raised. The determination of the amount due shall include:

10.1.2.1. The volume of point of interconnection wise traffic in minutes or minutes of usage (MoUs) and number of SMSs, as applicable, handled during the month, broken down by the type of traffic (local, long-distance, international etc.); and

10.1.2.2. The payable amount for such traffic shall be calculated at the rates given in the relevant TRAI regulations.

10.1.2.3. In addition, the due amounts for other services and network elements (refer to Schedules 2 & 3) shall also be presented wherever applicable.

10.1.2.4. Each party shall be solely responsible for payment of all applicable taxes, if any, imposed by the Central Government, State Governments, or any other competent authority in this regard.

10.2. Payments

10.2.1. The net amount for each billing period shall be remitted by the concerned party to the other party within fifteen days (or as agreed mutually) from the date on which the applicable invoice is received by the paying party (the 'due date').

10.2.2. Any payment not paid by the due date shall bear penal interest which shall be as per the Telecommunication Interconnection Regulations, 2018 (as amended from time to time) and indicated in Schedule 4. This interest calculated from the due date until the date of payment, shall be payable to the concerned party. The interest rate shall be mutually decided and shall not exceed State Bank of India's one-year Marginal Cost of Funds-based Lending Rate (MCLR) plus 2% per annum.

10.2.3. If any party issuing the bill subsequently finds that some charges have been omitted from the bills issued, it may include the omitted charges in the subsequent bills at any time, but not later than six months from the date of issuance of the relevant bill except in cases where additional billing becomes necessary due to the tariffs / rate changes notified by the appropriate authority subsequently.

10.3. Errors and reconciliation

10.3.1. If either party discovers an error in the invoice , it shall promptly notify the other party, but not later than 3 months from the date of issue of the Bill, and the parties shall make such adjustments in accounts as are necessary to correct the error.

10.3.2. Any disagreement related to the accuracy of the traffic information or any related matter shall be mutually resolved by both the parties or referred to the Coordination Committee, as provided under Article 15, for reconciliation and settlement of accounts, after making payment of 50% of the disagreed amount. In case reconciliation is not achieved, the parties may jointly select an auditor to assist in resolving the disagreement. If the parties are unable to appoint an auditor, the Authority, after a reference being made by either of the parties, shall appoint one or specify alternate measures for settlement of accounts. The cost of the auditor shall be borne equally by both parties. The amount payable after reconciliation shall carry interest from the due date at the rate of interest specified in Schedule 4.

10.3.3. Neither party shall be allowed to reduce any amounts reported or remitted to the other party pursuant to this Article as a set-off or compensation for amounts owing under any other obligation between the parties.

10.4. Bank guarantees

10.4.1. The parties shall be entitled to demand bank guarantees which shall be as per Telecommunication Interconnection Regulations, 2018 (as amended from time to time).

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10.5. Fraud and default

10.5.1. The parties shall cooperate with one another to investigate, minimise and take corrective action in cases of fraud. Subject to applicable laws, information concerning defaulting customers may be supplied to the other party.

11. Article 11 - Commercial terms and conditions

11.1. Supply of service

11.1.1. The parties agree to supply the services and facilities at the prices listed in Schedules 2 and 3. These lists shall be prepared in accordance with the Orders, Directions and Regulations of the Authority wherever applicable. If not so listed, same shall be determined based on the costing principles indicated in the relevant TRAI Regulations. The terms and conditions under which such services / facilities are to be supplied shall also be included in the schedule. Such facilities shall only be used for the agreed purpose and shall not be resold to other parties unless agreed otherwise mutually. These facilities shall not be used for bypass of traffic.

11.2. Third party rights

11.2.1. This agreement is intended to apply to the provision of facilities and services by one party to the other and shall not be construed as conferring rights of any nature on any third party.

11.3. Interconnection charges

11.3.1. The interconnection charges to meet the infrastructure requirements and interconnection usage charges shall be in accordance with TRAI regulations issued from time to time. Both the parties may mutually negotiate and agree upon the sharing arrangements and the cost of interconnection between the parties.

11.4. Upgradation

11.4.1. Any upgradation of telecom equipment required to meet National Standards shall be carried out by each party at its own cost.

11.5. Exclusivity

11.5.1. The parties may interconnect with any other licensed or authorised party in India according to the terms and conditions set out in their respective licenses or authorisation respectively. Neither party shall require the other to interconnect to its facilities on an exclusive basis.

11.6. Emergency services

11.6.1. Access to emergency services of each party as specified in Schedule 2 shall be provided in accordance with the relevant TRAI regulations and principles laid down therein.

11.7. Applicable law

11.7.1. This Agreement shall be governed by and construed in accordance with the laws of the Republic of India.

11.8. Assignability

11.8.1. Neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any party without the prior written consent of the other party hereto.

Provided that, in the event of any merger, acquisition, amalgamation, reorganisation or restructuring of either party, this Agreement shall continue in full force and effect and shall be binding upon and enforceable against the surviving, successor or resulting entity, as the case may be, which shall assume and perform all rights, obligations and liabilities of the relevant party under this Agreement.

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11.9. Language

11.9.1. This Agreement has been executed in the English language, which shall be the binding, and controlling language for all matters relating to the meaning or interpretation of this Agreement.

11.10. Waivers

11.10.1. The waiver of the rights derived from this Agreement shall only be effective if made in writing duly sent to the other party. No failure on the part of any party to exercise any right, power or privilege under this Agreement shall operate as a waiver hereof.

11.11. Partial invalidity

11.11.1. If any provision in or obligation under this Agreement is considered invalid, illegal or unenforceable by a court of competent jurisdiction, such judicial decision must, as regards such invalidity, be strictly interpreted and shall not affect or impair the validity, legality or enforceability of any other provision in or obligation under this Agreement.

11.12. Non-Discrimination

11.12.1. Service providers shall not, in the matter of interconnection charges, discriminate between service providers.

12. Article 12 - Interconnection usage charges

12.1. Usage charges

12.1.1. For determining usage charges for origination, termination, carriage and transit, as applicable, of each other's traffic, both the parties refer and conform to the relevant TRAI regulations issued from time to time.

13. Article 13 - Fundamental technical plans

13.1. General

13.1.1. The parties shall adhere to any plans for telecommunication as may be notified by the Central Government, including the national numbering plan and the national frequency allocation plan to the extent applicable to their networks subject to conditions stipulated in the License Agreements and authorisations, as applicable.

14. Article 14 - Confidentiality, liability and indemnities

14.1. Each party may disclose to the other party such proprietary and confidential (technical or business) information in written, oral, graphic or any other forms, as may be agreed to, for the purposes of this agreement only.

14.2. Each party shall guarantee that the equipment / systems and other articles of the service commissioned / provided by it for the purpose of interconnection or usage by the other party in terms of this agreement do not infringe any copyright, trademark or intellectual property rights of any third party.

14.3. Neither party shall use a trademark, service marks or trade names belonging to another party as a trademark, service marks or trade names without prior written consent of the other party.

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14.4. The conveyance of information, between both the parties which shall take place under this agreement, shall not constitute or imply the granting of any rights under any copyright, patent, trademark or any other intellectual property rights either at the time of conveyance or subsequently.

14.5. Except as otherwise provided in this agreement, neither party shall disclose confidential information to any third party except in the following circumstances:

14.5.1. the disclosure is authorised in writing by the disclosing party, to the extent so authorised; or

14.5.2. the disclosure is made to any auditor or expert appointed to resolve disagreements under this agreement; or

14.5.3. the disclosure is made pursuant to any applicable laws, rules, regulations or directions of a statutory or regulatory authority or order of a court of law of competent jurisdiction.

14.6. Each party to the agreement shall inform the other party before disclosing to a third party any information relating to interconnection under this agreement.

14.7. Each party to the agreement shall ensure that the information provided by one party to the other is used solely for the purposes for which it is disclosed.

14.8. In order to protect such confidential information from improper disclosure, both parties agree to limit access to such confidential information to authorised employees/agents who have a need to know the confidential information for performance of this Agreement and to use such confidential information only for purposes of fulfilling work or services relating to this agreement.

14.9. The authorised employees/agent to whom all or any confidential information is disclosed shall hold it strictly confidential and shall not disclose it to any other person. Each party shall be responsible for any unauthorised disclosure of confidential information by its authorised persons, and its liability for such disclosure shall be governed by this Agreement.

14.10. Neither party shall be liable to indemnify the other for any claim, demand or proceeding brought by any third party asserting that the use of any circuit, apparatus, system or software, or the performance of any service by either party under this agreement, constitutes an infringement or misuse of any patent, copyright or other proprietary or intellectual property right of that third party.

14.11. All written confidential information or any part thereof (including, written information incorporated in computer software or held in electronic storage media) together with any analysis, compilations, studies, reports or other documents or materials prepared by the receiving party or on its behalf, that reflect or are prepared from any of the confidential information provided by the disclosing party shall be returned to the disclosing party or destroyed by the receiving party, when requested by the disclosing party at any time, or when this agreement expires or is terminated, whichever is earlier. In the event of destruction, the receiving party shall certify in writing to the disclosing party within thirty (or as mutually agreed between parties) calendar days, that such destruction has been accomplished. The receiving party shall make no further use of such confidential information nor retain such confidential information in any form whatsoever.

14.12. The parties acknowledge that the provisions of this article shall continue in full force and effect regardless of variations, assignments or termination of other provisions of this agreement. The obligation to maintain confidentiality of the confidential information provided hereof and the undertakings and obligations in this article shall continue for two years upon the expiry or termination of this agreement.

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14.13. Notwithstanding any provision in this agreement and unless otherwise provided, the parties shall not reveal, make known or divulge to any third party in any manner howsoever, the contents of those aspects of this agreement (in full or in part) which the Authority has withheld from publication.

14.14. Save as provided under this agreement, no news releases, public announcements or any other form of publicity concerning this agreement or the terms of this agreement shall be conducted or released by either party without the prior written consent of the other party.

14.15. Each party acknowledges that a breach of any provision of this article may cause the other party damage.

14.16. The agreement contains the entire understanding between the parties with respect to the safeguarding of the confidential information and supersedes all prior communications and understandings with respect thereto.

