



**ITI LIMITED**  
**ITI Corporate Office**  
**(Projects & Planning Division)**  
**ITI Bhavan**  
**Dooravani Nagar**  
**BANGALORE – 560016**

**CIN No: L32202KA1950GOI000640**

**REQUEST FOR PROPOSALS (RFP)**

**for Selecting Technology Partners for BSNL's 4G Turnkey Project**

**Ref: COR/PP/4G/20-21/01**

**Dated:12th Jan, 2021**

**INTRODUCTION:**

ITI Limited is a CPSU of Department of Telecom, Govt. of India, engaged in delivering large turnkey projects, in the field of IT/Telecom/networking and working as Master System Integrator for Planning, Manufacturing, Design, Supply, Installation, commissioning and maintenance of PAN India Networks and other IT and Telecom related infrastructure and services. In the same string ITI Limited has decided to contribute in the proliferation of indigenously manufactured 4G Mobile service equipment in the Indian Telecom Space through first such opportunity in the form of forth coming BSNL's 4G TENDER under Atma Nirbhar Bharat Mission.

In order to service such opportunities such as by BSNL/MTNL etc., offers are invited from the Indian companies who are OEMs/ODMs of Core or/and RAN used in 4G Mobile having the expertise in relevant field and are empanelled under our policy in place called **“ENTERPRISE MANUFACTURING & BUSINESS ALLIANCE” [EMBA]**, open in nature.

Accordingly, Proposals are invited through this RFP from such Intending Technology Partners (ITP) who have the technical strength to deliver 4G and are OEM's to qualify all the technical requirements of the EoI of BSNL invited vide its EOI NO. MM/NWP-GSM-II/REG-POC-4G/E-697/2021 dated 01.01.2021 for servicing either Core or RAN or Both on technology front either by exhibiting their existing experience or by way of a POC to be conducted by BSNL to prove the claim of the ITP. The detailed document issued by BSNL in this regard is also obtained by ITI Ltd and is enclosed as an Annexure-VIII for further clarity to the Intending Technology Partners (ITPs).

The selection of the intending technology partners who meet all the preliminary and essential Criteria except financial Turn Over, as laid down in BSNL's 4G EoI and this RFP, shall be based on the best overall business proposal and best weighted Financial Quote as asked in Financial Bid. **Proposals are invited from ITPs, under one bid two envelop**

system one for Technical Proposal and the other for Financial Proposal. The Due Date for submitting the bid is 28<sup>th</sup> January 2021 by 11:30 hours.

The bids will be opened on 28<sup>th</sup> Jan 2021 at 15:00 hours.

Financial bids will be opened for only those ITPs, qualifying the technical proposal evaluation. The date of financial bid opening will be intimated later.

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<b>I. TENDER INFORMATION</b>		
<b>1</b>	<b>Type of tender</b>	
i.	Number of bid submission stages for tender	Single stage bidding
ii.	No. of envelopes for submission of bids	Two Nos. (Note-1)
iii.	Stages of Opening	Two (Note-2)
iv.	Bid Validity Period / Validity of bid Offer	150 days from the tender opening date.
v	<b>Note-1</b> The bidder shall submit Technical & Financial bid simultaneously.	
vi	<b>Note-2</b> The bids will be evaluated technically first and thereafter financial bids of technically compliant bidders only shall be opened.	
vii	The tender offer shall contain two physical envelopes system, the first envelope will be named as Techno-commercial envelope and will contain documents of	

	bidders satisfying the eligibility/Technical & commercial conditions and 2nd envelop will be named as financial envelope containing financial quote.
viii	The envelopes shall bear the name of the ITP , RFP Number and the words 'DO NOT OPEN BEFORE' (due date & time).
ix	The envelope shall indicate the name and complete postal address of the bidder to enable the purchaser to return the bid unopened in case it is declared to be received 'late'.

<b>II. TECHNICAL BID</b>	
<b>1</b>	<b>Scope of Work</b>
<b>i.</b>	Planning, Engineering, Supply, Installation, Integration, Redeployment, Testing, Commissioning & Annual Maintenance including interoperability issues of BSNL's existing and new 4G Mobile Network in allotted Zone (s) (North, East, West & South Zones of BSNL and Delhi & Mumbai LSA of MTNL zone) on Turnkey Basis as per requirements as applicable in the scope of work of prospective BSNL tender.
<b>ii.</b>	To prove his technology either by way of experience certificates or through a PoC (Proof of Concept) as per the requirement of BSNL DNIT MM/NWP—GSM-II/REG-POC-4G/E-697/2021 dated 01-01-2021.
<b>iii.</b>	The roles and responsibilities of ITI Ltd. (ITI) and Technology Partner (TP) will be based on Models of Engagement.

<b>2</b>	<b>Essential Eligibility Criteria for the Applicants</b>	
	<i>Pre-Qualifying Criteria</i>	<i>Compliance Document</i>
<b>i.</b>	<p>The ITP should have been selected as MoU partner vide ITI RFP <b>Ref: Corp/PP/EMBA/20-21/01 dated 20-05-2020 and/or Ref: Corp/PP/EMBA/20-21/02, Dated 13-10-2020 and Corp/PP/EMBA/20-21/03, dated 07.01.2021.</b></p> <p>The ITPs who have applied for the empanelment and the application is under process may also be considered provided, the company meets all the conditions of empanelment.</p>	<i>Provide the Details of MoU with ITI Ltd. Under the EMBA, EoI.</i>
<b>ii.</b>	The ITP should be a company registered in India having its office in India and incorporated under the Indian Companies Act, 1956/2013. The ITP to comply with the latest DPIIT guidelines.	<i>The details of the company and Certificate of Incorporation</i>

iii.	The ITP and its parent company shall not have any equity stake or operating partnership in mobile segment with any other cellular operators except MTNL in India. The Successful ITP shall not acquire equity share/enter into partnership with any other cellular mobile operator except MTNL in India for a period of 2 years from the date of the Detailed RFP. The ITP shall furnish a certificate in this regard. However, entering into operating partnership with any cellular operators for the limited purpose of any government project like Smart City etc. is allowed and will not be considered as ineligibility.	<i>A compliance statement for the stipulation.</i>
iv.	The ITP should have sufficient experience as mentioned in the BSNL's DNIT for 4G EoI and to provide supporting documents to this effect or to be ready to go for proving its technology solution, through PoC on No Cost No Commitment Basis.	<p><i>(i). In case of ITP having sufficient experience, the documentary evidence be submitted.</i></p> <p><i>(ii). In case not possessing enough experience, an assent to prove its technology through POC be provided.</i></p>
v.	ITP should not have been blacklisted by any Government Department/ CPSU/State PSU/GST authorities and shall submit a self-declaration to this effect.	<i>A Declaration of not being under any black list or Barring.</i>
vi.	The offered core shall be Indian and the IPR or copyright/License for the Source code of the software of core elements shall be owned by the ITP company. The Company must own or have unrestricted, irrevocable access and license to modify the source code and provide software support for all the future versions of the software. A certificate in this regard is to be submitted under the signature of Board Director or Key Managerial Personnel of the company as defined under Indian Companies Act 1956/2013. Relevant document(s) forming the basis for the certificate shall be submitted along with the proposal. An unconditional declaration of owning IPR of an Indian Core shall be provided by the Technology Partner.	<p><i>(i). An undertaking of owning IPR (Intellectual Property Right) or Copyright/License for the source Code needs to be submitted.</i></p> <p><i>(ii). An undertaking to have under stood and ready to sign an agreement by the appropriate authority before PoC, related to deposition of source code of Core and RAN in escrow account and operation thereof, as per the relevant clause of BSNL's DNIT</i></p>
vii.	The ITP should meet the eligibility criteria of the "Detailed Notice Inviting e-Tender" released by BSNL for PoC as part of rollout of 4G Network.	<i>A Compliance statement is needed.</i>

viii.	The Technology offered shall be 5G ready	<i>A Compliance statement is needed.</i>
ix.	The Transfer of Technology to ITI Ltd by the selected RAN TP for manufacturing Radios for e-Node Bs (RRUs) is essential condition.	<i>A Compliance Statement is needed</i>
<b><i>The Financial bids of only such ITPs shall be opened who qualify above pre-conditions.</i></b>		
<i>The reference of BSNL DNIT in this RFP shall also mean and include the clarifications and amendments issued there to.</i>		

