

Request For Proposal (RFP)
for Insurance of GSAT-11 Spacecraft

The offer is to be submitted by Nationalized Insurance Companies only who are authorized by the Government to do the subject business.

ISRO/DOS has signed a Launch Services Agreement with M/s Arianespace for launch of GSAT-11 spacecraft. This spacecraft is scheduled for the launch in the launch period December 2017 to January 2018 tentatively.

This spacecraft, along with the co-passenger (to be identified by M/s Arianespace), will be launched by Ariane-5 from Kourou. GSAT-11 integration and testing are in progress.

ISRO/DOS desires to insure the above spacecraft and associated equipment as given under:

1. **Satellite Transit and Pre Launch and Extra Expenses (PLEE) insurance:**

The total assured sum covering the spacecraft and ground equipment for any damage/loss from the time of leaving ISAC (ISRO Satellite Centre) / ISITE premises till the lift-off as detailed hereunder:

GSAT-11 - Total Sum Insured ₹ 575.34 Crores

- | | | |
|----|---|-----------------|
| 1. | Spacecraft cost | ₹ 518.50 crores |
| 2. | Ground Equipment cost | ₹ 22.09 crores |
| 3. | Extra Expenses* | |
| | a. Arising from physical loss or damage | ₹ 34.75 crores |
| | b. Arising from a Terminated Launch not involving physical loss or damage | ₹ 34.75 crores |

* Extra expenses cover the expenses incurred by ISAC/ISRO, DOS resulting from the delay in the launch arising out of damage to the spacecraft in question or any other reason like delay due to aspects related to copassenger, etc. This could be in the form of re-transportation (French Guyana – Bangalore – French Guyana) of the spacecraft (if needed) in case of a damage, re-test and repeat of the launch campaign or extension of the launch campaign including the deputation of engineers, ISAC/ISRO, DOS' contractual liability to the launch service provider in case the earlier launch manifest is required to be cancelled/modified as a result of damage to the spacecraft, and so on.

The aircraft used for transporting the satellite from HAL or KIAL Airport to French Guyana will be chartered AN-124 Aircraft or equivalent. The allied equipment are being transported in two ILS-76 Aircraft or in one AN-124 Aircraft. Hence, the shipment will probably be in 2 to 3 (maximum) Aircrafts. The spacecraft and the allied equipment will be transported from ISAC/ISITE premises to HAL or KIAL Airport, Bangalore by road.

1. Launch All Risk (LAR) insurance:

LAR Insurance for the spacecraft for the total assured sum of

GSAT-11 ₹ 518.50 crores

covering all the risks from the lift-off till pre-separation and post-separation phase, with risk coverage in two options as indicated below:

- a) Option 1: until 6 months after the launch
- b) Option 2: until 12 months after the launch

including orbit raising operations, deployments, in-orbit testing and at least one eclipse season.

The Launch Services Agreement with M/s Arianespace has a provision for a free re-launch to cover the risk of the launcher failure.

The values for the deductible for the partial loss and Constructive Total Loss can be 10% and 85%, respectively.

The mission failure percentage, in case of partial failure, is apportioned based on the utilization priorities and impact of failures provided below

The mission failure percentage, in case of partial failure, will be apportioned as given below in Table 1 & 2

Table - 1

SI. No	Component	Frequency Band (Polarization)	Mission failure percentage	Quantity	Aggregate Mission Failure percentage
1.	Ka x Ku (Forward Link) & Ku x Ka (Return Link)	Uplink: 29500-30000 (LH & LV) Downlink: 10700 – 10950 & 11200 – 11450, (LH & LV)	3.125	32	100
		Uplink: 12750 – 13250 (LH & LV) Downlink: 19700 – 20200 (LH & LV)			
Total			-	-	100%
Note: 1. There are total of 32 configurations and each Configuration has one FWD link and one RTN link as given in the table-2. 2. Any failure of either FWD link or RTN link in a particular configuration will result in failure of that configuration					