14.17. Force majeure

14.17.1. Neither party shall be liable for any breach of this Agreement (other than a breach for nonpayment) caused by an act of God, insurrection or civil disorder, war or military operations, national emergency, fire, flood, lightning, explosion, subsidence, industrial dispute of any kind. The party affected by such force majeure shall promptly notify the other party of the conditions and the details thereof. If as a result of force majeure, the performance by other party of its obligation under this agreement is only partially affected, such party shall nevertheless remain liable for the performance of those obligations not affected by such force majeure. If the force majeure lasts for more than the continuous period of 90 calendar days from the date of the notification, and continues to prevent the affected party from performing its obligation in a whole or in material part, the affected party shall be entitled to, but not be obliged to, terminate its agreement by giving not less than 30 calendar days written notice to the other party. This will be subject to the Articles on Termination.

15. Article 15 - Liaison and coordination

15.1. Coordination committee

15.1.1. A Coordination Committee consisting of both parties shall coordinate all mutual activities relating to implementation of interconnection, amendment of schedules, reconciliation of accounts etc. and lay down the detailed procedures required for smooth implementation of the agreements. Sub-committees may be set up by the Coordination Committee as may be required.

16. Article 16 - Termination and review

16.1. Termination

16.1.1. This Agreement shall continue for the period indicated in clause 1.2.1. unless:

16.1.1.1. either party ceases to hold a license under the Indian Telegraph Act, 1885, or authorisation under the Telecommunications Act, 2023, as the case may be.

16.1.1.2. an order is entered by a court of competent jurisdiction mandating the winding-up or dissolution of a party, or appointing a receiver or liquidator for such party or having a comparable effect;

In either case this Agreement shall immediately be terminated.

16.1.2. This Agreement also may be terminated by either party giving 35 days' notice to the other in the event that either party:

16.1.2.1. breaches any provision of this Agreement; provided, however, that the breaching party has been notified in writing of its failure by the non-breaching party and the breaching party has

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not remedied its failure within twenty (20) working days; and the approval of the Authority has been obtained for such termination. In the event, the approval is accorded with conditions, having regard to the general interest of the customers, the same will be fully complied with before the final act of disconnection of interconnection arrangements becomes effective.

16.1.2.2. ceases to carry on business.

16.1.3. Each party shall provide assistance as is necessary for recovery by the other party of any equipment supplied by that other party.

16.1.4. Termination of this Agreement shall be without prejudice to a party's rights, liabilities or obligations that may have accrued prior to such termination.

16.2. Disconnection or surrender of point of interconnection/Interconnection

16.2.1. Disconnection or surrender of point of interconnection or interconnection shall be governed by the Telecommunication Interconnection Regulations, 2018 (as amended from time to time)

16.3. Review

16.3.1. Apart from changes to Schedules and Annexures that may be made at any time by mutual agreement, this Agreement may be taken up for review by mutual consent whenever a material change in License/Authorisation conditions or Regulations takes place. The parties may mutually agree to enter into an addendum or not as a result of such review.

17. Article 17 – Disputes

17.1. Settlement of disputes

17.1.1. It is understood and agreed that the parties shall carry out this Agreement in the spirit of mutual co-operation and good faith and shall seek to resolve amicably any disputes arising between them.

17.1.2. It is desirable that before a matter is formally established as a disagreement, reconciliation is attempted in the Coordination Committee referred to in article 15.1. The Committee shall resolve the matter within 30 days. The settlement of disagreement shall take place in accordance with the Telecom Regulatory Authority of India Act, 1997 (as amended from time to time) and TRAI regulations/directions/orders. The Authority may intervene at the request of either of the parties.

17.1.3. During any period of disagreement/dispute, and pending its resolution, a party shall not disrupt the services being provided to the other party, nor take any action that may materially and adversely affect the other party's services.

18. Article 18 – Notices

18.1. Unless otherwise provided in the Agreement, any notifications, service of process, petitions, claims and other Communications requested or permitted pursuant to this Agreement, shall be made in writing and shall be considered validly made when delivered by hand or by post, courier, or electronic means , provided receipt is verified at the following addresses.

If to Party <XXXXX>:

Address:_____

Email id:_____

Attention:

With a copy to:

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If to Party <YYYYY>:

Address:_____

Email id:_____

Attention:

With a copy to:

or to such other address or persons as may have been designated in writing by the parties.

In witness whereof, the parties hereto have executed this Agreement as of the day and year written at the beginning of this Agreement.

By: Party <XXXXX>
Name:
Title:
Dated as of _____, 202

By: Party <YYYYY>
Name:
Title:

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Schedule 1

Points of Interconnection

List of Points of Interconnection

POI Location	Type of Traffic	QoS Standards	Remarks

Each POI should be described in the following format:

Item	Description	Remarks
Location of POI	Address	
Party responsible for setting up and maintaining the POI	Name and address of party	
Physical description of POI	E.g., Optical fiber cable type and interface specifications	

Note: Both the parties will update Schedule 1, whenever any information field changes.

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Schedule 2

Charges for services

Item	Charge	Details/Remarks

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Schedule 3

Charges and rent for sharing of infrastructure elements

Type of Facility	Charge/Rent	Details/Remarks

Note: The types of facility may include space for locating apparatus & plant in buildings, sharing of towers, leased line etc.

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Schedule 4

Interest Rate

Any payment not paid by the due date shall bear penal interest which shall be as per Telecommunication Interconnection Regulations, 2018.

Note: The interest rate shall be mutually decided and shall not exceed the State Bank of India's one-year Marginal Cost of Funds-based Lending Rate (MCLR) plus 2% per annum existing as on the beginning of the financial year in which the last day of the stipulated period falls."

12. After Annexure-I so inserted, the following Annexure shall be inserted, namely:-

"Annexure-II
Reference Interconnect Offer Guidelines

1. Introduction

Interconnection agreements are required to be established between service providers for interconnection of their networks. These would enable smooth operation of telecommunication services in India. Such agreements need to be entered into between service providers providing wireline access service, wireless access service, national long distance service, and/or international long distance service.

To assist service providers in arriving at fair agreements, it is mandatory for service providers with significant market power to publish a reference interconnect offer on their website. After the reference interconnect offer has been accepted by the interconnection seeker, an agreement based on mutually agreed terms and conditions, shall be entered into, within the interconnection regulatory framework.

Service providers are not required to obtain prior permission from the Authority for entering into an interconnect agreement. However, once an agreement has been entered into, it has to be registered with the Authority in accordance with the prevailing TRAI Regulations. The reference interconnect offer, however, requires the prior approval of the Authority before it is published. Service providers who do not have a published reference interconnect offer, may use the model reference interconnect offer for drafting their interconnect agreements, after appropriate legal and commercial scrutiny by themselves.

The model reference interconnect offer attached to these guidelines is a template agreement that would form the basis for an interconnection agreement to be entered between any two service providers for the interconnection of their networks. The types of networks would be defined in the interconnect agreement. The agreement may be modified, to suit the specific type of network and the special requirements of the two service providers.

The reference interconnect offer is divided into two parts, namely, i) main clause, ii) schedules and annexures. The parameters that may vary with time or with type of network are placed in the schedules and annexures. This means that the main agreement need not be changed every time a variable parameter is changed. The corresponding schedule or annexure may be changed as required.

2. Article 1

2.1. Acceptance of reference interconnect offer

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2.1.1. The interconnection seeker shall notify its acceptance of the reference interconnect offer to the service provider. Unconditional acceptance of the offer will result in a formally signed agreement precisely on the terms and conditions contained in the reference interconnect offer. Letter of acceptance of reference interconnect offer shall be furnished in accordance with the proforma as at Annexure-A.

2.1.2. An interconnection seeker may also notify the service provider that it intends to negotiate an individualized agreement. In that case the seeker may obtain services on the prices, terms and conditions specified in the reference interconnect offer on an interim basis pending the adoption of the individualized agreement following further negotiations and agreement. Letter of acceptance of reference interconnect offer shall be furnished in accordance with the proforma as at Annexure-A.

2.1.3. Pursuant to the Register of Interconnect Agreements Regulations, 1999 (as amended from time to time), the parties shall file this Agreement as well as any modifications with the Authority within fifteen days of the execution or modification of this Agreement including its Schedules or Annexures.

2.2. Scope

Once interconnection is achieved, the interests of the customers require that there should be no unilateral discontinuance of service. The term "uninterrupted" is used in this context and is addressed in detail in the termination clauses.

2.3. Definition of service(s)

For the purposes of this Agreement, the term "Service(s)" shall refer to the telecommunication service(s) provided by each service provider under the relevant license or authorisation issued by the Central Government. These are as follows:

1. Wireline Access Service
2. Wireless Access Service
3. National Long Distance Service (NLD)
4. International Long Distance Service (ILD)

2.4. Registration and commencement

2.4.1. Interconnect Agreements shall be registered in accordance with the extant TRAI Regulations. Relevant agreement clause(s) shall indicate the commencement date (effective date) and the duration of the agreement.

2.5. Definition of Terms

2.5.1. Definitions given in the Telecom Regulatory Authority of India Act, 1997 (as amended from time to time), TRAI regulations/directions/orders, the Telecommunications Act, 2023 or the Indian Telegraph Act, 1885 (as applicable), Rules notified by Central Government under the Telecommunications Act, 2023, and license/Authorisation have been reproduced in the model reference interconnect offer. A few definitions specifically relevant to the reference interconnect offer have also been included. Where the definitions in the sources listed above differ, the definition in the source appearing earlier in the list shall prevail.

3. Interconnection Principles

3.1. Levels of Interconnection and Timelines

3.1.1. The points of interconnection specified in the TRAI Regulations are given in the Tables 1.1, 1.2, and 1.3 of para 3.2.5. Interconnection process is to be completed as per the various timelines provided in the Telecommunication Interconnection Regulations, 2018, as amended from time to time.

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3.1.2. The actual details of interconnection should be worked out in the Coordination Committee set up by the service providers concerned.