<b>3</b>	<b>General Commercial Conditions</b>	
i.	The detailed BoM of Turn Key Solution to be provided to BSNL towards servicing its 4G roll out would be known exactly once the 4G Tender comes up likely to be available after POC phase, but the same has been attempted based on industry practice and is available as Schedule of Requirements (SOR) against Core & RAN at <b>Annexure-III</b>	
ii.	The turn key solution detailed above has various activities which would obviously need to be completed in strict time lines as provided in the BSNL Tender and in order to accomplish the task with best efficiency and within timelines, it has been planned to partner the responsibilities between ITI Ltd and the Technology Partner. The distribution matrix of the responsibilities of the project is worked out in number of packages (Models) and same is available at <b>Annexure-IV</b> .	
iii.	As evident from the preamble of RFP, the Technology partner shall have major role to play to Design, Plan, Engineer and get the Network integrated, handling various interoperability issues with the existing mobile network of BSNL and with various other allied components. ITI Limited will front end the whole business, administer and would undertake supply and services as per the responsibility index with a major focus on in-house manufacturing for RF Radios. The pay-out shall be in proportion of the responsibilities carried out by partners including due weightage for partnering the ownership rights of the technology. The responsibility index tables (Models), part of financial proposal has been assigned the due weightage as per the business suitability of ITI Ltd and the overall assessment would accordingly be considered and provided in this RFP.	
iv.	The ITP shall understand and comply with the Responsibility Matrix along with the weightages given, model wise and provide the financial quotes, accordingly.	
v.	As provided in the DNIT of BSNL, the TP shall be required to deposit the source code of Core & RAN in an Escrow account. The escrowed version of the software shall be upgraded/ updated regularly and will be the same as the version in the field. The source code should be compiled with non-proprietary compilers by the Technology Partner/ITI Ltd and installed in the field. A draft escrow agreement,	

	as specified in BSNL EoI, shall have to be signed and executed under the signature of Board Director or Key Managerial Personnel of the partner, as defined under the Indian Companies Act 1956/2013, before the start of PoC. An undertaking along with draft Escrow agreement signed by authorized signatory, to the effect that the ITP understands and agrees to the terms of draft escrow agreement, shall be part of the proposal to BSNL for the PoC. The above-mentioned draft agreement is available with the EoI's detailed DNIT document (Refer Annexure-VIII).
vi.	The payment to the selected Partner towards its deliverables after adjusting and calculating the Margins, Royalty and TSSA (Technology Steering and Support Amount) etc. will be made on receipt of payment from BSNL. An escrow account shall be opened to ensure timely payment to the TP.
vii.	The manufacturing of Radios for the e-Node Bs shall be the focused area of ITI and would like to exploit this capability to ensure Make in India and Atma Nirbhar Bharat and to play an important role towards in-house Manufacturing. This responsibility has therefore been given due weightage. <b>Also, in order to enable ITI Ltd to manufacture the RRUs, the TP shall necessarily Transfer the RRU Technology to ITI to manufacture the same.</b>
viii.	A detailed proposal of Technology Transfer (ToT) for the equipment to be manufactured by ITI along with Gerber data, PCB layout, component sourcing details including arrangement with Chipset supplier as applicable, through-hole details and mechanical assembly details etc.-etc. are to be provided by the Partner so as to ensure smooth transfer of technology and delivery of finished product. Commercial compensation details towards ToT and manufactured Radios by ITI based on the ToT is given under "Special Conditions". The ToT activity and manufacturing shall start parallelly and completion of POC would not hamper the process of manufacturing.
ix.	The BOM/BOQ will be as per Prospective BSNL RFP/Tender and exact quantities for supplies and services shall be as per the zone awarded.
x.	The end-to-end integration, acceptance testing and commissioning of the project will be the sole responsibility of the selected Technology Partner (TP). In case of any unresolved conflict and technical overlap, the Core Partner shall have overall responsibility to resolve.
xi.	The TP shall impart necessary training to ITI Engineers for undertaking manufacturing, installation, integration and acceptance testing for successful roll out of the 4G Network and operate and support the services. The TP shall also impart training to BSNL Staff on Operation & Maintenance as per the scope of BSNL's 4G Tender. The higher level Maintenance however, shall remain in the scope of TP only.
xii.	As already explained, the TP shall design and engineer the delivery of 4G network in the awarded zone by providing the quantities of each and every component what would be necessary to run the customer's network as per the traffic needs and associated control and management plane of BSNL. TP will be responsible for

	any short-fall in the BoM/BoQ as needed to meet the tendered specifications and service requirements of customer and the same shall be made good at his cost.
xiii.	Any Liquidated Damage (LD) imposed by BSNL for delayed deliveries or services as per the terms and conditions of BSNL's tender, same will be borne by ITI Ltd and TP in proportion of their responsibility and cause of LD. An appropriate mechanism and frame work shall however be decided before taking up the roll out so as to decide the clear line of responsibility in cases of overlapping jurisdiction.
xiv.	To deal with any unforeseen eventuality or a challenge in PoC or selection of TP, ITI Ltd may go for any other technically qualified associate to service the Reservation Quota (RQ) available to ITI by BSNL.
xv.	The consortium Agreement between ITI Ltd and Selected TP shall be signed by authorized signatories of ITI Ltd and Technology Partner duly supported by Power of Attorney issued by respective parties in the name of these signatories.
xvi.	Although the POC shall be on NC-NC basis but once the POC is successful the equipment used for PoC by TP shall be relocated to suitable site(s) in execution phase and payment reconciled in favour of TP accordingly.
<b>4.</b>	<b>The POC Performance Security Declaration and PBG</b>
i.	<b>PoC Performance Security Declaration:</b> Although BSNL DNIT stipulates for a Performance Security of Rs.5 Crores, but as per the latest MoF instructions, the intending TP need to submit a Bid Declaration in the given format in place of Performance security. In the instance of shortlisted technical partner withdrawing the offer mid-way of POC or after PoC being successful and ITI Ltd having submitted the acceptance to BSNL towards its 4G Tender with the selected TP as its technology partner, a deterring action shall be taken in such cases. In case of submission of PoC Security declaration and default by TP happens as above, ITI Ltd would be entitled to take up the process of barring such non-serious and defaulting company as per the stipulations of the PoC Security Declaration. The intentional or non-seriousness in completing the PoC by the TP shall also be taken as default of mid-way withdrawal from the process and would invite the similar action as explained above. The declaration shall be signed and submitted with the proposal in the format at <b>Annexure – VII</b> .
ii.	A Performance Bank Guarantee (PBG), in proportion of the responsibility index agreed, shall also be required to be submitted as per BSNL RFP/Tender after PoC phase, whenever it is launched.
<b>5.</b>	<b>SPECIAL CONDITIONS</b>
i.	The role of the technology partner is assumed to be at a high pedestal who would not only be responsible for Planning, Engineering, Integration, Testing and providing long term Maintenance Support but would also have a function of helping ITI to deliver the project, end to end. Recognizing its important role, apart from the agreed payouts towards specific supply and services made by TP as per BoQ and the responsibility model, <b>the respective technology partner shall also be eligible for an amount (Technology Steering &amp; Support Amount – TSSA) @</b>



