

**Request for Proposal (RFP)**  
on  
**Operation of Surface Treatment Facility**  
at  
**Vikram Sarabhai Space Centre,**  
**Thiruvananthapuram**  
on  
**Government Owned Company Operated Mode**

**Vikram Sarabhai Space Centre**  
**Thiruvananthapuram – 695022**



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## **1 Introduction**

Request For Proposal for **Operation of Surface Treatment Facility** at Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram using VSSC established facilities on Government Owned Company Operated (GOCO) mode.

## **2 Preamble**

Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram, is the lead centre of ISRO responsible for the design and development of launch vehicle technology. VSSC is an ISO 9001:2015 certified organization and following established standards, norms, procedures and practices. In order to meet the increasing demand of operational launches, industry participation for production, testing and supply of sub-systems & systems are solicited. Delivery of products/services off/for various systems for launch vehicles and associated technologies in compliance with the quality standards, schedule and strict adherence to the safety and security norms prevailing inside the campus shall enable a productive aerospace ecosystem in the country. Towards this the Government Owned Company Operated (GOCO) mode of operation was implemented in VSSC. To include more activities under this umbrella, VSSC is looking forward to participation of private industry for the production, testing and supply of launch vehicle systems and sub-systems. Among other aspects, surface treatment (Anodising & Chromating of aluminium alloys) through Contractors is being explored.

## **3 Objective**

To carry out surface treatment (Anodising & Chromating of aluminium alloys) through the personnel deployed at VSSC facility(s) by the CONTRACTOR in compliance with the defined quality standard & schedule as finalized by VSSC for GOCO mode of operation.

## **4 Scope of the Contract**

The activities planned, quantified and scheduled under GOCO contract is attached as **Annexure 1**. The Contractor shall execute the work using Contractor's work force as per the contract terms and conditions. The activities shall be carried out by the Contractor at identified facilities and compliance to safety in such activities shall be ensured by the CONTRACTOR through their Safety Officer wherever applicable. The CONTRACTOR should have an established safety management system and be conversant with applicable safety practices and carry out all the activities with utmost safety. VSSC shall conduct periodic safety inspection and audit for activities.

## **5 Facilities and Process**

The facilities, tools, machines, equipment, fixtures, utilities and raw materials essentially required to carry out the activities to deliver the product/service are given in **Annexure 2** under specific heads, which shall be provided by VSSC. The routine up keeping of such process equipment is in the scope of the GOCO team and shall be carried out as mentioned in **Annexure 2**. The facility/equipment, if required, shall be shared with

VSSC. All necessary consumables, accessories & spares for upkeep shall be provided by VSSC.

The process to be followed to carry out each activity/service/product is given in **Annexure 3**. A detailed presentation with respect to the processes to be followed shall be presented in pre-bid meeting.

## **6 Contract Management Committee**

After award of the contract, a Contract Management Committee (CMC) shall be constituted by VSSC with identified members from VSSC and Contractor representative. CMC shall be responsible for review of progress of training, certification of Contract human resources for production, throughput monitoring, monitoring quality of activities completed, change in hardware quantity, monitoring efficiency of human resources, additional requirement of Contract human resources/resources, accounting of rejections, recommendation for invoking LD, etc. The CMC shall essentially meet at the end of every month to evaluate the performance and clear the monthly payment based on the activity completed in the month and also meet at any time as deemed necessary. All issues pertaining to occupational safety, security shall be reported to CMC. Any damages caused to VSSC, as such, by Contract personnel shall be assessed by CMC and compensation if any, shall be recovered. Decision of CMC shall be final and binding.

### **6.1 Contract and Facility Managers**

The Contract shall be managed by the Contract Managers from Contractor and Facility Manager from VSSC and duly nominated by them. During the currency of the Contract, any change in the designated Contract/Facility Manager shall be intimated to the other party. The Contract/Facility Manager shall be responsible for the day-to-day management of the activities under the Contract and they shall act as the focal point of the Contract for their respective entities –Contractor and VSSC.

## **7 Human Resources**

VSSC has arrived at and identified the minimum work force both in terms of category of qualification and number required to execute the activities. To carry out the activities stated in **Annexure 1**, human resources requirements are tabulated in **Annexure 4**. Being mission critical activities, quality of products/services are utmost important in conjunction with the delivery schedule. Process team as in **Annexure 4** shall be required to be deployed by the Contractor to carry out the activities in GOCO mode. Hence, Contractors shall always ensure the availability of qualified, and skilled personnel in GOCO facilities. The verification of the proposed team of Contractor for their technical capability shall be done by VSSC.