3.2. Interconnection for carrying intra-LSA telecom traffic and long distance telecom traffic of wireline access service and wireless access service, i.e., PSTN-PSTN, PSTN-PLMN, and PLMN-PLMN traffic for intra-LSA, inter-LSA, and international calls shall be as follows:

3.2.1. Telecom traffic of intra-LSA calls of wireline access service and wireless access service shall be routed through LSA-level point of interconnection.

3.2.2. Inter-LSA traffic from one LSA to another LSA shall be routed through the telecommunication network of service provider having license or authorisation to provide national long distance service to ensure that the calls are completed to all destinations.

3.2.3. International long distance traffic shall be routed through the telecommunication network of service provider having license or authorisation to provide national long distance service to the international long distance gateway for onward transmission to international networks.

3.2.4. Notwithstanding the provision contained in paragraph above, neither the service provider having license or authorisation to provide wireline access service or wireless access service nor the service provider having license or authorisation to provide international long distance service shall refuse to interconnect their telecommunication networks directly, where the points of presence of both such service providers are located at the same station.

3.2.5. Based on the interconnection scenarios specified in the previous paragraphs, the possible types of interconnections are shown in the following tables, i.e., Table 1.1, 1.2, and 1.3.

Table 1.1 - PSTN to PSTN (For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location
Intra LSA	AS-AS interconnection	At LSA level
Inter LSA	AS-NLD interconnection	

Table 1.2 - PLMN to PSTN, PSTN to PLMN, and PLMN to PLMN
(For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location
Intra LSA	AS-AS interconnection	At LSA level
Inter LSA	AS-NLD interconnection	

Table 1.3 - International calls
(For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location	Remarks
International outgoing calls	AS-NLD interconnection	At LSA level	POPs of AS and ILD are not located at the same station

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	NLD-ILD interconnection	NLD to handover international calls to the ILD gateway	
	AS-ILD interconnection	POP of AS and ILD	Neither the AS nor the ILD shall refuse to directly interconnect their networks where the POP of the AS and the POP of the ILD are located at the same station.
International incoming calls	ILD-NLD interconnection	ILD gateway to handover international calls to NLD	POPs of AS and ILD are not located at the same station
	NLD-AS interconnection	At LSA level	
	ILD-AS interconnection	POP of AS and ILD	Neither the AS nor the ILD shall refuse to directly interconnect their networks where the POP of the AS and the POP of the ILD are located at the same station.

3.3. Sharing of Interconnecting facility

3.3.1. Service providers may share interconnection infrastructure like building space, power supply, duct, transmission medium such as OFC, equipment, etc., for building up transmission link, etc. with other service providers subject to the terms and conditions of the agreement.

4. Details of the point of interconnection

4.1. The complete details of the point of interconnection shall be entered into Schedule 1 provided in the 'Model reference interconnect offer'. This should cover location, physical details, technical details, quality of service and other parameters of the POI.

5. Network elements and infrastructure

5.1. A service provider may supply network elements, such as accommodation in buildings and on towers, power supply, leased circuits, leased switch capacity etc. All agreed rental charges for these elements should be included in Schedule 3.

6. Interconnection implementation

6.1. The Telecommunication Interconnection Regulations, 2018, as amended from time to time, lay down clear procedures for requesting capacity for both initial interconnection and later augmentation of interconnect capacity. Specific timelines are defined for each stage of the interconnection process.

6.2. Aforementioned regulations prescribe maximum time limits however, the guiding principle is that, where capacity is available, reasonable requests should be fulfilled in line with the requested schedule. Any issues arising in this

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regard are expected to be resolved amicably by the Coordination Committee consisting of both the service providers established under the Agreement.

6.3. While the requirement of the interconnect seeker paying for interconnection is emphasized, once interconnection has been established, each service provider should be responsible for ensuring that the quality of service is maintained for their outgoing traffic. It shall therefore pay for additional capacity required for its outgoing traffic. The service providers may, however, negotiate to equally share the costs of common components like leased line for both way traffic.

6.4. Utilisation of the interconnect capacity and the need for augmentation will be determined as prescribed in the aforementioned regulations.

7. Network engineering

7.1. Article under the heading 'Network and Transmission Requirements' of the model reference interconnect offer, prescribes the framework for traffic and network engineering. Since interconnection establishes a connectivity between two networks, the peak traffic at the interconnection point should be used for dimensioning and network engineering.

7.2. Service providers are encouraged to adopt alternative routing arrangements to enhance network efficiency and strengthen network resilience. Adequate safety margins shall be maintained in the design of backbone routes to prevent overloading of backbone links during periods of congestion or link failures.

8. Technical Specifications and Standards

8.1. National standards, as established by the Department of Telecommunications, Telecommunication Engineering Centre, shall be adhered to. The interconnection agreement should include a list of all applicable standards.

8.2. In the absence of national standards, those set by the International Telecommunication Union should be followed. If International Telecommunication Union standards are also unavailable, relevant international industry standards may be applied.

9. Network Integrity

9.1. Network integrity refers to the ability of a telecommunication network to function as intended and maintain reliable operation when interconnected with other networks. It is critical for interconnection among service providers, as it safeguards the proper functioning of individual networks and systems. Network integrity is a fundamental principle for safe and reliable interconnection.

10. Interconnection usage charges

10.1. All types of interconnection usage charges such as origination charges, termination charges, transit charges, and carriage charges, as applicable, shall be as per relevant TRAI regulations as amended from time to time.

11. Billing and Inter-carrier Charging

11.1. Each service provider is normally responsible for billing of its own subscribers, however, the long distance service providers shall have to make their own arrangements to bill customers for their services. They may either bill

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directly or negotiate with the access service providers to bill and collect revenue on their behalf. Wherever call carriage involves the networks of two or more service providers, the collection from the subscriber has to be then distributed on an agreed basis. The agreed arrangements shall be described in the agreement and agreed procedures shall be placed in an appropriate annexure of the agreement.

12. Commercial Terms and Conditions

12.1. Article under heading 'Commercial Terms and Conditions' of the model reference interconnect offer, lays down the commercial terms and conditions, and shall be based on relevant TRAI regulations, as applicable. Both the service providers shall include mutually agreed commercial terms and conditions in their interconnection agreement. The cost of upgradation and/or modification of interconnecting networks to meet the service requirements of the service shall be met by the service provider seeking the interconnection. However mutually negotiated sharing arrangements for cost of upgrading and/or modification of the interconnecting networks between the service providers shall be permitted.

13. Coordination and settlement of disagreement

13.1. Operational issues may arise between interconnected networks, whether technical or financial. To prevent such issues from escalating into disputes, they should first be addressed through formal discussions in coordination committee meetings between the service providers. A formal Coordination Committee consisting of representatives from both the service providers should be established under the agreement to develop detailed procedures based on experience, resolve differences, and, wherever necessary, seek TRAI's guidance on the interpretation of regulations. If the Committee is unable to reach a settlement, the service providers remain free to pursue other available avenues for resolution.

14. Termination and Review

14.1. The interconnection agreement is expected to last for the period mentioned in the agreement. Under certain circumstances, the interconnection agreement may have to be suspended or terminated. Relevant paragraph under agreement shall lay down the conditions relating to these matters. However, any discontinuation of services to customers shall require the permission of the Authority.

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Annexure-A

Letter of acceptance of Reference interconnect offer

No. Dated the _____

To

Sub: Acceptance of Reference interconnect offer

Sir,

1. We are licensed/authorised to provide the following telecommunication services:

2. (i) We notify the acceptance of your published Reference Interconnect Offer in terms of Clause 2.1.1 of the TRAI's Reference Interconnect Offer Guidelines (Annexure-II).

Or

(ii) We notify the acceptance of your published Reference interconnect offer pending execution of an individualized Agreement in terms of Clause 2.1.2 of the TRAI's Reference Interconnect Offer Guidelines (Annexure-II).
(cancel the alternative which is not applicable)

3. We request you to provide the following interconnection and / or services:

4. The designated contact person on our behalf is

Yours faithfully,

Authorised Signatory

Name and signature _____
Name of the company_____
Service area of License/Authorisation_____"

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13. The heading "Annex - A" in the Explanatory Memorandum to the principal regulations shall be deleted.

14. The Annex-B and Annex-C to the principal regulations shall be deleted.

27/11/2026

(Harinder Kumar)
Secretary

Note 1. The principal regulations were published vide F. No. 409-10/2002-TRAI (FN) dated 12.07.2002 (2 of 2002)

Note 2. The Explanatory Memorandum explains the analysis of comments and counter-comments received during consultation process for the Telecommunication Interconnection (Reference Interconnect Offer) (Amendment) Regulations, 2026 (12 of 2026).

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Explanatory Memorandum

to

The Telecommunication Interconnection (Reference Interconnect Offer) (Amendment) Regulations, 2026

1. Introduction

1.1. Interconnection in telecom refers to the commercial and technical arrangements that allow authorised entities or licensees to connect their telecommunication equipment, networks, and services, enabling their users to access the users, services, and networks of other authorised entities or licensees.

1.2. The Authority has undertaken a review of the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 (2 of 2002), which was notified and came into force on 12th July 2002.

1.3. The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, ensured that all licensed telecommunication service providers have access to transparent, non-discriminatory, and standardized interconnection terms with service provider holding Significant Market Power (SMP). This regulation aimed to ensure fair competition in the telecom sector by preventing dominant operators from leveraging their market position to place smaller or new entrants at a disadvantage. By requiring operators with SMP to publish a reference interconnect offer for each service and licensed area, the regulation provides a framework for interconnection agreements, including technical, operational, and commercial terms. This framework safeguards the interests of consumers by ensuring that telecom traffic can be seamlessly routed across networks, facilitating the entry and growth of new operators.

1.4. This Explanatory Memorandum sets out the background, rationale and considerations underlying these amendments, to enable stakeholders to understand the issues addressed and the Authority's approach in formulating these regulations.

2. The present exercise to review the regulatory framework for interconnection in India

2.1. The Authority issued a pre-consultation paper dated 3rd April 2025 and subsequently issued a consultation paper on 'Review of existing TRAI Regulations on Interconnection matters' on 10th November 2025 to seek the views of stakeholders on various aspects of these regulations. Stakeholders were requested to submit their written comments and counter-comments by the extended last date of 15th December 2025 and 29th December 2025 respectively. An open house discussion was held with the stakeholders on 28th January 2026. The issues raised in the consultation paper, submission of stakeholders through comments and counter comments and during the open house discussion, have been examined in the succeeding paragraphs.