	<b>2.5 % of the billing towards supplies and services provided by ITI Ltd, directly, for Core and RAN</b> (excluding billing for infrastructure).
ii.	Since ITI Ltd is known to have all the inherent strength of manufacturing telecom switch gear, it sees a larger role to play in the manufacturing of RRUs to be used in the rollout of this project. The Partner shall sign an agreement of Transfer of Technology (ToT) for manufacturing of RRUs of its technology and provide full support in planning, manufacturing, implementation, upgrading of manufacturing facilities and rehabilitation of the manufacturing lines so that ITI is fully equipped and capacitated to service the BSNL's 4G tender. The ToT activity and manufacturing shall start in parallel just after issue of LoI and completion of PoC would not hamper the process of manufacturing. Any delay in ToT shall be seen as a default on the part of TP and may be termed as non-seriousness and may prompt ITI to look for next available alternative towards selection of TP.
iii.	The Transfer of Technology for manufacturing RRUs shall be exclusive to ITI Ltd in India for a period of two years from the date of signing of ToT provided the ITI manufactured RRUs keep matching the price competition. However, manufacturing if found non-viable by ITI, it may review its decision.
iv.	Towards ToT and total support to ensure end-to-end manufacturing of RRUs at ITI facilities, <b>TP shall be entitled for a special commercial compensation as royalty @4% of the billed price of RRUs</b> sold by ITI directly to the end customer. TSSA, however shall not be payable on such RRU supplies.
v.	For the RRUs manufactured for the third party by ITI, with Partner's technology, for the consumption of their customer need of 4G tender or later, a conversion and value addition charge on the base price of all supplied components used in the manufacturing of RRUs shall be charged by ITI, which shall be in the range of (say) 10 to 15 % depending upon the volumes ordered and the marketing dynamics and to be decided mutually between ITI and the 3rd party using TP's RAN technology. A royalty @10% of this conversion charge shall be passed on to the TP.
vi.	Since the Partner shall be transferring the technology, which shall be new to ITI, Technology Partner should not only be doing hand holding in leveraging its resources to streamline the production of RRUs at ITI but also shall supply the initial lot of RRUs for the e-Node B's as per ITI's need to service its customer. These readymade RRUs shall be supplied to ITI by TP at a discounted rate of 10 % on the BSNL's determined price through 4G tender for this SoR item. The maximum RRU quantity such procured from TP shall not be more than 15% of total ordered quantity by BSNL on ITI for RQ. The royalty charges shall however not be applicable on these RRUs.
vii.	Although, the offers have been asked separately from OEMs dealing with Indigenous CORE and RAN but, in order to take advantage of better Co-ordination and seamless network rollout, preference shall be given to the offers of such OEMs who offer both CORE and RAN Technologies. This preference shall be to the tune of 20%.

viii.	In case any ITP's statement is found false and misleading specially towards ownership of relevant technology rights for Core or RAN as asked by BSNL vide its DNIT issued vide its EOI NO. MM/NWP-GSM-II/REG-POC-4G/E-697/2021 dated 01.01.2021 followed by any clarifications or modifications, the barring process against such defaulting ITP, Company shall be initiated and the next eligible ITP shall be selected to go ahead in the process of proving technical compliance and competence to BSNL, directly through experience or through PoC route as the case may be.
ix.	Since the time lines of registering with BSNL are very stringent and the registration with BSNL has to happen immediately after selection/declaration of Technology Partner, the intending TP must be ready with all the documents as necessitated in DNIT of BSNL available at Annexure-VIII. In order to vouch the preparedness, ITI may demand from ITP, to show all the necessary documents proving credentials such as ownership of Technology/IPR/Source code etc. at a short notice, before opening of financial bids. The ITPs not complying within time provided, shall not be considered for financial bid opening.

<b>III. FINANCIAL CONDITIONS</b>							
i.	The preliminarily qualified ITP, who offers best percentage margins on the supplies, Services and AMC to be executed by it under the chosen model of responsibility matrix, shall be preferred and selected. The Percentage margins offered and accepted shall be deductible by ITI Ltd on the amount billed on the supply and services executed by TP and payable to TP at the agreed rates with BSNL, against each item of BoQ as per the quantities executed for the awarded Zone (s).						
ii.	The ITP shall quote their <b>Best Margin</b> , as a percentage on BSNL RFP/Tender determined L1 price (to be assessed/assumed and not available, presently) and to be offered to ITI to match, against each module (BoQ) of responsibility index as per the model and package of engagement, separately for CORE and RAN as per its eligibility, capability and interest given in the Financial Bid at <b>Annexure-VI</b> .						
iii.	There are 3 (three) models (Packages) of engagement with the partner and the ITP is expected to quote the <b>Best Margin</b> for each model. The models of engagement, specified in <b>Annexure-IV</b> , have weightages assigned against each model signifying the extent of preference of ITI as below:						
a.	<b>Model</b>	Model-I		Model-II		Model-III	
		Core	RAN	Core	RAN	Core	RAN
b.	<b>Preference Weight</b>	80%	60%	15%	30%	5%	10%
iv.	The margins offered model wise, shall be summed up separately for Core and RAN after applying the declared weightages.						
v.	An extra weightage of 20% shall be added to the offers received from same ITP for both Core and RAN, giving an edge to common technology partner. The gap of margin however, needs to be matched with highest quote both for Core and RAN.						

vi.	Based on above calculations, the best TP shall be chosen based on calculated highest margin offered to ITI Ltd when summed up for all the three models after applying the preference weightages model wise.
vii.	Partner will be selected based on the highest composite margin offered.
viii.	Apart from the mentioned activity index, the TP being a technology Steerer, Support and provider shall be overall responsible for the turn key delivery of the project as mentioned generally.
ix.	ITI reserves the right to negotiate margins.
x.	The choice of Model shall be exercised by ITI after Opening of BSNL's financial bids and TP shall be obliged to accept the same.

#### IV. FINANCIAL BID ASSESSMENT

##### 1. CORE BID

	Name of Technology Partner:		M/s	X
<b>Model</b>	Percentage Margin, on the accepted L1 price, driven by BSNL 4G Tender, for items in the TP's responsibility index		Weightage assigned to the Model	Weighed Quoted Margin
	<b>(A)</b>		<b>(B)</b>	<b>A*B</b>
	Quote (in Words)	Quote (in figures)		(C)
MC-I			<b>0.80</b>	c1
MC-II			<b>0.15</b>	c2
MC-III			<b>0.05</b>	c3
Total Weighed Core Package Margin			CM	<b>c1+c2+c3</b>

✓ **The ITP scoring highest CM shall be the preferred Technology Partner**

##### 2. RAN BID

Name of Technology Partner: M/s Y

<b>Model</b>	Percentage Margin, on the accepted L1 price, driven by BSNL 4G Tender, for items in the TP's responsibility index		Weightage assigned to the Model	Weighed Quoted Margin
	<b>(A)</b>		<b>(B)</b>	<b>A*B</b>
	In Words	In figures		(C)
MR-I			<b>0.60</b>	c1
MR-II			<b>0.30</b>	c2
MR-III			<b>0.10</b>	c3
Total Weighed RAN Package Margin			RM	<b>c1+c2+c3</b>

✓ **The ITP scoring highest RM shall be the preferred Technology Partner**

**3.** In case of X and Y are the same company then an extra weightage of 20% to be applied to the total core and RAN margins.