VSSC prefer to entrust the activities with a team with prior experience in similar field of operation. As the components and sub-assemblies to be handled are critical to mission application, stipulated quality and safety are of utmost importance and the same shall

be adhered to. Retaining of trained human resources is purely the responsibility of the Contractor to ensure quality safety and delivery schedule.

**Other requirements**

**Security** : GOCO team shall comply with the security regulation of VSSC.

**Safety** : GOCO team shall follow all safety stipulations/guidelines.

**Secrecy** : The CONTRACTOR and their production team shall abide by the INDIAN OFFICIAL SECRETS ACT and its amendments in vogue and shall provide information of awareness of the crew on the matter in writing.

**7.1 Training of vendor's personnel**

VSSC will impart inprocess training for carrying out independently all the processes proposed to be carried out. The training period will be one week. The human resources as indicated in Annexure 4 shall be deployed by the vendor for training. After completion of training, CMC will certify based on the evaluation of the hardware processed by the personnel. Personnel certified by VSSC only will be allowed to carry out processing. CMC reserves the right to certify / reject the personnel based on performance during training.

Fresh human resources supplied by the vendor shall undergo training for one week and will be certified based on the assessment by contract management committee. Payment, will be made as per the PO terms during training of human resources for the actual jobs. However, the sample jobs which are not actual components used for any of the applications will not be charged. Retaining of trained human resources is purely the responsibility of the vendor to ensure quality of the hardware processed.

As part of training, complete processes and procedures to be followed for execution of anodising / chromating of hardware will be imparted to the personnel. Major activities identified are

- ✓ Chromating
- ✓ Clear / Black anodising
- ✓ Selective clear / black anodising / chromating
- ✓ Selective clear / black anodising / free from anodising
- ✓ Analysis & bath maintenance
- ✓ Quality control & report generation
- ✓ Logging of process, job register, hardware movement register, etc.
- ✓ Disposal of baths, rinse water, etc.

Personnel will be trained to handle all the activities for operation of the facility and process on their own.

Charges for training will be recovered from the party, in case of employment of fresh human resources due to discontinuation of trained human resources of more than 1 person in six months. The charges will be reviewed and recommended by CMC.

## **8 Schedule**

The schedule for the activities to be carried out and the throughput requirements as in **Annexure 1** shall be prescribed by CMC and honored by the Contractor. Continuity of the activity shall be maintained and completion within stipulated period shall be ensured to maintain anticipated quality & quantity and any halt in process shall be mutually discussed and agreed in CMC, properly assessing the impact on quality & schedule. Facility Manager shall issue the individual activity with schedule of delivery to the Contract Manager. In case of conflict between schedule and activities being carried out, a revised schedule to be prepared by Contract Manager in consultation with Facility Manager. Adherence to schedule and throughput shall be logged for verification by Facility Manager. The quality checkpoints are embedded in the schedule and QA team of Contractor shall generate report at specific stages mentioned in process flow chart for later verification by Facility Manager. Mid-course corrections, if warranted shall be implemented by the Contractor as per the instructions of CMC.

## **9 Issue of Hardware/ Raw Material**

Facility Manager shall issue the necessary hardware/raw materials required for carrying out the activities as per the material issue plan. It is the responsibility of the Contractor to properly store the Raw Material/Hardware, if any, drawn from the stores/supplied for processing at identified places/ discard the byproducts/waste materials at identified places only. The Contractor is also responsible for the storage/protection of finished and semi-finished items, if any. The Raw Material/Hardware, if any, given should be under safe custody of the Contractor. The Contractor has no right to take the Raw Material/Hardware or part of Raw Material/Hardware, whatever provided, out of VSSC or replace a part of it with same material from other sources.

All Raw Material/Hardware, if applicable, shall be handled with care and the Contractor should ensure that the physical damages of any kind do not occur during handling. In case of any damage, the same shall be reported to facility manger immediately.

## **10 Responsibilities of the Contractor**

The Contractor shall form their own Team comprising of supervisors, processing/working personnel for the GOCO activity in VSSC. Safety officers, quality control team shall be a part of GOCO team wherever applicable. The members of the GOCO Team shall be above 18 years and below 60 years of age while working at VSSC. The Contractor should necessarily have experience in surface treatment viz. Anodising & Chromating of aluminium alloys. The Contractor should provide the bio-data, police verification certificate, EPF details, credentials and technical capability of



the GOCO Team for verification by VSSC prior to start of Contract. The Team shall be positioned at GOCO facility within 2 weeks from the signing of the Contract.

VSSC shall provide support and guidance to the GOCO Team during the initial Phase. However, Contractor should ensure that necessary competence is built up within the GOCO Team so that they can independently take full charge of the activity. The Contractor should also try to retain the competence, so as to ensure seamless progression of activities/services.