3. Analysis of the issues related to the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002

3.1. In the consultation paper dated 10th November 2025, the Authority sought views from stakeholders on the various issues related to The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002. The relevant issues which have been discussed in this explanatory memorandum are as follows:

a. Determination of significant market power and revisions in The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, if any. Need for revision in the current categories of 'Services' and 'Activities' to determine significant market power.
b. Publication of reference interconnect offer by the service provider with significant market power.
c. Necessary financial disincentive framework.

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The submissions received from stakeholders have been summarized in the subsequent sections followed by the analysis and views of the Authority on these issues.

3.2. **Examination of determination of SMP, need for revisions in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, if any, publication of reference interconnect offer by service provider on its website and necessary financial disincentive framework.**

3.2.1. The existing licensing framework, regulatory framework and the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026 under the Telecommunications Act, 2023, in respect of these issues are, *inter alia,* discussed in the following paras.

3.2.2. Chapter IV of the Unified License issued by the Department of Telecommunications contains, *inter alia*, the following provisions relating to network interconnection:

"27.3 Interconnection between the networks of different Licensees for carrying circuit switched traffic shall be as per national standards of CCS No.7 and for carrying IP based traffic as per Telecom Engineering Centre (TEC) standards as amended from time to time by Telecom Engineering Centre (TEC) and also subject to technical feasibility and technical integrity of the Networks and shall be within the overall framework of interconnection regulations/ directions/ orders issued by the TRAI/ Licensor from time to time. For inter-networking between circuit switched and IP based network, the Licensee shall install Media Gateway Switch. Further, the Licensor may direct the LICENSEE to adopt any other technical standards issued by TEC on interconnection related issues."

3.2.3. The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, provides as follows:

"3.1 A Service Provider with significant market power shall be required to publish within 90 days of issue of this Regulation, a Reference Interconnect Offer (RIO) describing inter-alia the technical and commercial conditions for interconnection based on the model RIO as at annex 'B' and the guideline as at annex "C", as modified from time to time, with the prior approval of the Authority. The RIO so published by the Service Provider shall form the basis for all Interconnection Agreements to be executed hereafter."

And

"3.3 A Service Provider shall be deemed to have significant market power if it holds a share of 30% of total activity in a licensed telecommunication service area. These Services are categorized as Basic Service, Cellular Mobile Service, National Long Distance Service and International Long Distance Service."

And activity is defined as follows:

"...2(ii) 'Activity' would mean and include any one or more of the following:
(a) Subscriber base
(b) Turnover
(c) Switching Capacity
(d) Volume of Traffic"

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3.2.4. Further, the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, also contains levels of interconnection between different networks as provided in the para 4.4 and 4.5 of Annex - C titled 'Reference Interconnect Offer Guidelines' as follows:

"PSTN Interconnections

Table 1.1 - PSTN to PSTN (Out-going Traffic)

Type of Call	*POI*	*Remarks*
Local	*At SDCC Tandem or Local Exchange level situated in the same SDCA as per mutual agreement.*	*BSO- BSO*
Intra-Circle Long Distance (Note 2)	*(i) Terminating SDCC / LDCC* *(ii) Originating SDCC / LDCC, if BSO has no POI at the terminating end.*	*BSO- BSO (Far-end)* *BSO-BSO (Near-end)*
Inter-Circle	*BSO to hand over originating traffic at the SDCC in the same SDCA in which it has originated or by mutual agreement as per licence terms and conditions at the LDCC of originating LDCA*	*BSO to NLDO (Near-end)*
International	*BSO to hand over originating traffic at the SDCC in the same SDCA in which it has originated or by mutual agreement as per licence terms and conditions at the LDCC of originating LDCA.* *NLDO to hand over international traffic at the Gateway Switch of ILDO* *To the gateway switch of the ILDO in case the ILD Gateway Switch and the BSO's Tandem/Transit Switch are located at the same station of level I TAX.*	*BSO to NLDO (Near-end)* *NLDO to ILDO* *BSO to ILDO (Near-end) for traffic of same SDCA*

Table 1.2 - PSTN - PSTN (In-coming Traffic)

Type of Call	*POI*	*Remarks*
Local	*Same as Table 1.1*	
Intra-Circle Long distance	*Same as Table 1.1*	
Inter-Circle	*NLDO to hand over terminating traffic by mutual agreement as per licence terms and conditions in the destination LDCA at SDCC or at LDCC POI.*	*NLDO to BSO*
International	*Level I TAX where the ILDO Gateway Switch is located.* *NLDO to hand over International traffic to the BSO at the terminating SDCC or by mutual agreement as per licence terms and conditions at terminating LDCC.*	*ILDO to NLDO* *NLDO to BSO*

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	Terminating local network at tandem/transit in case the ILD Gateway Switch and the Access Provider's Tandem/Transit Switch are located at the same station of level I TAX.	*ILDO to BSO (for traffic terminating in same SDCA)*

Note 1. New National Long-Distance Operator(s) can make necessary interconnection arrangements with other NLDOs, to ensure delivery of calls at places where POP is yet to be established as per their network rollout obligations.
Note 2. Intra-Circle Traffic may also be handed over to an NLDO by mutual consent.

Interconnection between PLMN (Public Land Mobile Network) and PSTN

Table 2.1 - Traffic from PLMN to PSTN

Licensed Area	*POI*	*Remarks*
A. Metros		
1. Local Call	*Transit Exchange (Tandem)* *Local Exchange by mutual agreement*	*To BSO*
2. Inter-circle call	*Designated Level I TAX located in the Metro.*	
3. International Call	*Designated Level I TAX of NLDO (or) Gateway Switch of ILDO if ILDO Gateway Switch and GMSC are located at the same station of Level I TAX (Metro).*	*Designated by NLDO / ILDO*
B. Circles		
1. Intra - Circle Call	*Level I TAX for both transit to other LDCAs/termination in the LDCA in which it is located.* *Level II TAX for traffic terminating in the destination LDCA, at the request of interconnection seeker. POI below TAX level may also be provided with mutual agreement for terminating traffic.*	*To BSO*
2. Inter - circle Call	*The traffic can be handed over at the designated Gateway Level I TAX of NLDO through any one of its Gateway MSC.* *CMTS provider cans also handover traffic to NLDOs at the POP situated in the LDCA at the location of the Gateway MSC or MSC in a Circle.* *The NLDO shall handover terminating traffic in the destination LDCA at the SDCC or by mutual agreement as per licence terms and conditions at LDCC POI.*	*To NLDO* *NLDO to BSO*
3. International Call	*The traffic can be handed over at the designated Gateway Level I TAX of NLDO through any one of its Gateway MSC.*	*To NLDO*

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	CMTS provider cans also handover traffic to NLDOs at the POP situated in the LDCA at the location of the Gateway MSC or MSC in a Circle. *To the Gateway Switch of the ILDO if ILDO's Gateway Switch and the GMSC are located at the same station of level I TAX*	*To ILDO*

Note 1. New National Long-Distance Operator(s) can make necessary interconnection arrangements with other NLDOs, to ensure delivery of calls at places where POP is yet to be established as per their network rollout obligations.

Table 2.2 Traffic from PSTN to PLMN

Licensed Area	*POI*	*Remarks*
A. Metros		
1. Local Call	*Transit Exchange (Tandem)* *Local Exchange (by mutual agreement)*	*To CMTS provider*
2. Inter-circle call	*BSOs shall handover the call at the designated TAX of NLDO in the originating Metro.* *The traffic can be handed over at any one of the GMSC through a designated Level I TAX of NLDO* *NLDO can also handover traffic to CMTS provider at the POP situated in the LDCA at the location of GMSC or MSC in the Metro / Circle.*	*BSO to NLDO* *NLDO to CMTS provider*
3. International Call *(Out-going)* *(In-coming)*	*BSOs shall handover the call at the designated TAX of NLDO in the originating Metro* *To the gateway switch of the ILDO in case the ILD Gateway Switch and the Access Provider's Tandem/Transit Switch are located at the same station of level I TAX (Metro).* *The ILDO to handover at the Gateway MSC of the Cellular Operator if this Gateway MSC and the Gateway Switch of the ILDO are located at the same location of Level I TAX (Metro).* *The traffic can be handed over at any one of the GMSC through a designated Level I TAX of NLDO.*	*BSO to NLDO* *BSO to ILDO (Near end for traffic of same SDCA)* *ILDO to CMTS Provider* *NLDO to CMTS provider*

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	NLDO can also handover traffic to CMTS provider at the POP situated in the LDCA at the location of GMSC or MSC in the Metro / Circle.	
B. Circle		
1. Intra -Circle Call	*Level I TAX or Level II TAX of the originating LDCA. If no POI is available at Level II TAX then at GMSC of the CMTS provider subject to mutual agreement.*	*BSO to CMTS provider*
2. Inter-circle call	*BSO to hand over originating traffic at the SDCC in the same SDCA in which it has originated or by mutual agreement as per licence terms and conditions at the LDCC of originating LDCA.* *The traffic can be handed over at any one of the GMSC through a designated Level I TAX of NLDO. NLDO can also handover traffic to CMTS provider at the POP situated in the LDCA at the location of GMSC or MSC in the Metro / Circle*	*BSO to NLDO* *NLDO to CMTS provider*
3. International Call *(Out-going)*	*BSO to hand over originating traffic at the SDCC in the same SDCA in which it has originated or by mutual agreement as per licence terms and conditions at the LDCC of originating LDCA.* *NLDO to hand over International calls to the ILDO at the Gateway Switch.*	*BSO to NLDO* *NLDO to ILDO*
(In-coming)	*To the gateway switch of the ILDO in case the ILD Gateway Switch and the Access Provider's Tandem/Transit Switch are located at the same station of level I TAX.* *ILDO to hand over incoming international traffic to NLDO at the Gateway Switch of ILDO* *The traffic can be handed over at any one of the GMSC through a designated Level I TAX of NLDO.* *NLDO can also handover traffic to CMTS provider at the POP situated in the LDCA at the location of GMSC or MSC in the Metro / Circle.* *The ILDO to handover at the Gateway MSC of the Cellular Operator if this Gateway MSC and the Gateway Switch of the ILDO are located at the same location of Level I TAX.*	*BSO to ILDO (Near end for traffic of same SDCA)* *ILDO to NLDO* *NLDO to CMTS provider* *ILDO to CMTS provider*

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Note 1 New National Long-Distance Operator(s) can make necessary interconnection arrangements with other NLDOs, to ensure delivery of calls at places where POP is yet to be established as per their network rollout obligations.