Upgraded Core Margin to Common TP	UCM	(CM+0.2 CM)
Upgraded RAN Margin to Common TP	URM	(RM+0.2 RM)

➤ **In case of Common ITP for Core and RAN, the ITP, having highest combined score (upgraded) shall be the preferred Technology Partner.**

4. *The margins filled at the prescribed place in the Price Bid shall be a numerical value to be considered up to two decimal points for calculation.*

## V. INSTRUCTIONS FOR SUBMITTING PROPOSAL TOWARDS RFP

The Technical Bid and financial bid (Indicating the Margins clearly) shall be placed in separate sealed envelopes only, super scribed with words "Technical Bid". & "Financial Bid". Both the sealed envelopes of technical and financial bids are to be placed in another separate sealed cover mentioning, "RFP for Selection of Technology Partner for BSNL's 4G Turnkey Project" Ref: COR/PP/4G/20-21/01 Dated: 12th Jan, 2021 DON'T OPEN BEFORE 15.00Hours on 28-01-2021 and to be submitted to :

**The Addl. General Manager – PP,  
ITI Limited, ITI Corporate Office  
Dooravaninagar P.O.,  
Bengaluru – 560 016.**

**Mob: +91 9447963602/080 25618289**

**Mail: [pp\\_crp@itilttd.co.in](mailto:pp_crp@itilttd.co.in)**

1. The offer will be rejected, if the margin is not offered and offered margin is not mentioned in a separate sealed cover.
2. Schedule of Bidding:
  - a. Last date of seeking clarifications: 19<sup>th</sup> Jan'2021
  - b. Bid Submission: 28<sup>th</sup> January'2021 by 11:30 Hrs
  - c. Bid opening: 28<sup>th</sup> January'2021 at 15:00 Hrs
3. Financial Bid opening will be done after the evaluation of Technical bid (Only for technically qualified bidders).
4. Bid should be valid for a period of 150 days from the date of opening of RFP response.
5. Conditional offers and Multiple offers are liable for rejection.
6. The Bidders should give Clause by clause compliance (as per Annexure – II ) of RFP and BSNL's EoI with references to supporting documents; otherwise, the offers are liable for rejection.
7. Margin offered shall be firm throughout the contract irrespective of reason, what so ever, including the exchange rate fluctuation.
8. All the pages of the technical offer and the price bid shall be signed by an authorized person of the ITP .
9. The TP to indemnify ITI from any claims / penalties / statutory charges, liquidated damages, with legal expenses etc .
10. The interested OEMs may like to discuss the BSNL tender related information, RFP Bidding Conditions, Bidding Process and clarifications, if any may do so with the Additional General Manager – PP and obtain the required information/clarification by due date i.e. latest by 19<sup>th</sup> January'2021.
11. Consortium bids/offers are not allowed.

12. Late offer: Any offer received after the prescribed timeline shall be rejected and shall be returned unopened to the Companies.
13. Language of offers: The offers prepared by the ITP and all the correspondences and documents relating to the offers exchanged by the companies shall be written in English language.
14. In the event that ITI is required to provide demonstration or details of the product to BSNL, the same shall be arranged by the technology partner at latter's cost and expenditure.
15. **Cost of RFP:** The bidder shall bear all costs associated with the preparation and submission of his offer against this RFP, including cost of presentation for the purposes of clarification of the offer, if so desired by ITI. ITI will, in no case be responsible or liable for those costs, regardless of the conduct or outcome of the RFP process.
16. **Amendment of RFP:** At any time prior to the last date for receipt of offers, ITI, may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective ITP, modify the RFP document by an amendment. ITI may, at their discretion, extend the last date for the receipt of offers and/or make other changes in the requirements set out in the Invitation for RFP.
17. **Disclaimer:** ITI and/or its officers, employees disclaim all liability from any loss or damage, whether foreseeable or not, suffered by any person acting on or refraining from acting because of any information including statements, information, forecasts, estimates or projections contained in this document or conduct ancillary to it whether or not the loss or damage arises in connection with any omission, negligence, default, lack of care or misrepresentation on the part of ITI and/or any of its officers, employees.
18. On the Bid opening day, only technical bids will be opened. The Bidders who are desirous of attending bid opening shall inform ITI in writing and a maximum of two persons from a Bidder are allowed to attend the Bid opening.

### **Venue of bid opening:**

**First Floor Conference Room  
ITI Corporate Office, ITI Bhawan  
Dooravaninagar P.O.,  
Bengaluru – 560 016.**

19. Letter of authority from the Bidder authorizing the persons to attend the Bid opening shall be submitted by such person(s).
20. ITI reserves the right to suspend or cancel the RFP process at any stage, or to accept, or reject any, or all offers at any stage of the process and / or to modify the process, or any part thereof, at any time without assigning any reason, without any obligation or liability whatsoever and the same shall be published in the ITI website or intimated through email.
21. The Bidder shall bear all costs associated with the preparation and submission of its RFP, including cost of presentation for the purpose of clarification of the offer, if so desired by ITI.
22. If the last day for bid submission/opening is declared as a holiday, the bid submission and opening will be at the same time and venue on the next working day.

23. **Accessibility of RFP Document:** Complete RFP document with terms and conditions and amendments/clarifications if any shall be provided at the following websites:

(i) <http://www.itilttd.in>

(ii) <http://eprocure.gov.in>

**24. All Enquiries and Clarification with regards to this RFP shall be addressed to:**

**The Additional General Manager (PP)**  
**ITI Corporate Office**  
**Dooravaninagar P.O.,**  
**Bengaluru – 560 016.**  
**Mob: +91 9447963602/ 080 25618289**  
**Mail: [pp\\_crp@itilttd.co.in](mailto:pp_crp@itilttd.co.in)**



<b>VI. Check list of documents/information to be submitted</b>	
<b>a.</b>	The details of the company and Certificate of Incorporation.
<b>b.</b>	Details of MoU with ITI Ltd. Under the EMBA, EoI.
<b>c.</b>	Audited financial statements for past three years ( FY 2017-18, FY 2018-2019, FY 2019-20) or year 2018, 2019 and 2020.
<b>d.</b>	Technical proposal in one Envelope super-scribing the <b>RFP reference No COR/PP/4G/20-21/01</b> and <b>“Technical Proposal”</b> .
<b>e.</b>	Financial Quote in the format given at <b>Annexure VI (C) and Annexure VI (R)</b> in a separate envelope super-scribing the <b>RFP reference No COR/PP/4G/20-21/01</b> and <b>“Financial Proposal”</b> .
<b>f.</b>	Both the above envelopes should be placed in big envelope and this envelope should be super-scribed with <b>“RFP for Selection of Technology Partner for BSNL’s 4G Turnkey Project Ref: COR/PP/4G/20-21/01 Dated: 12th Jan, 2021 DON’T OPEN BEFORE 15:00 Hours on 28-01-2021”</b> .
<b>g.</b>	Purchase Order / Client certificates towards technical experience if any, as per the conditions of BSNL EoI, else assent to prove its technology through POC.
<b>h.</b>	Details of possession of Quality certification – ISO 27001.
<b>i.</b>	A Certificate of not having been blacklisted by any Government Department/ CPSU/State PSU/GST authorities and shall submit a self declaration to this effect in the given format at <b>Annexure-V</b> .
<b>j.</b>	Valid Power of Attorney along with resolution of Board for authorizing the person signing the bid for this RFP.
<b>k.</b>	Undertaking by the ITP shall be submitted as per <b>Annexure-V</b> .
<b>l.</b>	Clause by Clause compliance of RFP terms (Eligibility criteria & General Requirements) and all corrigendum’s with supporting documents as per <b>Annexure-II</b> .
<b>m.</b>	An undertaking of owning IPR (Intellectual Property Right) or Copyright/License for the source Code needs to be submitted.
<b>n.</b>	A PoC Performance Security Declaration in the given format at <b>Annexure-VII</b> .
<b>o.</b>	An undertaking to have under stood and ready to sign an agreement by the appropriate authority before launch of PoC related to deposition of source code of Core and RAN in escrow account and operation thereof, as per the relevant clause and format of BSNL’s DNIT.
<b>p.</b>	A declaration, that the technology offered shall be 5G ready.
<b>q.</b>	Technical literature/Brochures of the offered Solution/equipment. Documents on Core & RAN Technologies used in PoC.