Table - 2

CO NFI GU RAT ION NO.	FORWARD LINK							RETURN LINK						
	Cha nnel No.	Ku- bea m	Channel	Uplink		Downlink		Cha nnel No.	Ku- beam	Channel	Uplink		Downlink	
			Designatio n	Centr e freq (MHz)	Pol.	Centre freq (MHz)	Pol.			Designation	Centre freq (MHz)	Pol.	Centr e freq (MHz)	Pol.
1	1	B1	Ka8 x Ku1	29812	L-V	11262	L-H	33	B1	Ku17 x Ka4	13062	L-V	20012	L-H
2	2	B2	Ka5 x Ku2	29687	L-V	10887	L-H	34	B2	Ku18 x Ka1	12937	L-V	19887	L-H
3	3	B3	Ka7 x Ku3	29562	L-V	10762	L-H	35	B3	Ku19 x Ka3	12812	L-V	19762	L-H
4	4	B4	Ka8 x Ku4	29937	L-V	11387	L-H	36	B4	Ku20 x Ka4	13187	L-V	20137	L-H
5	5	B5	Ka6 x Ku5	29812	L-V	11262	L-H	37	B5	Ku21 x Ka2	13062	L-V	20012	L-H
6	6	B6	Ka8 x Ku6	29687	L-V	10887	L-H	38	B6	Ku22 x Ka4	12937	L-V	19887	L-H
7	7	B7	Ka8 x Ku7	29562	L-V	10762	L-H	39	B7	Ku23 x Ka4	12812	L-V	19762	L-H
8	8	B8	Ka5 x Ku8	29937	L-V	11387	L-H	40	B8	Ku24 x Ka1	13187	L-V	20137	L-H
9	9	B9	Ka5 x Ku9	29812	L-V	11262	L-H	41	B9	Ku25 x Ka1	13062	L-V	20012	L-H
10	10	B10	Ka6 x Ku10	29687	L-V	10887	L-H	42	B10	Ku26 x Ka2	12937	L-V	19887	L-H
11	11	B11	Ka6 x Ku11	29562	L-V	10762	L-H	43	B11	Ku27 x Ka2	12812	L-V	19762	L-H
12	12	B12	Ka6 x Ku12	29937	L-V	11387	L-H	44	B12	Ku28 x Ka2	13187	L-V	20137	L-H
13	13	B13	Ka7 x Ku13	29812	L-V	11262	L-H	45	B13	Ku29 x Ka3	13062	L-V	20012	L-H
14	14	B14	Ka7 x Ku14	29687	L-V	10887	L-H	46	B14	Ku30 x Ka3	12937	L-V	19887	L-H
15	15	B15	Ka5 x Ku15	29562	L-V	10762	L-H	47	B15	Ku31 x Ka1	12812	L-V	19762	L-H
16	16	B16	Ka7 x Ku16	29937	L-V	11387	L-H	48	B16	Ku32 x Ka3	13187	L-V	20137	L-H

CO NFI GU RAT ION NO.	FORWARD LINK							RETURN LINK						
	Cha nnel No.	Ku- bea m	Channel	Uplink		Downlink		Cha nnel No.	Ku- beam	Channel	Uplink		Downlink	
			Designatio n	Centr e freq (MHz)	Pol.	Centre freq (MHz)	Pol.			Designation	Centre freq (MHz)	Pol.	Centr e freq (MHz)	Pol.
17	17	B17	Ka4 x Ku17	29812	L-H	11262	L-V	49	B17	Ku1 x Ka8	13062	L-H	20012	L-V
18	18	B18	Ka1 x Ku18	29687	L-H	10887	L-V	50	B18	Ku2 x Ka5	12937	L-H	19887	L-V
19	19	B19	Ka3 x Ku19	29562	L-H	10762	L-V	51	B19	Ku3 x Ka7	12812	L-H	19762	L-V
20	20	B20	Ka4 x Ku20	29937	L-H	11387	L-V	52	B20	Ku4 x Ka8	13187	L-H	20137	L-V
21	21	B21	Ka2 x Ku21	29812	L-H	11262	L-V	53	B21	Ku5 x Ka6	13062	L-H	20012	L-V
22	22	B22	Ka4 x Ku22	29687	L-H	10887	L-V	54	B22	Ku6 x Ka8	12937	L-H	19887	L-V
23	23	B23	Ka4 x Ku23	29562	L-H	10762	L-V	55	B23	Ku7 x Ka8	12812	L-H	19762	L-V
24	24	B24	Ka1 x Ku24	29937	L-H	11387	L-V	56	B24	Ku8 x Ka5	13187	L-H	20137	L-V
25	25	B25	Ka1 x Ku25	29812	L-H	11262	L-V	57	B25	Ku9 x Ka5	13062	L-H	20012	L-V
26	26	B26	Ka2 x Ku26	29687	L-H	10887	L-V	58	B26	Ku10 x Ka6	12937	L-H	19887	L-V
27	27	B27	Ka2 x Ku27	29562	L-H	10762	L-V	59	B27	Ku11 x Ka6	12812	L-H	19762	L-V
28	28	B28	Ka2 x Ku28	29937	L-H	11387	L-V	60	B28	Ku12 x Ka6	13187	L-H	20137	L-V
29	29	B29	Ka3 x Ku29	29812	L-H	11262	L-V	61	B29	Ku13 x Ka7	13062	L-H	20012	L-V
30	30	B30	Ka3 x Ku30	29687	L-H	10887	L-V	62	B30	Ku14 x Ka7	12937	L-H	19887	L-V
31	31	B31	Ka1 x Ku31	29562	L-H	10762	L-V	63	B31	Ku15 x Ka5	12812	L-H	19762	L-V
32	32	B32	Ka3 x Ku32	29937	L-H	11387	L-V	64	B32	Ku16 x Ka7	13187	L-H	20137	L-V

The Functional Specifications document and the Configuration summary document including Heritage Matrix of GSAT-11 Project is enclosed.