Note 2: Different level 1 TAXs can be designated for terminating calls from different circles, in case a circle has more than one level 1 TAX."

3.2.5. CHAPTER-VIII under the heading ACCESS SERVICE of the Unified License issued by the Department of Telecommunications contains, *inter alia*, the following provisions relating to network interconnection:

"6.1 Inter-Circle traffic from one service area to another shall be routed through the network of NLD licensee or the Unified Licensee having authorization of NLD service.

6.2 It shall be mandatory for the LICENSEE to interconnect to/ provide interconnection to all eligible Telecom Service Providers (eligibility shall be determined as per the service Provider's License Agreement and TRAI's determinations/orders/regulations issued from time to time) to ensure that the calls are completed to all destinations. Further, the Licensor may direct the Licensee to implement the process whereby the subscribers could have a free choice to make inter-circle/ international long distance calls through NLD/ ILD Operator.

6.3 International Long Distance traffic should be routed through network of NLD service providers, to the ILD service Provider's gateways for onward transmission to international networks subject to fulfilment of any Guidelines/ Orders/ Directions/ Regulation issued from time to time by LICENSOR/ TRAI. However, the Licensee shall not refuse to interconnect with the ILD Service licensee directly in situations where POP of ILD service licensee and Switches of Licensee's (GMSC/ Transit Switch) are located at the same station of Level-I TAX."

3.2.6. The Central Government vide notification dated 23rd June 2026 has issued the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026, under the Telecommunications Act, 2023, wherein the rule 2(1)(a), *inter alia,* provides the following:

"... "access services" means the telecommunication services provided by a new authorised entity to users for conveyance of voice or non-voice messages through wireline or wireless telecommunication network, and the expression "wireline access services" and "wireless access services" shall be construed accordingly;"

3.2.7. The Central Government vide notification dated 23rd June 2026 has issued the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026, under the Telecommunications Act, 2023, wherein the rule 4, *inter alia,* provides the following:

*"**4. Authorisation for principal telecommunication services.**—Any person may apply to the Central Government under rule 6 to obtain authorisation, as network service operator or virtual network operator or both, to provide one or more telecommunication services that are within the scope and service area of any authorisation specified below:*

(a) unified service authorisation for national service area;
(b) access service authorisation for one or more service areas listed in Schedule B;
(c) wireline access service authorisation for one or more service areas listed in Schedule B;
(d) internet service authorisation for national service area or one or more service areas listed in Schedule B; and
(e) long distance service authorisation for national service area:

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Provided that application to obtain wireline access service authorisation may be made only by a person intending to provide such telecommunication service as virtual network operator."

3.2.8. The Central Government vide notification dated 23rd June 2026 has issued the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026 under the Telecommunications Act, 2023, wherein the rule 71 under Part B: Access Service Authorisation, and rule 79 under Part D: Long Distance Service Authorisation, *inter alia,* provides respectively the following:

"71. Technical and operating conditions.—(1) The following technical and operating conditions apply to every new authorised entity, namely:—

....

(b) it shall ensure that inter service area traffic from one service area to another service area shall be routed through the national long distance network;

(c) it shall ensure that international long distance traffic shall be routed through the national long distance network to the international long distance gateway for onward transmission to telecommunication networks of foreign carriers;"

"(4)...

(a) it shall interconnect and provide interconnection to the telecommunication network of all eligible new authorised entities or licensees which hold any authorisation or license, to ensure that the calls are completed to all destinations;

(b) it shall not refuse to interconnect its telecommunication network directly with the international long distance gateway, in situations where its point of presence and the point of presence of a new authorised entity or licensee having authorisation or license to provide international long distance services are located at the same station;"

and

"79. Technical and operating conditions.—(1) Every new authorised entity shall adhere to the following technical and operating conditions, namely:—

....(b) it shall ensure the carriage of all types of bearer telecommunication traffic so that end-to-end principal telecommunication services may be provided to the users by the new authorised entities or licensees having authorisation or license to provide access services.

....(3) In addition to the technical and operating conditions under sub-rules (1) and (2), following technical and operating conditions apply to a network service operator, namely:—

(a) it shall route international long distance traffic through the international long distance gateway to or from the interconnected telecommunication network of foreign carrier;

(b) it shall not refuse to interconnect its international long distance network directly with the point of presence of another new authorised entity or licensee having authorisation or license to provide access services, where point of presence of both such entities are located at the same station;

(c) it shall for the purpose of carriage of bearer telecommunication traffic establish and provide interconnection to the new authorised entities or licensees having authorisation or license to provide national long distance services; and...."

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3.2.9. The Central Government vide notification dated 23rd June 2026 has issued the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026 under the Telecommunications Act, 2023, wherein sub-rule (2) of the rule 32, *inter alia,* provides the following:

"(2) The network service operator while undertaking interconnection or peering with the telecommunication network of any other network service operator or network service operator licensee shall ensure—

(a) that the transmission systems for interconnection or peering meet the requirements under section 19 of the Act in respect of standards and interface requirements;

(b) that interconnection and peering, as required, is established on Internet Protocol interface for carrying Internet Protocol-based traffic, as per the standards, including those notified under section 19 of the Act:

Provided that the network service operator shall convert circuit switched traffic to Internet Protocol based traffic before sending circuit switched traffic to the telecommunication networks of another network service operator or network service operator licensee;

(c) establishment and maintenance of one or more points of interconnection and peering of sufficient capacity as are reasonably required for transmission and reception of messages in conformity with the standards and conformity assessment measures as may be notified by the Central Government under section 19 of the Act; and

(d) that interconnection and peering is technically compatible and effective.

(3) The network service operator shall provide and update the details of interconnection and peering undertaken with any other network service operator or network service operator licensee to the Central Government on the portal.

(4) The network service operator that has an agreement for interconnection or peering with other network service operator or network service operator licensee, whose authorisation or license, is the subject of revocation, surrender or expiry, shall disconnect any interconnection or peering, and where it has provided any telecommunication resource, withdraw such telecommunication resources on the effective date of revocation, surrender or expiry."

3.2.10. During the consultation process stakeholders were invited to provide their views on whether there is a need to revise the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 in this context.

3.2.11. The next question sought stakeholders' views on whether, for the purpose of interconnection, there is a need to revise the current categories of 'Services' and 'Activities' to determine significant market power and whether the publication of reference interconnect offer on the website of service providers be mandated.

3.2.12. Another question sought stakeholders' views on necessary financial disincentives in interconnection regulations to deter non-compliance, along with their quantification.

3.3. **Views of stakeholders on determination of SMP, need for revisions in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, if any, publication of reference interconnect offer by service provider on its website and necessary financial disincentive framework.**

3.3.1. A few stakeholders submitted that the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, no longer needs updating, as it was only relevant during the early market entry of private operators to ensure interconnection with incumbents. With the Telecommunication

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Interconnection Regulations 2018, interconnection requirements and timelines are already clearly defined. The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, has lost its relevance and accordingly this regulation should be repealed.

3.3.2. These stakeholders further suggested that if any guiding principles of the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, remain relevant, the same could be incorporated as broad, fair, reasonable, and non-discriminatory guidelines within the Telecommunication Interconnection Regulations 2018, while allowing most interconnection matters to be settled through bilateral agreements, reflecting a mature and competitive telecom market.

3.3.3. Some stakeholders submitted that the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, needs to be revised, so that it may serve the present and future requirements. The model reference interconnect offer should be updated to align with the upcoming authorisation framework, including revised definitions, legal references, and changes from the past two decades such as technological advancements, regulatory developments, and digitalization of processes. The model reference interconnect offer should mandate LSA-level interconnection. Evolution to IP-based, centralized, and virtualized networks has made several provisions of the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, such as hierarchical routing and SDCA/LDCA (short distance charging area/long distance charging area) structures obsolete, and retaining them alongside modern frameworks leads to redundancy and regulatory overlaps. The reference interconnect offer should be updated from a legacy, TDM-focused template into a modular, technology-neutral, and IP-native reference offer that aligns with India's evolving telecom architecture. The near-end and far-end handover concepts in reference interconnect offer guidelines may be removed, as they are not relevant under LSA-based interconnection.

3.3.4. One stakeholder stated that the lack of clarity in determining significant market power may have allowed operators to consider themselves as having SMP at their own discretion. There is also uncertainty regarding which documents should be referred to for SMP determination. Therefore, this aspect needs to be clearly addressed in the regulation.

3.3.5. Regarding need to revise the current categories of 'Services' and 'Activity' to determine significant market power, divergent views have been expressed by stakeholders. One stakeholder suggested reviewing the relevance of Switching Capacity in an IP-based environment. Some stakeholders suggested adding Data Traffic Volume as an additional parameter, considering the increasing significance of data traffic. A few stakeholders stated that these should be revised, and a simplified and updated significant market power framework should ensure regulatory proportionality and fairness and reflect both the technological environment and the market structures under current legal framework. On the other hand, a few stakeholders have stated that there is no need to revise the current categories of 'Services' and 'Activity' to determine significant market power for the purpose of interconnection, at this stage.

3.3.6. A few stakeholders submitted that the traffic routing tables (Tables 1.1, 1.2, 2.1, and 2.2) in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, need a complete overhaul. They are based on legacy switching hierarchies of SDCA, LDCA, and TAX, which do not align with modern IP-based networks. The routing framework should be updated to use LSA-level interconnection as the standard handover point. Intra-circle, and inter-circle call scenarios should be redefined around the LSA as the main reference, simplifying and modernizing the routing logic.