	<b>r.</b>	The declaration that ITP (in case of applying for RAN) shall Transfer, Technology for manufacturing RF Radio equipment to ITI for e-NodeB (RRUs) on its selection and becoming technology partner.
	<b>s.</b>	A declaration and Consent to all the eligibility documents specified in the BSNL DNIT such as Certificate of Country of Origin, Escrow Agreement, Consortium Agreement etc., as per the formats contained in detailed Document of DNIT.
	<b>t.</b>	A declaration of ownership of Indian Core (in case of Core OEM) and certificate of having unrestricted, irrevocable access and license to modify the source code and provide software support for all the future versions of the software (both for Core and RAN applicants) and assent to deposit the source code in escrow account under the signature of Board Director or Key Managerial Personnel of the company. In case of offering RAN and CORE both by the same company, separate declaration certificates both for Core and RAN shall be submitted.

**Bidders Profile**

1.	Name and address of the company		
2.	Details of MoU under EMBA		
3.	Contact Details of the Bidder (Contact person name with designation, Telephone Number, FAX, E- mail and Web site)		
3.	Annual Turnover for financial years:	2017-18	
		2018-19	
		2019-20	

### Compliance Statement

Section Details	Clause Numbers	Compliance (YES/NO)	Documentary Reference, If any
<b>Technical BID</b>			
Scope of Work	(i) to (iii)		
Essential Eligibility Criteria for the Applicants	(i) to (ix)		
General Commercial Conditions	(i) to (xvi)		
Special Conditions	(i) to (ix)		
Financial Conditions	(i) to (x)		
Financial Bid Assessment	1-4		
Instructions for submitting Proposal towards RFP	1-24		

<b>SOR for CORE</b>			
CORE	Hardware	STANDALONE HSS/AuC (HW) (In 1+1 Mode)	
		Standalone HSS/ AuC Cat A HW	
		HSS/AuC Cat B Expansion HW	
		HSS/AuC Upgrade for 5G NSA	
		SGSN MME (In 1+1 Mode)	
		SGSN MME Cat A HW	
		SGSN MME Cat B Expansion HW	
		SGSN-MME Upgrade for 5G NSA	
		GGSN-SGW-PDNGW	
		GGSN-SGW-PDNGW Cat A HW	
		GGSN-SGW-PDNGW Cat B HW	
		GGSN-SGW-PDNGW Cat C Expansion HW	
		GGSN-SGW-PDNGW Upgrade for 5G NSA	
		ePDG/TWAG	
		ePDG/TWAG Cat-A HW	
		ePDG/TWAG Cat-B Expansion HW	
		Router/ LAN Switch	
		IP MPLS T-PE Router Type I HW	
		IP MPLS T-PE Router Type II HW	
		LAN Switch Type I HW	
		LAN Switch Type II HW	
		Software	STANDALONE HSS/AuC (HW & SW) (In 1+1 Mode)
			Standalone HSS/ AuC Cat A SW
		HSS/AuC Cat B Expansion SW	
		HSS/AuC Upgrade for 5G NSA	
		Core NETWORK -PS	
		SGSN MME (In 1+1 Mode)	
		SGSN MME Cat A SW	

		SGSN MME Cat B Expansion SW	
		SGSN-MME Upgrade for 5G NSA	
		GGSN-SGW-PDNGW	
		GGSN-SGW-PDNGW Cat A SW	
		GGSN-SGW-PDNGW Cat B SW	
		GGSN-SGW-PDNGW Cat C Expansion SW	
		GGSN-SGW-PDNGW Upgrade for 5G NSA	
		ePDG/TWAG	
		ePDG/TWAG Cat-A SW	
		ePDG/TWAG Cat-B Expansion SW	
		Router/ LAN Switch	
		IP MPLS T-PE Router Type I SW	
		IP MPLS T-PE Router Type II SW	
		LAN Switch Type I SW	
		LAN Switch Type II SW	
Zonal OMC /EMS	Hardware	Zonal OMC/EMS/Common tool Platform	
		Platform Hardware	
		Circle Clients- Central Location	
		Circle Remote terminals	
	Software	Zonal OMC/EMS/Common tool Platform	
		Application Softwares	
		OMC-S Software (CS & PS)	
		OMC-R Software for 4G	
		MPLS EMS	
		Microwave EMS	
		Circle Clients- Central Location	
		Circle Remote terminals	
	SON		SON
		Hardware	SON server for 4G circles
Software		SON server for 4G circles	
Tools		Tools	

		RAN Optimization Tool
		RF Planning tool
		Digital Map of Delhi & Mumbai LSA
		Drive Test Tool
		Hand held measurement tool
		Post Processing Tool
		RAS - Array Secure Access Gateway
		RAS - Central Server
		4G Training Model
Services		SERVICES
		HSS Cat A
		HSS Cat B Expansion
		SGSN MME Cat A
		SGSN MME Cat B Expansion
		GGSN-SGW-PDNGW Cat A
		GGSN-SGW-PDNGW Cat B
		GGSN-SGW-PDNGW Cat C Expansion
		ePDG/TWAG Cat A
		ePDG/TWAG Cat B Expansion
		IP MPLS T-PE Router Type I
		IP MPLS T-PE Router Type II
		LAN Switch Type I
		LAN Switch Type II
		Zonal OMC/EMS/Common tool Platform for South Zone
		Zonal OMC/EMS/Common tool Platform for North Zone
		Zonal OMC/EMS/Common tool Platform for East Zone
		Zonal OMC/EMS/Common tool Platform for West Zone
		Zonal OMC/EMS/Common tool Platform for MTNL Zone

		Integration with existing IN Platform
		Integration with existing B&CCS Platform
		Integration with existing Lawful Interception System
		Integration with existing FMCC System
		Integration with MTNL Core
		IP Clock Server in 1+1 config for minimum 1500 Network Elements.
		SON Server
	Services for Infrastructure	Services for Infrastructure
		1000A SMPS PP
		2000A SMPS PP
		3000A SMPS PP
		1500 AH Battery
		3000AH battery
		100 KVA UPS in 1+1 - battery [
		Li-Ion] system
		200 KVA UPS in 1+1 - battery [ Li-Ion] system
		I&C for BSC with Collocated/integrated PCU/PDU Type 1(1000 TRX) H/W
		I&C for BSC with Collocated/integrated PCU/PDU Type 2 (2500 TRX)H/W
		I&C for BSC Expansion for 500 TRX
Infra-structure		Infrastructure for Core
		SMPS P/P 1000A-Indoor
		SMPS P/P 2000A-Indoor
		SMPS P/P 3000A-Indoor
		Lithium - ion Battery 2x1500 AH @ 50V
		Lithium - ion Battery 2x3000 AH @ 50V
		100 KVA UPS in 1+1 - battery [Li-Ion] system
		200 KVA UPS in 1+1 - battery [Li-Ion] system
		PC and Laptops



PC and Laptops		General Purpose PC with printer
		Laptop
Training		4G Training Model
Note		
The Items & their quantities may vary according to the new BSNL 4G tender at the time of implementation.		