The following are the responsibilities of the Contractor:

- a. Deploy sufficient and competent human resources within 2 weeks of the date of release of GOCO Purchase Order, to progress and complete the work/ activities/ services meeting the schedule, quantity and quality requirements.
- b. The Procedure/ Process Document/ Checklist shared by VSSC shall be studied and strictly followed/heard by the Contractor and any doubts, clarifications etc. must be settled prior to start of activity/ services
- c. Schedule the processing/ servicing and activities as per the requirement projected by VSSC under the directions of CMC.
- d. Ensure readiness of the facilities, equipment, consumables, tooling and other aids required for the processing/ carrying out the activities.
- e. Preparation and maintenance of all process/test logs as per the Procedure/ Process Documents/ Checklist to be ensured.
- f. Carry out the activities as per Procedure/Process Document/ Checklist. Major steps involved in the activity are detailed in **Annexure 3**.
- g. Preparation of Production Document/ Activity log for quality/ safety audit and product acceptance/ completion of activities.
- h. Routine housekeeping, minor maintenance/cleaning/upkeep of the equipment, fixtures and tools wherever applicable.
- i. Contractor shall follow the byproducts/ waste materials disposal mechanisms/guidelines formulated by CMC for the GOCO activities.

## **11 Inspection, Quality Control, Quality Assurance and Quality Audit**

Inspection, Quality Control (QC) and Quality Assurance (QA) procedures and acceptance methodology at various stages of activity shall be as per the Procedure/Process Document issued by the VSSC after the award of contract. Quality/Safety Audits on the activity shall be carried out by VSSC once in every six months (or as and when required). The Contractor shall furnish all the required documents/reports to VSSC. Final assessment of the product shall be carried out by the QA agency of VSSC.

## **12 Verification**

The Facility Manager/ QA team/ Safety/ CMC shall have the right to verify the process, product, logs, records etc. as applicable during the activity. Such

inspection/verification/clearance by CMC does not absolve the Contractor from their responsibility of delivering/meeting the quality & specification spelt out in the Contract.

### **13 Process Rejections and Replacements**

Acceptance/ Rejection criteria of the activity shall be clearly mentioned in the Procedure/Process Document. The non-acceptance of product, if any, shall be studied and root-cause analysis shall be established by Facility Manager and presented to CMC. If the cause of non-acceptance is due to a wrong/careless process by Contractor, then the cost accrued towards the rejection/damage shall be borne by the Contractor after assessment by CMC. The decision of the VSSC shall be final in this respect. In cases of non-acceptance of products for reasons other than by that of Contractor, the payment for such products shall only be made after clearance by CMC with approval of VSSC.

### **14 Facility Sharing**

VSSC shall provide facilities, equipment, fixtures, etc. required for the activity as included in **Annexure 2**. Facilities are common and used for both development & production. All facilities offered to use by Contractor on a sharing basis with VSSC shall be agreed to by the Contractor. Whenever needed, priority override shall be discussed in CMC and mutually agreed upon. The Contractor should be willing to reschedule the planned activities accordingly. In case of equipment/facility where usage/ requirement is less, sharing is to be done. The processing schedule for such shared facilities/equipment/items shall be worked out by CMC.

### **15 Safety, Occupational Health and Environment Management**

Proposed GOCO activity of surface treatment (Anodising & Chromating of aluminium alloys) may involve certain operations which are critical in nature. It is Contractor's responsibility to conduct the activities in a safe manner. Towards this, following are the various aspects that have to be taken care of:

#### **15.1 Support from VSSC**

Following infrastructure to ensure safety, occupational health and environment protection shall be provided by the VSSC.

- a. Service of first aid centre and ambulance in case accidents/medical emergencies.
- b. Facility housekeeping (janitorial support only) is the responsibility of the VSSC.
- c. Wash room facility – facility available in the campus shall be extended to the Contractor.
- d. Drinking water facility – facility available in the campus shall be extended to the Contractor.
- e. Essential telephonic connections available in the facility can be utilized by the Contractor.

## **15.2 General Procedure and safe work practices**

- a. Work instruction and safety instruction for the production activity shall be as per the Procedure/Process Document of VSSC. GOCO Team must follow the work instructions.
- b. Applicable PPEs shall be arranged for the GOCO Team by VSSC.
- c. Facility housekeeping shall be the responsibility of the Contractor. Man/material limit as per the safety guidelines should be strictly adhered by the Contractor

## **15.3 Inspection, testing and preventive maintenance of safety critical equipment and facility**

The periodic inspection/testing and preventive maintenance of safety critical equipment/items like building electrical system, fire protection system, crane, building and structure, fire extinguishers and other tools shall be done by VSSC.