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3.3.7. Regarding the publication of reference interconnect offer on the websites of service providers, some stakeholders stated that the telecom industry is already implementing standardized interconnect agreements based on reciprocity principles, offered equally to all competitors, and therefore, there should be no requirement for service providers to publish reference interconnect offer on their websites. Some other stakeholders supported the publication of reference interconnect offer on the websites of service providers. Requiring carriers to publish reference interconnect offer online increases transparency, ensures non-discriminatory access, and helps new entrants and smaller carriers quickly access standard interconnect terms. Public reference interconnect offer provides equitable access to all authorised entities under the new authorisation regime, reduces information asymmetry, prevents preferential treatment by dominant operators, reduces negotiation friction, benefiting industry efficiency and consumer prices.

3.3.8. A stakeholder submitted that mandatory online publication of reference interconnect offer by service providers on its websites is essential for transparency and to protect consumer rights. Publicly accessible, standardized reference interconnect offer including technical, financial, QoS, security, and SLA (service level agreement) details, with version history ensure non-discriminatory access, reduce conflicts, and strengthen consumer trust.

3.3.9. Some stakeholders submitted that the Authority had previously proposed a revision to the definition of SMP through the Telecommunication Tariff Order. However, the said amendment was challenged by certain stakeholders, and the matter is currently sub judice before the Hon'ble Supreme Court. In view of the pending judicial proceedings, the stakeholders have submitted that the present discussion on this issue may be deferred.

3.3.10. Regarding necessary provisions for financial disincentives in interconnection regulations to deter non-compliance, some stakeholders stated that financial disincentives are not required, arguing that a mature telecom market and existing regulatory provisions are sufficient to ensure compliance without additional penalties. Other stakeholders argued in favour of need for financial disincentives. One stakeholder stated that appropriate provisions for financial disincentives should be incorporated into the regulations to deter non-compliance by private and PSU operators alike. Some other stakeholders recommended financial disincentives as a deterrent to ensure adherence to inter-operator rights and obligations. They stated that financial disincentives should be applied only in extreme cases, after giving service providers an opportunity for hearing and establishing conclusive proof of non-compliance.

3.4. **Analysis of the issues and views of the Authority on determination of SMP, need for revisions in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, if any, publication of reference interconnect offer by service provider on its website and necessary financial disincentive framework.**

3.4.1. The Authority has examined the views expressed by various stakeholders during the consultation process, existing licensing framework, regulatory framework and the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026 under the Telecommunications Act, 2023, issued by the Central Government in respect of these issues.

3.4.2. The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, was introduced in 2002 and has not undergone any revision since then. In view of the fact that considerable time has elapsed, as well as the advancements in network deployment, it is necessary to amend this regulation. At the time of its notification, the regulatory framework was designed around legacy circuit-

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switched networks and E1/TDM-based interconnection architectures. However, the telecom sector has since undergone a substantial transition toward packet-switched, IP-based networks, necessitating a corresponding change in the interconnection framework. Further, the legacy structure of interconnection at SDCA and LDCA levels has become largely obsolete due to deployment of core networks and next generation networks, advancement in switching technologies, and revised interconnection frameworks introduced through subsequent regulatory amendments. These developments require establishment of interconnection at the LSA level. Accordingly, provisions in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, based on SDCA/LDCA-level Points of Interconnection (POIs) require necessary amendments. Additionally, in the E1/TDM-based interconnection, a POI consists of a fixed-capacity 2.048 Mbps E1 link, with capacity being provisioned in the multiples of such E1 links. This approach was appropriate in an E1/TDM-based interconnection environment. However, with the migration to the IP-based, packet-switched networks, the interconnection is established over Ethernet or other IP-based interfaces, which support variable and scalable bandwidth. Unlike the fixed link capacity in E1-based interconnection, capacity in IP-based networks can be provisioned in a flexible and granular manner, depending upon traffic requirements, and may range from a few Mbps to several Gbps.

3.4.3. The model reference interconnect offer has also been aligned with the timelines prescribed for migration from E1/TDM-based interconnection to IP-based interconnection under the Telecommunication Interconnection (Third Amendment) Regulations, 2026.

3.4.4. In view of above, the model reference interconnect offer at Annex-B and the guidelines at Annex-C of the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, require exhaustive changes. Therefore, it would be appropriate to substitute these annexures with Annexure-I and Annexure-II, respectively, incorporating the required changes.

3.4.5. Further, the timeline for filing of interconnection agreements and their modifications with the Authority has been revised from thirty days to fifteen days in Annexure-II, so as to align it with the timeline specified in the Register of Interconnect Agreements Regulations, 1999, as amended from time to time.

3.4.6. The reference interconnect offer currently classifies services, *inter alia*, as "basic service" and "cellular mobile services". However, the Telecommunications (Authorisation for Provision of Principal Telecommunication Services) Rules, 2026 issued under the Telecommunications Act, 2023, define and classify "access service" as "wireline access service" and "wireless access service". In view of this, the existing terminology used in the reference interconnect offer needs to be aligned with the nomenclature prescribed under these Rules to ensure consistency and clarity. Accordingly, it is decided that the services shall be categorized as wireline access service, wireless access service, national long distance service and international long distance service.

3.4.7. The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, prescribes the levels of interconnection between different networks in the para 4.4 and 4.5 of Annex – C. These scenarios are discussed in following paras.

(a) Table 1.1 - PSTN to PSTN (Out-going Traffic) - The table specifies the designated POIs for local, intra-circle, inter-circle, and international PSTN-PSTN outgoing traffic. It further specifies POI arrangements for traffic routing between Basic Service Operators (BSOs), National Long-Distance Operators (NLDOs), and International Long-Distance Operators (ILDOs).

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(b) Table 1.2 - PSTN to PSTN (In-coming Traffic) - The table specifies arrangement of POIs for handling incoming PSTN to PSTN traffic. It further specifies the interconnection level between BSOs and other operators for different calling scenarios.

(c) Table 2.1 - Traffic from PLMN to PSTN - The table specifies arrangement of POIs for mobile-originated traffic to PSTN in terms of local, intra-circle, inter-circle, and international calls. It further specifies the traffic handover between Mobile Service Providers and BSOs, NLDOs, and ILDOs.

(d) Table 2.2 - Traffic From PSTN to PLMN - The table specifies arrangement of POIs for PSTN-originated traffic destined for mobile networks, across local, intra-circle, inter-circle, and international calls. It further specifies mechanisms for routing including lower hierarchy routing options (below TAX level).

(e) The arrangements for outgoing and incoming traffic routing, as outlined in Tables 1.1 and 1.2 for PSTN to PSTN communications, alongside Tables 2.1 and 2.2 which govern PLMN to PSTN and vice versa, need changes in view of LSA-level interconnection and closure of SDCA/LDCA level POIs.

3.4.8. In view of LSA level interconnection and closure of SDCA/LDCA level POIs, the PSTN-PSTN, PSTN-PLMN, and PLMN-PLMN traffic for intra LSA, inter LSA, and international calls, the type of interconnection and POI locations are given below in the Table 1.1, 1.2, and 1.3.

Table 1.1 - PSTN to PSTN (For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location
Intra LSA	AS-AS interconnection	At LSA level
Inter LSA	AS-NLD interconnection	

Table 1.2 - PLMN to PSTN, PSTN to PLMN, and PLMN to PLMN
(For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location
Intra LSA	AS-AS interconnection	At LSA level
Inter LSA	AS-NLD interconnection	

Table 1.3 - International calls
(For incoming and outgoing traffic)

Type of Call	Type of interconnection	POI location	Remarks
International outgoing calls	AS-NLD interconnection	At LSA level	POPs of AS and ILD are not located at the same station
	NLD-ILD interconnection	NLD to handover international calls to the ILD gateway	
	AS-ILD interconnection	POP of AS and ILD	Neither the AS nor the ILD shall refuse to directly interconnect their networks where the POP of the AS

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			and the POP of the ILD are located at the same station.
International incoming calls	ILD-NLD interconnection	ILD gateway to handover international calls to NLD	POPs of AS and ILD are not located at the same station
	NLD-AS interconnection	At LSA level	
	ILD-AS interconnection	POP of AS and ILD	Neither the AS nor the ILD shall refuse to directly interconnect their networks where the POP of the AS and the POP of the ILD are located at the same station.

3.4.9. The Authority has examined the need for any revision in the scope of "Activity" as defined in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002, as well as the categorisation of "Services" for the purpose of determination of Significant Market Power (SMP). In this regard, divergent views have been expressed by stakeholders. While some stakeholders have suggested a review and simplification of the existing framework to align it with the evolving technological environment and market structures, others have submitted that the current framework continues to remain appropriate and does not require any change.

3.4.10. After careful consideration of the submissions made by stakeholders, the Authority considers it appropriate to retain four parameters under "Activity", with suitable changes in their terminology and measurement for the purpose of determination of SMP. Accordingly, "Turnover" has been replaced with "Adjusted Gross Revenue" and "Switching Capacity" with "Voice Call Handling Capacity of the Network", while "Subscriber Base" and "Volume of Traffic" have been retained with more clarity regarding their measurement. The rationale and manner of measurement of these parameters are discussed below.

Adjusted Gross Revenue

3.4.11. The existing term "Turnover" does not specify the revenue components to be considered and may include revenue that is not representative of the scale of a service provider's telecommunication operations. Adjusted Gross Revenue, on the other hand, is a defined revenue measure under the licensing and authorisation framework and takes into account permissible exclusions and deductions, including specified amounts passed on to other service providers. It also helps limit duplication where amounts collected by one service provider and passed on to another are reflected in the revenues of both. AGR, therefore, provides a more relevant and consistent basis for assessing the economic significance and market strength of a service provider for determination of SMP. Accordingly, the Authority considers it appropriate to replace "Turnover" with "Adjusted Gross Revenue" under "Activity".

Subscriber Base

3.4.12. The existing parameter "Subscriber Base" did not describe the category of subscribers to be considered for determination of SMP and, therefore, left ambiguity regarding its measurement. Since the

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telecommunication interconnection framework relates to voice calls and SMS, Subscriber Base has been specified as the number of PSTN or PLMN subscribers provided with voice call services, as the case may be. It includes subscribers receiving voice service either independently or together with data services, but excludes connections that are not provided for voice communication. Subscriber Base is relevant to access services and is not applicable to national long distance and international long distance services, as such service providers do not have end-user subscribers for these services. This provides a relevant and comparable measure of subscriber presence for determination of SMP in access services.

