

## Technical clarifications for RFP for Rate Contract for Supply, Installation and commissioning of Hub / Gateway station and Satcom VSAT Terminals

### Technical Part:

No.	RFP Specifications	Query from Parties	NSIL response
1	Section-2, Point 2.4: Total solution includes complete system engineering, associated design and development of RF front end sub-systems, supply of required hardware & software, site installation.....	Total link budget cannot be done without knowing satellite parameters. So, hub station and remotes should be evaluated separately based on their own specifications.	RF link calculation / sizing of Hub station / user terminal will be decided by NSIL. As per requirement, suitable hub station and user terminal will be selected for supply order.
2	Section-2, Point 2.5: Antenna system shall have the provision for stow-locks in both Azimuth and Elevation axes. Hand-cranks shall also be provided in both the axes for moving the antenna to stow-lock position.	Many Ka-band hub stations use breaks in the motors for antenna safety. There is no separate Stow lock.	<b>Section-2 The point 2.5 shall be read as:</b> Antenna system shall have suitable safety provision in terms of braking system / stow lock for antenna survival up-to 180 Kmph. IN case stow lock is not offered, party shall provide detailed analysis / wind load calculation to substantiate his claim for Antenna system survival up-to 180 Kmph.
3	Hub station / user station EIRP	HPA rating option should be left to vendor as long as EIRP specification is met and also EIRP should be specified with 19dB NPR.	NSIL RFP specifications demand required EIRP shall be achieved for a given hub station diameter and HPA rating. Party shall supply solution to meet the overall station EIRP as defined in RFP specifications.
4	Pointing and Tracking Error for Hub stations	Pointing and Tracking error: Both these errors should be RMS error and not peak errors. Also request pointing error be changed to ½ of beamwidth	NSIL RFP specification already indicates it is "Maximum Average RMS tracking error". NSIL original RFP specifications prevails.

5	G/T for Ka band Hub station	G/T for CP antennas should be reduced to 37 dB/K for 9.1M antenna	NSIL original RFP specifications prevails.
6	Ka-band Hub station Spec no 22 – Port to Port Specifications	Port to port isolation: For CP antennas Tx-Tx/Rx-Rx isolation should be changed to 18 dB and Tx-Rx/Rx-Tx isolation be limited to 85 dB.	<b>For CP antennas following specifications are required (Ka-band hub station Spec no 22):</b> Tx-Tx/Rx-Rx Isolation: Min. 18 dB or better Rx-Tx Isolation: 90 dB or better Tx-Rx Isolation: 100 dB or better For CP antenna, Axial Ratio: 1.5 dB or better
7	Ka-band Hub station Spec no 1 Feed Operating Frequency Band.	Ka Band Gateway Page feed specifications: frequency range Tx: 27.5 -31.0GHz Tracking: 17.7 – 21.2 GHz	The Frequency Range Specification for Tracking is corrected to 17.7 – 21.2 GHz (same as receive freq. range). All other specifications for Ka-band hub Frequency Range remain same.
8	C/Ku/Ka Hub Station Antenna velocity Specification AZ: 0.01 – 1.0 Deg./sec EL: 0.01 – 1.0 Deg./sec	Antenna velocity: 1deg/sec velocity is generally required for antennas used for LEOP operations. For antennas used for regular satcom operations they should be limited to Az: 0.5 deg./sec and El: 0.2 deg./sec.	C/Ku/Ka Hub Station Antenna velocity Specification updated as: AZ: 0.01 – 0.5 Deg./sec EL: 0.01 – 0.2 Deg./sec
9	Ka-band VSAT Terminal Specification no 32 – polarisation movement	Polarisation movement: Request delete this specification as this is not applicable to CP antennas.	For CP antennas this is not applicable. This specification is removed for Ka-band VSAT terminals.
10	Ka-band VSAT Terminal Specification BUC power sizing	For Ka band VSAT terminals at present 2W/4W BUC's will not provide enough link margins.	NSIL will take care of link calculation / BUC sizing as per HUB station specifications. NSIL original RFP specifications prevails.
11	Ka-band VSAT Terminal Specification no 33 – Feed Assembly	Request change Feed ports for VSAT terminal from 4P to 2P as is normal for VSAT terminals	For CP antennas is user needs to change Rx./Tx. polarisation due to any requirement, VSAT terminal feed shall support that

			without any major hardware change / upgrade. Accordingly feed capabilities specifications are arrived. For Linear polarisation feed (with polarisation axis) two port feed is accepted.
12	Environmental Specifications for HUB / Gateway station	Request specification for Rain be modified to 120 mm/hr. Dust is not a normal specification used for satcom antennas. Request delete this specification.....	NSIL original RFP specifications prevails.
13	Section-2: Specification 6.4 - Factory Acceptance Tests	FAT is normal for Hub antennas as it is very expensive to install antenna at the factory and then dismantle it again for hub antenna only OSAT should be applicable after installation. However, Factory Test reports will be provided for all major sub-systems like HPA, Frequency Converters etc.	Acceptable. Party shall submit FAT results for all major sub-systems like LNA/LNB, Frequency Converters, HPA, TLT, Active power splitter / combiner etc. for clearance from NSIL.
14	Section-3 point 3.17 - Vendor's Team shall comply and indemnify NSIL with the provision of all laws including labour .....	Page 35 Point 17: The sentence "The Vendor shall also submit the compliance of the laws along with techno-commercial proposal" is vague. Please specify what laws need to be complied.	
15	Section-1, Para 2.2, point C - The bidder/OEM shall have successfully performed supply and installation of at-least two nos. of hub stations (operating in C/Ext.-C/Ku/Ka band) .....	Large Ka band hub station market is relatively small globally with not many large antennas being sold annually. So request past 5 years' experience should be considered instead of last 3 years. Please note Ka band VSAT terminal market in India is yet start. So, requirement that 10 no's should have been sold be waived for	NSIL can accept party's global delivery / installation experience also. Installation experience of vehicle mounted VSAT systems also can be accepted. All other NSIL RFP requirements remains same.