The proposal should be submitted in two separate sealed covers containing:

Part-1 : Techno-commercial bid

Part-2 : Price bid

The techno-commercial bid shall contain the response to the RFP, the compliance statement also the price bid (masking the price values). The compliance statement is enclosed as Annexure -1.

The price bid shall be furnished in the format enclosed in Annexure-2. This part shall indicate the Price in percentage of the sum assured (with detailed break-up of applicable taxes and duties).

Please note that the proposals have to be addressed to

Senior Head, Purchase and Stores (Projects)

ISRO Satellite Centre, HAL Airport Road

Bangalore – 560017, India

Ph No. : +918025084004/+918025084369

Fax : +918025205283/+918025205284

E-mail : srhpsp@isac.gov.in

The proposals should be submitted on time before the deadline failing which the quotes will not be considered in our evaluation.

Compliance Statement
Insurance of GSAT-11 Spacecraft

Sl. No.	Description	Compliance	Remarks
1	<p>Satellite Transit and Pre Launch and Extra Expenses (PLEE) insurance:</p> <p>Insurance covers the spacecraft and ground equipment for any damage/loss from the time of leaving ISAC (ISRO Satellite Centre) / ISITE premises till the lift-off. Insurance coverage for Ground equipment to continue till its return to ISAC/ISITE premises after launch.</p>		
1.1	<p>GSAT-11 - Total Sum Insured ₹ 575.34 Crores</p> <p>1. Spacecraft cost ₹ 518.50 crores</p> <p>2. Ground Equipment cost ₹ 22.09 crores</p> <p>3. Extra Expenses ₹ 34.75 crores</p>	Yes / No	
1.2	<p>Extra Expenses arising from physical loss or damage and arising from a Terminated Launch not involving physical loss or damage (₹ 34.75 crores)</p> <p>Extra expenses cover the expenses incurred by ISAC/ISRO, DOS resulting from the delay in the launch arising out of damage to the spacecraft in question or any other reason like delay due to aspects related to copassenger, etc. This could be in the form of re-transportation (French Guyana – Bangalore – French Guyana) of the spacecraft (if needed) in case of a damage, re-test and repeat of the launch campaign or extension of the launch campaign including the deputation of engineers, ISAC/ISRO, DOS' contractual liability to the launch service provider in case the earlier launch manifest is required to be cancelled/modified as a result of damage to the spacecraft, and so on.</p>	Yes / No	
2	<p>Launch All Risk (LAR) insurance:</p> <p>LAR insurance covers the total assured sum of satellites, covering all the risks from the lift-off till pre-separation and post-separation phase including orbit raising operations, deployments, in-orbit testing and at least one eclipse season.</p>		

Sl. No.	Description						Compliance	Remarks
2.1	GSAT-11 : ₹ 518.50 crores						Yes / No	
2.2	Option 1 : Risk coverage till 6 months after launch						Yes / No	
2.3	Option 2 : Risk coverage till 12 months after launch						Yes / No	
2.4	The values for the deductible for the partial loss and Constructive Total Loss can be 10% and 85%, respectively						Yes / No	
2.5	The mission failure percentage, in case of partial failure, will be apportioned as given below							
	Sl. No.	Component	Frequency Band (Polarization)	Mission failure percentage	Quantity	Aggregate Mission Failure percentage	Yes / No	
	1.	Ka x Ku (Forward Link) & Ku x Ka (Return Link)	Uplink: 29500-30000 (LH & LV) Downlink: 10700 – 10950 & 11200 – 11450, (LH & LV)	3.125	32	100		
			Uplink: 12750 – 13250 (LH & LV) Downlink: 19700 – 20200 (LH & LV)					
	Total			-	-	100%		
	Note: 1. There are total of 32 configurations and each Configuration has one FWD link and one RTN link as given in the table-2. 2. Any failure of either FWD link or RTN link in a particular configuration will result in failure of that configuration							
3	Validity of the quotation from the tender opening date - 120 days						Yes / No	

Price Bid Format
Insurance of GSAT-11 Spacecraft

Sum Insured for PLEE

	GSAT-11
Spacecraft cost	₹ 518.50 crores
Ground Equipment cost	₹ 22.09 crores
Extra Expenses	₹ 34.75 crores
Total Sum Insured	₹ 575.34 Crores

Sum Insured for LAR

	GSAT-11
Spacecraft cost	₹ 518.50 crores

Quotes for the Premium

Sl. No.	Description	Premium	Remarks
1	Satellite Transit and Pre Launch and Extra Expenses (PLEE) insurance Premium		
1.1	Applicable Taxes		
2	Launch All Risk (LAR) insurance Premium		
2.1	Option 1 : Risk coverage for 6 months after launch		
2.2	Option 2 : Risk coverage for 12 months after launch		
2.3	Applicable Taxes		