Voice Call Handling Capacity of the Network

3.4.13. The existing parameter "Switching Capacity" was framed in the context of switching-centric network architecture and does not adequately describe the voice call handling capability of present-day networks. With the evolution of network architecture, including transition towards IP-based networks, voice calls may be handled through different network elements and functional modules, each having its own designed capacity. The overall capacity of a network to handle voice calls, therefore, depends upon the capacities of the relevant network elements or functional modules involved in call handling and cannot be represented only by the capacity of a switching system.

3.4.14. Accordingly, the Authority considers it appropriate to replace "Switching Capacity" with "Voice Call Handling Capacity of the Network". This parameter represents the capacity for which the network has been designed to handle voice calls, taking into account the relevant network configuration, traffic forecast, concurrent call handling capability, mean call holding time and the applicable Grade of Service (GoS) and Quality of Service (QoS) requirements. This provides a more relevant measure of voice call handling capacity for determination of SMP. For wireline access service and wireless access service, service providers shall furnish the Voice Call Handling Capacity of the Network separately for each licensed or authorised telecommunication service area, so as to enable comparison of network capacity for determination of SMP in the relevant service area.

Volume of Traffic

3.4.15. The existing parameter "Volume of Traffic" did not specify the metric or manner in which traffic was to be quantified, leaving scope for different interpretations and inconsistent measurement by service providers. Therefore, for the purpose of determination of SMP, the Authority considers it appropriate to measure Volume of Traffic in terms of minutes of usage (MoUs) of voice calls.

3.4.16. For access services, both originating and terminating MoUs of on-net and off-net voice calls have been considered so that on-net and off-net calls are measured on a comparable basis. An on-net call involves both originating and terminating ends within the same network, whereas in an off-net call the originating and terminating ends are in different networks. Accordingly, originating and terminating MoUs are considered for both on-net and off-net calls, so that both types of calls are measured on the same basis. Similarly, for national long distance and international long distance services, MoUs of voice calls received and handed over for carriage are considered, so as to measure the traffic handled at both ends of the respective long distance network.

3.4.17. In view of the above, the Authority considers it appropriate to revise the parameters under "Activity" for greater clarity and relevance in the determination of SMP. Accordingly, "Activity" shall comprise

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any one or more of the following four parameters, namely, Adjusted Gross Revenue, Subscriber Base, Voice Call Handling Capacity of the Network and Volume of Traffic, as specified below:

(a) 'Adjusted Gross Revenue', as provided under the applicable licence or authorisation;

(b) 'Subscriber Base', being the number of voice subscribers in PSTN or PLMN, as the case may be;

(c) 'Voice Call Handling Capacity of the Network', being the maximum number of simultaneous voice call sessions that the telecommunication network of a service provider is designed to establish and maintain in a licensed or authorised telecommunication service area, under normal operating conditions, while meeting applicable quality of service standards, without double counting the capacity of shared or overlapping network resources; and

(d) 'Volume of Traffic', being the aggregate minutes of usage (MoUs) of voice calls comprising:

  (i) for access services, on-net originating, on-net terminating, off-net originating and off-net terminating voice calls; and

  (ii) for national long distance and international long distance services, voice calls received and handed over for carriage.

Treatment of VNO Activity

3.4.18. Where a Virtual Network Operator (VNO) provides telecommunication services using the network of its Parent Network Service Operator (NSO), interconnection of the VNO with other authorised telecommunication networks is undertaken through its Parent NSO under the applicable licensing or authorisation framework. Accordingly, for determination of Significant Market Power (SMP) for interconnection purposes, the market presence of the VNO, to the extent it relates to services provided through the network of its Parent NSO, needs to be considered along with that of the Parent NSO. For this purpose, the Subscriber Base, Adjusted Gross Revenue and Volume of Traffic of the VNO in respect of services provided through the network of its Parent NSO shall be attributed to that Parent NSO for SMP assessment. There shall be no double counting of any subscriber, revenue or traffic.

3.4.19. Further, as a VNO uses the network of its Parent NSO, the Voice Call Handling Capacity of the Network shall be counted only for the Parent NSO, and not for the VNO, for SMP assessment.

3.4.20. The existing categories of "Services" also continue to be relevant despite technological advancements, as they are based on functional and service-level distinctions rather than underlying network technologies. However, the nomenclature of "Basic Service" and "Cellular Mobile Service" has been aligned with "Wireline Access Service" and "Wireless Access Service", respectively, as discussed previously.

3.4.21. It is also noted that the parameters specified under "Activity", namely Adjusted Gross Revenue, Subscriber Base, Voice Call Handling Capacity of the Network and Volume of Traffic, provide different measures of the relative market position of service providers for determination of SMP. These parameters apply to all four Services, except Subscriber Base, which applies only to wireline access service and wireless access service.

3.4.22. The methodology for the determination of SMP needs further clarity. The Authority has noted the submission made by a stakeholder regarding the lack of clarity in the determination of SMP, and as per stakeholder this may have led to varying interpretations by service providers, including possibility of self-assessment. The ambiguity highlighted by the stakeholder with respect to the documents or data sources to be relied upon for determination of SMP has also been noted. It is observed that while the

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existing framework provides the broad framework for determination of SMP, there is a need to enhance clarity and uniformity in its application. This issue has been discussed in succeeding paras.

3.4.23. The existing regulation prescribes that a service provider shall be deemed to have SMP if it holds a share of 30% of total activity in a service area. This may give rise to ambiguity regarding the threshold, particularly whether the market share is to be interpreted as less than, equal to, or greater than 30%. The intent of the regulation is to determine entities having substantial share in the relevant 'Services'. In order to remove any ambiguity and ensure uniform interpretation, it is decided to clearly mention in the regulation that a service provider shall be deemed to have SMP if it holds a share of 30% or more in any one or more of the parameters specified under "Activity" in a service area. This interpretation is consistent with the objective of the regulation.

3.4.24. The existing framework neither specifies the authority or entity responsible for determination of SMP nor provides for the periodicity for SMP determination. In the absence of a clearly defined and standardised methodology, the possibility of different interpretations cannot be ruled out, which may lead to potential differences among service providers. To address this concern, the Authority is of the view that SMP should be determined by the Authority in a structured and periodic manner, based on data obtained from service providers. The Authority is further of the view that SMP may be determined on the basis of Subscriber Base, Voice Call Handling Capacity of the Network and Volume of Traffic submitted by the end of the first quarter of every financial year. A subsequent determination may be made after the end of October, taking into account the Adjusted Gross Revenue obtained from the financial reports submitted under the Reporting System on Accounting Separation Regulations, 2016, as amended from time to time, or furnished separately by service providers not required to submit such financial reports. The subsequent determination enables identification of additional service providers having SMP on the basis of Adjusted Gross Revenue, without affecting the SMP status of service providers already determined on the basis of the other three parameters for that financial year. This approach allows the operational data to be considered without waiting for the annual financial reports and Adjusted Gross Revenue to be taken into account when those reports become available. Further, the Authority may seek additional information or clarification from a service provider, particularly in relation to the Voice Call Handling Capacity of the Network, as this parameter depends upon network design and configuration and may require further examination. Such information or clarification shall be furnished within fifteen days from the date of such communication from the Authority.

3.4.25. Accordingly, the data relating to the immediately preceding financial year, being the latest available data, shall be considered for the four parameters under 'Activity', as discussed below.

(a) Adjusted Gross Revenue: Adjusted Gross Revenue, as provided under the applicable licence or authorisation, measures revenue earned over a period. Considering the complete preceding financial year provides an annual measure of the scale of operations and reduces the influence of short-term or seasonal variations. Accordingly, Adjusted Gross Revenue for the complete preceding financial year shall be considered for SMP determination. As the duly audited financial reports under the Reporting System on Accounting Separation Regulations, 2016 are required to be submitted within seven months from the end of the accounting year, i.e., by the end of October where the accounting year ends on 31 March, the Adjusted Gross Revenue-based SMP determination may be undertaken thereafter. A service provider not required to submit such financial reports shall furnish its duly audited Adjusted Gross Revenue separately to the Authority by the end of October.

(b) Subscriber Base: Subscriber Base, being the number of voice subscribers in PSTN or PLMN, as the case may be, represents the position of a service provider at a particular point in time. Since SMP is to be determined for a financial year, the figure as on the last day of the preceding financial

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year represents the latest available position immediately before the financial year for which SMP is being determined. Accordingly, the Authority decides that the Subscriber Base as on the last day of the preceding financial year shall be considered.

(c) Voice Call Handling Capacity of the Network: Voice Call Handling Capacity of the Network may change during the year due to expansion, reconfiguration or decommissioning of network elements. Since SMP is determined for a financial year, the last month of the preceding financial year, i.e., March, being the latest available position, is considered. Further, capacity on a particular day may be lower due to temporary factors such as maintenance or reconfiguration, and may not reflect the capacity for which the network is designed. Accordingly, the Authority decides that the maximum Voice Call Handling Capacity of the Network during the month of March of the preceding financial year shall be considered.

(d) Volume of Traffic: Volume of Traffic, measured in terms of minutes of usage (MoUs) of voice calls, represents the traffic carried during a period and may vary from month to month due to changes in demand and seasonal factors. Considering the MoUs for the complete preceding financial year may not reflect the latest traffic position of a service provider. Therefore, the Authority decides that the total MoUs of the voice calls for the last month of the preceding financial year shall be considered. This provides the latest available monthly measure of traffic immediately preceding the financial year for which SMP is being determined.

Accordingly, the Authority decides that SMP may be determined, in respect of each service in each licensed or authorised telecommunication service area, on the basis of Subscriber Base as on the last day of the preceding financial year, the maximum Voice Call Handling Capacity of the Network during the month of March of the preceding financial year, and Volume of Traffic measured in terms of the total MoUs of voice calls for the last month of the preceding financial year. A subsequent determination may be made on the basis of Adjusted Gross Revenue for the complete preceding financial year.