<b>SOR for RAN</b>		
BBU	Hardware	BBU Hardware for RRH
		BBU Outdoor with 3U space for Transmission Hardware
		BBU Indoor Hardware
		BBU Upgradation to support 4G-TD-LTE
		BBU Upgradation to support Massive MIMO either 4G-FD- LTE or 4G-TD-LTE
	Software	BBU Software
		BBU Software for 4G-FD-LTE
		BBU Software for 4G-TD-LTE
		BBU Software Upgradation to support Massive MIMO either 4G-FD-LTE or 4G-TD-LTE
RRH	Hardware	For RRH based Base Station
		3 Sector SDR Base Station 2T-2R HW - 850 MHz [band-5]
		3 Sector SDR Base Station 2T-4R HW - 850 MHz [band-5]
		3 Sector SDR Base Station 4T-4R HW - 850 MHz [band-5]
		6 Sector SDR Base Station 4T-4R HW - 850 MHz [band-5]
		4T-4R HW - 850 MHz [band-5]
		3 Sector SDR Base Station 2T-2R HW - 900 MHz [band-8]
		3 Sector SDR Base Station 2T-4R HW - 900 MHz [band-8]
		3 Sector SDR Base Station 4T-4R HW - 900 MHz [band-8]
		6 Sector SDR Base Station 4T-4R HW - 900 MHz [band-8]
		3 Sector SDR Base Station 2T-2R HW - 2100 MHz [band-1]
		3 Sector SDR Base Station 2T-4R HW - 2100 MHz [band-1]

	3 Sector SDR Base Station 4T-4R HW - 2100 MHz [band-1]
	6 Sector SDR Base Station 4T-4R HW - 2100 MHz [band-1]
	3 Sector SDR Base Station 4T-4R HW - 2600 MHz [band-41] TD-LTE
	6 Sector SDR Base Station 4T-4R HW - 2600 MHz [band-41] TD-LTE
	2 Sector SDR Base Station 2T-4R HW - 850 MHz [band-5]
	2 Sector SDR Base Station 2T-4R HW - 900 MHz [band-8]
	2 Sector SDR Base Station 2T-4R HW - 2100 MHz [band-1]
	Sector Addition SDR Base Station 2T-4R HW - 850 MHz
	Sector Addition SDR Base Station 2T-4R HW - 900 MHz
	Sector Addition SDR Base Station 2T-4R HW - 2100 MHz
	SDR Base Station 4T-4R HW - Dual Band RRH 1800 & 2100MHz [band-1 & 3]
	SDR Base Station 4T-4R HW - Dual Band RRH 1800 & 2100MHz [band-1 & 3]
	SDR Base Station 4T-4R HW - 2100 MHz [band-1]
	SDR Base Station 4T-4R HW - 2100 MHz [band-1]
	Addition of 1T-2R SDR Module
	Addition of 2T-2R SDR Module
	Massive MIMO based eNode- B - Hardware - 2600 MHz [band-41]
	Massive MIMO based eNode-B - Hardware - 2100 MHz [band-1]
	Massive MIMO based eNode-B - Hardware - Dual Band 1800 & 2100 MHz [band-1]
Software	Software for RF Units
	FD-LTE 4G Software

	TD-LTE 4G Software
	Upgradation of e-NodeB by
	additional 5Mhz Bandwidth Capability
	Massive MIMO based eNode- B - Software -4G-TD-LTE
	Massive MIMO based eNode- B - Software -4G-FD-LTE
Antennas	Antennas
	Single Band - 698-960Mhz - [33 deg] 2 Ports
	Single Band - 698-960 Mhz-[33 deg] 4 Ports
	Single Band - 698-960 Mhz-[65 deg] 2 Ports
	Single Band - 698-960 Mhz- [65 deg] 4 Ports
	Dual Band - 698-960 Mhz 2ports   1710-2170Mhz-[65 deg] 4 Ports
	Single Band - 698-960 Mhz - 2Ports/beam x dual beam [40 deg each]
	Single Band -1710-2690 Mhz- 4 Ports/beam x dual beam [40deg each]
	Single Band -1710-2690 Mhz- 4 Ports - 65 deg
	Single Band -2490-2690 Mhz- 4 Ports/beam - dual beam 40deg each
	Single Band -1710-2690- 4 Ports/beam x dual beam [40 deg each]
	Dual Band - 1710-2170 Mhz- Single beam-65 deg-2 ports   2490-2690-[40 deg x 2 beams] 4 Ports/beam
	Single Band -1710-2170- 4 Ports/beam x Single beam [<65 deg each]
	Single Band -1710-2170- 4 Ports/beam x dual beam [<35 deg each]
	OMNI 10.5 dbi Gain Single Band 1920-2690 - 4 port- with 5 deg fixed Electrical Tilt
	Broad band Antenna-Triplesystem-Type-1
	Broad band Antenna-Triple system-Type-2
	Broad band Antenna- Quadsystem-Type-1

		Dual band Combiner for antenna system
		Triple band combiner for antenna system
		Quad system combiner for antenna system
		BTS Antenna Mounting Fixture
		Remote Electrical Tilt
Small Scale Radio	Hardware	Micro eNode B Hardware FD LTE2T2R
		Micro eNode B Hardware TD LTE 4T4R
		Pico RRH Hardware
	Software	Micro eNode B Software FD LTE
		Micro eNode B Software TD LTE
		Pico RRH Software
I&C Material	I&C Material for BBU	Outdoor Baseband (BBU) Installation Material
		Indoor Baseband (BBU) Installation Material
	I&C Material for BBU	RRH Installation Material RAT- SWAP site - 3 sector
		RRH Installation Material RAT- Greenfield site - 3 sector
		RRH Installation Material RAT- SWAP site - 2 sector
		RRH Installation Material RAT- Greenfield site - 2 sector
		RRH Installation Material RAT-SWAP site - 6 sector
		RRH Installation Material RAT- Greenfield site - 6 sector
		RRH Installation Material RAT- Greenfield site
		RRH Installation Material RAT- Greenfield site - Dual- Beam/Bi-Sector/6-sector
		Redeployment e-Node-B - Indoor Installation Material
		Redeployment e-Node-B - Outdoor Installation Material
		Redeployment e-Node-B -RRH Installation Material
		Sector Addition RRH Installation Material
		Micro eNode B Installation Material FD LTE 2T2R
		Micro eNode B Installation Material TD LTE 4T4R