		companies which are making exclusively Ka VSAT antennas.	
16	Section-2, Para 1, point 6 - Comprehensive on-site Warranty of three (03) years to be provided .....	Confirm on-site warranty support requirement is not applicable to VSAT terminals.	On-site warranty applicable for VSAT Terminals also. Same is mentioned in section-2, para-11 – list of deliverables for VSAT terminals. However, in case of any remote places (like Andaman, Lakshadweep, Ladakh etc.), if any additional logistics are involved, party can provide separate delta price in a separate sealed cover.
17	Section-2, Para 1, point 7 – 24/7 technical support .....	Confirm 24/7 Technical support requirement is limited to on-line support only for VSAT terminals.	Online support asked for both Hub station and VSAT terminals.
18	Section-2, Ku-band HUB / Gateway Station specification no 1 – feed operating frequency	The frequency gap between edge of Rx & Tx band is very close. A minimum gap of 500 MHz is preferred.	Even though total Ku-band freq. Range is covered under specification, while issue of the specific supply order, required frequency separation will be ensured. So, as far as Ku-band feed operating freq., NSIL specifications remains same.
19	Bids for different types of hub stations and VSAT terminals.	Please confirm bidders need not have to bid for all types, frequency bands, aperture sizes indicated in RFP to be qualified but can submit bids for any specific band or aperture or for hub only or VSAT terminals only. Request you to allow us to quote for the partial BOM (Bill of Material) also.	Party can bid for limited types of hub stations / VSAT terminals. However, for a given hub station / VSAT terminal, party shall bid for all deliverables, spares, support services etc.

**Commercial Part:**

No.	RFP Specifications	Query from Parties	NSIL response
1	Bid submission mode	Please confirm that bid submission is on-line only and hard copy need to be submitted or not.	Only online / soft copy required to be submitted. Only for any delta price applicable, party needs to send separate sealed cover to NSIL.
2	RFP specification Section-1, Para 2.1, point E – Authorized Signatory of the Bidder shall initial all relevant pages of the Technical and the Financial bid	Confirm printed datasheets and other such material need not be signed but only pages on company's letterhead need to be signed.	OK. Acceptable
3	RFP specification Section-1, Para 2.4 – Bid document cost	Page 6 Point 2.4: Under ease of doing business all ISRO labs have done away with tender document fee as they are now on-line. So, request delete requirement for tender document fee	NSIL RFP terms and conditions prevails.
4	RFP specification Section-1, Para 2.6, point 4 – Price Escalation .....	Page 7 Point 2.6.4: Request modify this clause as prices cannot held valid for 2-3 years including time to process the RFP and shortlist the vendor. Request that prices offered against RFP should be valid only for one year from the date of submission of the bid with agreed up on annual increase for subsequent year.	<p><b>The clause 2.6 point 4 shall be read as:</b></p> <p>No price escalation by the bidders shall be permitted during initial ONE year of the rate contract. After ONE year, the price escalation can be calculated as per following Formula (subject to max. 5% escalation / per year):</p> $Pr = P * (Lx - Lb) / Lb$ <p>Where: Pr = Revised cost of the item after escalation P = Original cost of the item quoted in this RFP</p>

			<p>Lx = The current month CPI (Consumer Price Index) while issuing the Supply order as mentioned in section 2.10 below in this RFP.</p> <p>Lb = The CPI for the month of the Rate Contract signing + ONE year. (for e.g. if the rate contract is signed in Dec. 2024, the CPI shall be considered for Dec. 2025).</p>
5	RFP specification Section-1, Para 2.10, point 6 – Security deposit	All ISRO establishments now a days asks Security Deposit at 3% of contract value. Accordingly request you reduce SD to 3% of contract value	<p><b>The Security deposit requirement for this RFP to be read as:</b></p> <p><b>If Supply Order value is &lt; 50 lakhs: 5% of the supply order.</b></p> <p><b>If Supply Order value is between 50 lakhs and 5.0 Cr.: 3% of the supply order.</b></p> <p><b>If Supply Order value above 5.0 Cr.: 2% of the supply order.</b></p>
6	RFP specification Section-2, Para 3, point 3 – VSAT Transportation	Cost of freight for VSAT antennas is significant part of cost of antenna and sometimes can be more than 30-40% of the antenna cost depending on the site.	<p>For remote places (like Andaman, Lakshadweep, Ladakh etc.), if any additional logistics are involved, party can provide separate delta price in a separate sealed cover.</p> <p>All other RFP specifications remain same.</p>
7	RFP specification Section-2, Para 7 – Quality Assurance	Page 27 Point 7: Request deletion of requirement of ISO 9001 qualification for manufacturers of Ka Band User/VSAT terminals. This is a new product/market and it will take time for new manufacturers to be qualified for ISO 9001.	<p>NSIL has asked for the ISO 9001 for the organisation and its quality process - not for the specific product.</p> <p>NSIL original RFP specifications prevails.</p>

8	L1 calculation criteria	We understand that L1 will be calculated per line item basis. Please confirm.	Yes. For different hub stations and VSAT terminals, line-item wise L1 will be calculated.
9	Due date extension for bid submission	Request from multiple parties.	<b>The due / last date for bid submission is extended up-to December 20, 2024.</b>
10	Request from some Party	NSIL may please share a list of NSIL approved vendor.	All the empanelled vendors with different centres of ISRO are acceptable for NSIL also.