3.4.26. Data relating to Subscriber Base, Voice Call Handling Capacity of the Network and Volume of Traffic shall be submitted by service providers by the end of the first quarter of every financial year. Adjusted Gross Revenue shall be obtained from the financial reports submitted under the Reporting System on Accounting Separation Regulations, 2016, as amended from time to time, or, in the case of a service provider not required to submit such financial reports, from the duly audited Adjusted Gross Revenue furnished separately to the Authority by the end of October, for consideration in the subsequent determination after the end of October. To ensure continuity in SMP status, the Authority decides that a service provider determined to have SMP shall continue to be treated as such until its SMP status is modified by the Authority. The determination based on Adjusted Gross Revenue shall not affect the SMP status of service providers determined on the basis of the other three parameters for that financial year.

3.4.27. The service provider having significant market power, so determined, shall submit its reference interconnect offer to the Authority for approval within thirty days of such determination, unless its reference interconnect offer published in accordance with the amended sub-regulation 3.1 is already in force. Once the reference interconnect offer is approved, the same shall be published by such service provider on its website, within fifteen days of the approval by the Authority, for the relevant service in the licensed or authorised telecommunication service area.

3.4.28. Under the existing sub-regulation 3.1, a period of ninety days from the date of issue of the regulation was provided for publication of the reference interconnect offer, which was intended to cover its preparation as well as the prior approval of the Authority. However, the existing framework did not

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specify any timeline for submission of the reference interconnect offer to the Authority for approval. In order to ensure that the process is completed in a time-bound manner, it has been provided that the service provider having significant market power shall submit its reference interconnect offer to the Authority for approval within thirty days of the determination of significant market power. Since the reference interconnect offer is to be prepared on the basis of the model reference interconnect offer and the guidelines specified at Annexure-I and Annexure-II, respectively, a period of thirty days is considered adequate for this purpose. Further, as only the publication of an already approved reference interconnect offer is required thereafter, a period of fifteen days from the date of approval is considered adequate for its publication on the website of the service provider.

3.4.29. Sub-regulation 3.2 provides that a published reference interconnect offer may be changed only with the prior approval of the Authority. It has been amended to also enable the Authority to direct a service provider to modify its reference interconnect offer. In such a case, the modified reference interconnect offer shall be submitted to the Authority for approval within fifteen days from the date of such direction. In either case, the modified reference interconnect offer shall be published within fifteen days of its approval by the Authority.

3.4.30. Sub-regulation 3.4 of the existing regulation provides that the Authority may review the guidelines from time to time. The model reference interconnect offer and the guidelines, specified at Annexure-I and Annexure-II respectively, may be amended by the Authority, whenever required. Further, sub-regulation 3.1 requires the reference interconnect offer to be based on Annexure-I and Annexure-II, as amended from time to time. Accordingly, sub-regulation 3.4 has been deleted.

3.4.31. The existing regulation 5 provides for the Authority's decision to be final and binding where a question arises regarding interpretation of the regulations. The Authority considers it appropriate to substitute this provision with a general review provision and to separately provide for issuance of necessary clarifications or guidelines to address difficulties arising in the interpretation or application of these regulations. Accordingly, regulation 5 has been substituted and regulation 5A has been inserted.

3.4.32. In regulation 4, the expression "public network operators" has been replaced with "service providers", so as to align it with the terminology used elsewhere in these regulations and in the licensing and authorisation framework.

3.4.33. Consequential amendments have also been made in existing regulations 1 and 6 to update the references to the substituted Annexures, remove redundant expressions and reflect the revised placement of the Explanatory Memorandum.

3.4.34. Publishing reference interconnect offers on service provider websites is necessary for transparency. The Authority does not agree with the argument that service providers should not be required to publish reference interconnect offers on their websites, despite claims that standardized interconnect agreements based on reciprocity principles are already being implemented in the industry. There is merit in the view that publishing reference interconnect offers on service provider websites helps new entrants and smaller companies plan their business. It also ensures that all companies have access to the terms and conditions of interconnection agreement, thereby facilitating their modification by mutual agreement, if required.

3.4.35. The comments of various stakeholders with respect to the concept of SMP being sub-judice before the Hon'ble Supreme court pertains to the amendment to the Telecom Tariff Order issued by the Authority

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and not relevant to these regulations. The concept of SMP as exists in the principal RIO Regulations has not been altered by the Authority and the relevant provisions of the principal RIO Regulations is neither under challenge nor set aside by any court.

3.4.36. The Authority has examined the comments received from stakeholders regarding necessary financial disincentive framework in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002. Financial disincentives play an important role in ensuring timely compliance with the obligations of service providers, as well as in safeguarding the rights of service providers under the interconnection framework.

3.4.37. The Authority has considered the nature and potential impact of non-compliance with the provisions of these regulations. Sub-regulations 3.1, 3.2 and 3.3A relate to submission of a reference interconnect offer for approval and its publication by the service provider having SMP and furnishing of information to the Authority for determination of SMP and their associated timelines. Compliance with implementation of these provisions is essential. Any delay or non-compliance with provisions relating to submission and publication of a reference interconnect offer by the service provider having SMP and furnishing of information to the Authority for determination of SMP may have a direct and significant impact on other service providers and the proper functioning of the interconnection framework. Such non-compliance, particularly if it continues for a prolonged period, may affect the ability of other service providers to enter into interconnection agreement.

3.4.38. The Authority, therefore, considers it appropriate to prescribe a financial disincentive as a consequence for contravention of the provisions of the regulations, as follows:

(a) If any service provider contravenes the provisions of sub-regulation 3.1, 3.2 or 3.3A, it shall, without prejudice to any penalty which may be imposed under the terms and conditions of its license or authorisation or any other action that may be taken under any Act, or the rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive as provided in the table below:

Sl. No.	**Contravention under the regulation**	**Amount of financial disincentive for each instance of contravention**
1.	Contravention of sub-regulation 3.1 of regulation 3 or sub-regulation 3.2 of regulation 3	(a) Up to fifty thousand rupees per day per instance of contravention for delay up to fifteen days; and (b) Up to one lakh rupees per instance of contravention for each day of delay beyond fifteen days: Provided that the financial disincentive under item (a) and item (b) above put together shall not exceed rupees twenty-five lakh per Service Area for each instance of contravention.
2.	Contravention of sub-regulation 3.3A of regulation 3	(a) Up to twenty-five thousand rupees per day per instance of contravention for delay up to fifteen days; and (b) Up to fifty thousand rupees per instance of contravention for each day of delay beyond fifteen days:

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		Provided that the total amount of financial disincentive under item (a) and item (b) above put together shall not exceed rupees fifteen lakh per Service Area for each instance of contravention.

(b) No order for payment of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention observed by the Authority.

(c) The Authority may decide not to impose any financial disincentive, or impose a lower amount of financial disincentive, for reasons to be recorded in writing.

3.4.39. Payment of financial disincentives:

(a) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority.

(b) If the service provider fails to make payment of financial disincentive under regulation 3A, within a period of twenty-one days from the date of issue of the order for payment of financial disincentive or as stipulated in the order for payment of financial disincentive, it shall be liable to pay simple interest at a rate which shall be two percent (2%) above the one year Marginal Cost of Funds-based Lending Rate (MCLR) of the State Bank of India prevailing as on the beginning of the Financial Year in which the last day of the stipulated period falls.

Explanation: For the purposes of this regulation, a part of the month shall be reckoned as a full month for calculation of interest and a month shall be reckoned as an English calendar month."

3.4.40. The Authority has also considered that a fixed financial disincentive, irrespective of the duration of the contravention, may not adequately distinguish between a short delay and continued non-compliance. Therefore, a graded financial disincentive has been prescribed, with a lower rate for delay up to fifteen days and a higher rate where the delay continues beyond fifteen days. The higher rate for prolonged delay is intended to encourage service providers to take timely corrective action and ensure compliance at the earliest.

3.4.41. For clarity, the financial disincentive shall be calculated on an accumulated basis according to the number of days of delay. For example, in case of a contravention where the applicable rates are ₹50,000 per day for the first fifteen days and ₹1,00,000 per day for each day beyond fifteen days, if the delay is for twenty days, the financial disincentive would be ₹7.5 lakh for the first fifteen days and ₹5 lakh for the next five days, making a total financial disincentive of ₹12.5 lakh, subject to the applicable ceiling.

3.4.42. At the same time, the Authority is of the view that there should be a reasonable ceiling on the financial disincentive so that the financial liability does not continue indefinitely. Accordingly, a ceiling of rupees twenty-five lakh per Service Area for each instance of contravention of sub-regulation 3.1 or 3.2 and rupees fifteen lakh per Service Area for each instance of contravention of sub-regulation 3.3A has been prescribed.

3.4.43. A lower rate and ceiling have been prescribed for contravention of sub-regulation 3.3A, having regard to the nature of the obligation to furnish data for determination of SMP. A higher rate and ceiling have been prescribed for contravention of sub-regulations 3.1 and 3.2, as delay in submission, modification

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or publication of a reference interconnect offer may directly affect the availability of approved interconnection terms to other service providers.

3.4.44. The Authority is also of the view that the quantum of financial disincentive should not be determined solely by reference to the number of days of delay. The nature, extent, duration, frequency and impact of the contravention may vary from case to case and should also be considered while determining the quantum of financial disincentive.

3.4.45. The Authority is of the view that a service provider should be given a reasonable opportunity to represent against the contravention before financial disincentive is imposed. This will ensure fairness and enable the Authority to consider the submissions of the service provider before determining the financial disincentive.

3.4.46. The Authority is of the view that the financial disincentive imposed on a service provider should be paid within the period specified in the order. To ensure timely payment and discourage delay, simple interest on the outstanding amount of financial disincentive has been provided in case of delayed payment. The Authority considers that linking the rate of interest to the one-year Marginal Cost of Funds-based Lending Rate (MCLR) of State Bank of India, with an additional two percent, would provide an objective basis for determining the applicable rate. Accordingly, the service provider shall be liable to pay simple interest on the outstanding amount at the said rate prevailing at the beginning of the relevant financial year. It has also been provided that for the purposes of this regulation, a part of the month shall be reckoned as a full month for calculation of interest and a month shall be reckoned as an English calendar month.

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