		PICO RRH Installation Material
		Massive MIMO based eNode- B - Installation Material - 2600 MHz [band-41]
		Massive MIMO based eNode-B - Installation Material - 2100 MHz [band-1]
		Addition of 1T-2R SDR Module-Installation Material
		Addition of 2T-2R SDR Module- Installation Material
Transmission Media	Hardware	Digital MW
		Digital MW -15 GHz with Installation Material including cables, BITE etc. Hardware
		Set of 0.3m Antenna with Accessories
		Set of 0.6m Antenna with Accessories
		Set of 1.2m Antenna with Accessories
		Digital MW -18 GHz with Installation Material including cables, BITE etc. Hardware
		Set of 0.3m Antenna with Accessories
		Set of 0.6m Antenna with Accessories
		Set of 1.2m Antenna with Accessories
		Digital MW -E-band- with Installation Material including cables, BITE etc. Hardware
		Set of 0.3m Antenna with Accessories
		Set of 0.6m Antenna with Accessories
		Set of 0.3m Antenna with Accessories (to support 15GHz/ 18GHz and E-band Radio)
		Set of 0.6m Antenna with Accessories (to support 15GHz/ 18GHz and E-band Radio)
		Digital MW Antenna Mounting Fixture
		Installation Material for Redeployment of existing Digital MW link including required material like IF cable, connectors etc,
		Decommissioning, & installation at new site
		Optical Modem
	Software	Digital MW
		Digital MW -15 GHz : Software

		Digital MW -18 GHz : Software		
		Digital MW -E-band- Software		
Infrastructure	General	Infrastructure General		
		Provision of Earthing System for Greenfield NBSNL BTS Site-Material		
		Electrical supplies for NBSNL sites		
		Power cable- 15 KVA (from pole to meter)		
		Power cable - 30 KVA (from pole to meter)		
	Electrical	Infrastructure Electrical		
		Single Phase, Air cooled, 10KVA DG with all accessories		
		SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300A with 1 phase supply input- Indoor for BTS sites		
		SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300A with 3 phase supply input-Indoor for BTS sites		
		SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300Awith 1 phase supply input- O/D for BTS sites		
		SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300A with 3 phase supply input-O/Dfor BTS sites		
		SMPS P/P 50A Module with 1phase supply		
		SMPS P/P 50A Module with 3 phase supply		
		BTS Battery - 400AH -1 bank- Lithium-ion Indoor Type		
		BTS Battery - 400AH -1 bank- Lithium-ion Outdoor Type		
		3 KVA UPS for Micro eNode B with 4 hours Li-Ion battery back up included		
		1.2 KVA UPS for Micro eNode B with 4 hours Li-Ion batteryback up included		
		Tower		Tower
				Ground base Tower 40 Meter narrow base flood light(170KMPH , TEC approved)
	Roof Top 20 or 21 Meter (TEC or SERC approved)			

		Roof Top 15 Meter ( TEC or SERC approved)
		6 meter [3 Poles] for BTS Antenna (TEC or SERC approved)
Services	Services BBU	Services BBU
		Outdoor Baseband (BBU) I&C
		Indoor Baseband (BBU) I&C
		I&C for BBU Upgradation to support 4G-TD-LTE
		I&C for BBU Upgradation to support Massive MIMO either 4G-FD-LTE or 4G-TD-LTE
	Services RRH	Services RRH
		I&C for RRH RAT - SWAP site- 3 sector
		I&C for RRH RAT - Greenfield site - 3 sector
		I&C for RRH RAT - SWAP site- 2 sector
		I&C for RRH RAT - Greenfield site - 2 sector
		I&C for RRH RAT - SWAP site- 6 sector
		I&C for RRH RAT - Greenfield site - 6 sector
		I&C for RRH RAT - Greenfield site
		I&C for Sector Addition RRH
		Micro eNode B Hardware FD LTE 2T2R
		Micro eNode B Hardware TD LTE 4T4R
		PICO RRH Installation Material
		Massive MIMO based eNode- B - Hardware -band-41
		Massive MIMO based eNode- B - Hardware -band-1
		Massive MIMO based eNode- B - Hardware -band-1& 3
		Addition of 1T-2R SDR Module
		Addition of 2T-2R SDR Module
		RF Survey for e-Node B sites
		4G RF Optimisation
		Digital MW -15 GHz with Installation Material including cables, BITE etc.



	Digital MW -18 GHz with Installation Material including cables, BITE etc.
	Digital MW -E-band- with Installation Material including cables, BITE etc. Hardware
	SWAP of existing Digital MW link with new system including required material like IF cable, connectors etc, shifting the old eqpt to designated destination.
	Redeployment of existing Digital MW link including required material like IF cable, connectors etc, Decommissioning [if reqd] & installation at new site.
	Provision of Earthing System for Greenfield NBSNL BTS Site
	Electrical works for NBSNL sites
	Ground base Tower 40 Meter narrow base flood light (170KMPH, TEC approved)
	Roof Top 20 or 21 Meter (TEC or SERC approved)
	Roof Top 15 Meter ( TEC orSERC approved)
	6 meter [3 Poles] for BTS Antenna (TEC or SERCapproved)
	Single Phase, Air cooled, 10KVA DG with all accessories
	SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300A with 1 phase supply input-Indoor for BTS sites
	SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300Awith 3 phase supply input- Indoor for BTS sites
	SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300Awith 1 phase supply input- O/D for BTS sites
	SMPS P/P 150A with 50A(3+1) Ultimate Capacity 300A with 3 phase supply input-O/Dfor BTS sites
	BTS Battery - 400AH -1 bank- Lithium-ion Indoor Type
	BTS Battery - 400AH -1 bank- Lithium-ion Outdoor Type
	3 KVA UPS for Micro eNode B with 4 hours Li-Ion battery backup included

		1.2 KVA UPS for Micro eNode B with 4 hours Li-Ion batteryback up included
		Documentation submission to TERM for EMF certification
		Dig MW & Base Station Antenna Fixture hoisting
Note		
The Items & their quantities may vary according to the new BSNL 4G tender/at the time of implementation.		

<b>Responsibility Matrix Core – Model MC I</b>					
		Supply	Services	AMC	
				Level 1	Level 2
Core Hardware		TP	TP	TP	TP
Core Software		TP	TP	TP	TP
Zonal OMC/EMS	Hardware	TP	TP	TP	TP
	Software	TP	TP	TP	TP
SON	Hardware	TP	TP	TP	TP
	Software	TP	TP	TP	TP
Infrastructure		TP	TP	TP	TP
P C laptop		TP	TP	TP	TP
Tools		TP	TP	TP	TP

TP:  
Technology  
Partner

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials.
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.

### Responsibility Matrix Core – Model MC II

		Supply	Services	AMC	
				Level 1	Level 2
Core Hardware		TP	TP	TP	TP
Core Software		TP	TP	TP	TP
Zonal OMC/EMS	Hardware	TP	TP	TP	TP
	Software	TP	TP	TP	TP
SON	Hardware	TP	TP	TP	TP
	Software	TP	TP	TP	TP
Infrastructure		ITI	ITI	ITI	ITI
P C laptop		TP	TP	TP	TP
Tools		TP	TP	TP	TP

<i>TP</i>		<i>ITI</i>
<i>Technology Partner</i>		<i>ITI Limited</i>

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials .
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.

### Responsibility Matrix Core – Model MC III

		Supply	Services	AMC	
				L1	L2
Core Hardware		ITI	ITI	ITI	ITI
Core Software		TP	TP	TP	TP
Zonal OMC/EMS	Hardware	ITI	ITI	ITI	ITI
	Software	TP	TP	TP	TP
SON	Hardware	ITI	ITI	ITI	ITI
	Software	TP	TP	TP	TP
Infrastructure		ITI	ITI	ITI	ITI
P C laptop		TP	TP	TP	TP
Tools		TP	TP	TP	TP

<i>TP</i>		<i>ITI</i>
<i>Technology Partner</i>		<i>ITI Limited</i>

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials.
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.

Responsibility Matrix RAN					
Model: MR I					
		Supply	Services	AMC	
				Level-1	Level-2
BBU Hardware		TP	TP	TP	TP
BBU Software		TP	TP	TP	TP
RF Unit	Hardware	ITI	ITI	ITI	ITI
	Software	TP	TP	TP	TP
	Antenna	ITI	ITI	ITI	ITI
Transmission Media	Digital Hardware	ITI	ITI	ITI	ITI
	Digital Software	ITI	ITI	ITI	ITI
Infrastructure	General	ITI	ITI	ITI	ITI
	Electrical	ITI	ITI	ITI	ITI
Tower		ITI	ITI	ITI	ITI

<i>TP</i>		<i>ITI</i>
<i>Technology Partner</i>		<i>ITI Limited</i>

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials.
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.

<b>Responsibility Matrix RAN</b>					
<b>Model MR II</b>					
		Supply	Services	AMC	
				Level 1	Level 2
BBU Hardware		TP	TP	TP	TP
BBU Software		TP	TP	TP	TP
RF Unit	Hardware	ITI	ITI	ITI	ITI
	Software	TP	TP	TP	TP
	Antenna	ITI	ITI	ITI	ITI
Transmission Media	Digital Hardware	TP	TP	TP	TP
	Digital Software	TP	TP	TP	TP
Infrastructure	General	TP	TP	TP	TP
	Electrical	TP	TP	TP	TP
Tower		TP	TP	TP	TP

<i>TP</i>		<i>ITI</i>
<i>Technology Partner</i>		<i>ITI Limited</i>

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials.
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.

<b>Responsibility Matrix RAN</b>					
<b>Model MR III</b>					
		Supply	Services	AMC	
				Level 1	Level 2
BBU Hardware		TP	TP	TP	TP
BBU Software		TP	TP	TP	TP
RF Unit	Hardware	TP	TP	TP	TP
	Software	TP	TP	TP	TP
	Antenna	TP	TP	TP	TP
Transmission Media	Digital Hardware	TP	TP	TP	TP
	Digital Software	TP	TP	TP	TP
Infrastructure	General	TP	TP	TP	TP
	Electrical	TP	TP	TP	TP
Tower		TP	TP	TP	TP

<i>TP</i>		<i>ITI</i>
<i>Technology Partner</i>		<i>ITI Limited</i>

Note: Unless specified otherwise, in the SOR and BOM/BoQ of BSNL, usually following would prevail:

1) Installation & commissioning material shall be part of supply.
2) Supply Shall include supply at site, with Installation and commissioning materials.
3) Design, Planning & Engineering shall be the responsibility of TP
4) Integration & Interoperability shall be the responsibility of TP
5) Services shall include deployment, testing, AT etc.
6) Annual maintenance contract will be for 9 years after warranty of one year.
7) Warranty of the equipment shall be the responsibility of the respective supplier.
8) RF unit Hardware will be manufactured by ITI under ToT as per Model chosen.



**UNDERTAKING**

**(To be submitted on ITP's Letter Head)**

M/s..... do here by undertake and declare that:

1. We are empaneled and an MOU partner under ITI's policy in place called "Enterprise Manufacturing & Business Alliance" [EMBA].
2. All the undertakings and submissions made under MoU of EMBA are also applicable herein unequivocally, unless specifically mentioned otherwise.
3. The Integrity pact signed under EMBA shall be unequivocally applicable to this RFP.
4. The Non-Disclosure Agreement (NDA) signed under EMBA shall also be applicable and abided by us unequivocally.
5. That we are not under any blacklist by Central Govt./ any State or UT Govt./ PSU/ organized sector in India or by GST authorities and fully comply the Terms and conditions of RFP by ITI Ltd.
6. We agree to submit PBG for an appropriate amount as per the quantum of work assigned under 4G tender of BSNL in the standard PBG format as required by ITI.
7. That we do not have any equity stake or operating partnership in mobile segment with any cellular operator in India including MTNL.
8. That we undertake to indemnify ITI from any claims / penalties / statutory charges, liquidated damages, with legal expenses etc., as charged by the customer.
9. That all the hardware/ software supplied under the contract arrangement shall not contain any embedded malicious codes that could inhibit the desired functions of the equipment or cause the network to malfunction in any manner.

Duly authorized to sign the bid for and on behalf of:

[insert complete name of ITP]

Dated on \_\_\_\_\_ day of \_\_\_\_\_ [insert date of signing] Corporate Seal (where appropriate)

FINANCIAL BID**[CORE]**

Name of CORE Technology Partner: \_\_\_\_\_

<b>Model</b>	<b>Percentage Margin</b> , on the L1 price driven by BSNL 4G Tender for items in the TP's responsibility index (Numerical Value to be filled, to be considered up to two decimal places)	
	<b>Quote</b> (in Words)	Quote (in figures)
MC-I		
MC-II		
MC-III		

- Model-wise responsibility Matrices is given in Annexure IV – (C).

FINANCIAL BID**[RAN]**

Name of RAN Technology Partner: \_\_\_\_\_

Model	Percentage Margin, on the L1 price driven by BSNL 4G Tender for items in the TP's responsibility index (Numerical Values to be filled, to be considered up to two decimal places)	
	Quote (in Words)	Quote (in figures)
MR-I		
MR-II		
MR-III		

- Model-wise responsibility Matrices is given in Annexure IV – (R).

**POC- Performance Security Declaration**

Dated:

[RFP No. COR/PP/4G/20-21/01 dated 12.01.2021]

To  
The ITI LIMITED  
Corporate (PP) Unit  
Bengaluru 560016

*Subject: RFP No: **COR/PP/4G/20-21/01** dt: 12.01.2021 for THE SELECTION OF "TECHNOLOGY PARTNER [TP]" for the rollout of 4G network for BSNL.*

We, the undersigned, declare that:

1. I/We understand that, according to the general conditions of RFPs, offers must be secured with a bid security or to be supported with a Bid-Securing Declaration (In the present case the bid security is POC performance security).
2. Accordingly, in lieu of PoC Performance security, I/We unconditionally declare that:
  - (a). I/We undertake to stand to all our statements and declarations towards this RFP as agreed upon by us.
  - (b). I/we will not alter or change any of the conditions during the validity and after our selection as successful Technology Partner and award of this RFP.
  - (c). I/We will abide by all the terms and conditions of the RFP.
  - (d) I/we fully understand that I/we will be automatically disqualified and barred from bidding for any contract and doing business for a period of **two (2) years** upon receipt of your Barring/Blacklisting/Suspension Order,
  - (e) I/we will pay the applicable fine or damages as provided by any stipulation or guidelines from the appropriate authority in this regard for the violation of PoC Securing Declaration; and,
  - (f) I/We undertake to comply above, without prejudice to other legal action or remedies ITI Ltd. may have, to secure itself from the damages and losses incurred due to the act of default or violation by undersigned company/entity.

Duly authorized to sign the bid for and on behalf of:

[insert complete name of ITP]

Dated on \_\_\_\_\_ day of \_\_\_\_\_ [insert date of signing] Corporate  
Seal (where appropriate)

**DNIT (Detailed)**

[BSNL No. EOI NO. MM/NWP-GSM-II/REG-POC-4G/E-697/2021 dated 01.01.2021]

**( BSNL's Detailed EOI mentioned above, being quite voluminous and meant for limited circulation has not been uploaded on the tender website, can be obtained by sending a request from official email id of ITP, addressed to AGM-PP, ITI Ltd. At his email id “ [pp\\_crp@itild.co.in](mailto:pp_crp@itild.co.in) “)**