## **15.4 Work permits**

Contractor shall not carry out any unplanned works or any other non-routine job not covered in SOP in the facilities offered to them. For carrying out any work or maintenance activities in the facility, work permits shall be obtained from CMC.

## **15.5 Emergency Planning and Response**

Contractor shall follow VSSC emergency plans and instructions. Contractor shall participate in the drills conducted periodically in the VSSC campus.

## **15.6 Reporting of accidents/ incidents/ near miss and investigation**

Any incident/accident that occurs during the activity or any other occasion within the premises of VSSC shall be immediately reported to Facility Manager. Reporting of accidents/ incident or near misses shall be done as per VSSC procedure. Investigation shall be done by VSSC.

## **15.7 Continuous Improvement**

Corrective actions can be suggested during accident/incident/near miss investigation, safety inspection, safety surveillance, safety audit etc. If the corrective actions suggested are related to the Contractor's purview, then the same shall be implemented by the Contractor. A report on action taken in VSSC prescribed format shall be submitted within three days. Action taken reports shall be verified by VSSC.

## **15.8 Safety Monitoring**

Contractor shall have internal mechanism for monitoring the implementation of safety protocols in the work place through safety inspection. VSSC shall monitor the safety performance of the Contractor through periodic safety surveillance, safety inspection and safety audit.

VSSC safety agency shall have the full authority to stop the work in case of any critical violation of safety requirements. Decision on the nature of violation is fully under the

purview of VSSC safety agency. Non-conformances pointed out by the safety officers should be promptly addressed and corrective actions shall be taken.

### **15.9 Safety Review**

Implementation of safety aspects by the Contractor shall be reviewed periodically as decided by the CMC.

### **16 Alteration/Modification of Facilities/Equipment**

The Contractor is not permitted to alter or modify or make any changes to the existing facilities and equipment and machineries. In case any change or modification is an absolute necessity to sustain the activity, the modification need shall be proposed in writing to CMC for perusal and implementation. The decision of CMC shall be final.

### **17 Statutory Requirements**

The contract agency shall comply with the safety regulations and safety guidelines of ISRO/DOS in all their activities. In respect of all personnel, directly or indirectly engaged by the Contractor shall abide by the rules and safety provisions as governed by the below listed requirements with latest amendments.

- The Contractor shall ensure that all the relevant labour laws, applicable from time to time, are adhered to. Contractor shall comply with provisions of Contract Labour Regulation and Abolition Act (CLRA Act).
- All Risk Insurance Policy (ARIP) for a minimum amount of Rs.10 Lakhs (comprehensive scheme covering against all accidents/mishaps or exigencies that can arise while working) for the GOCO team shall be taken by the Contractor for the full contract period. Documentary evidence for the same shall be submitted before engaging the Work Force.
- Contractor shall comply with Factories Act/Rules, as applicable, or Occupational, Safety, Health and Working Conditions Code 2020 in respect of working hours, rest intervals, leave and overtime etc., to their employees. Contractor shall ensure provision for social security measures under Employee State Insurance Act and Employee Provident Fund and Miscellaneous Provision Act and Employees Compensation Act.
- The holidays shall be in accordance with VSSC as per the existing rules and amendments from time to time.
- Contract agencies/companies should not employ any personnel below 18 years of age on the site.
- The liability for any compensation on account of injury sustained by an employee of the Contractor shall be exclusively that of Contractor and as per statutory norms.

- Contractor shall comply with all statutory requirements, rules, regulations and amendment made time to time by the concerned authorities with respect to the employment and employees.
- Only Indian Nationals shall be engaged as employees by Contractor.
- Other statutory requirements which are applicable, but not limited to, are the following:
  - The Environment Protection Act and Rules
  - The Explosives Act and Rules
  - Petroleum Act and Rules
  - Factories Act and Rules
  - Labor Laws and Rules
  - Gas Cylinder Rules
  - Radiation Protection Rules
  - Static and Mobile Pressure Vessel Rules and
  - Occupational Health and Safety Working Code
- In addition to the above, the contract agency shall observe and abide the safety rules and regulations of ISRO/DOS while undertaking any work within the premises.

Contract Manager shall ensure adequate systems to prevent any loss/ damage due to unsafe conditions of GOCO team/damage to VSSC property. Documentary evidence/undertaking for the same shall be submitted to VSSC before engaging the GOCO Team.

VSSC shall not be responsible for any loss of life/injury or property that has happened by way of an incident/accident due to mismanagement of the facility/poor workmanship/non-compliance to work instructions and safety guidelines during execution of the Contract by the Contractor. The entire responsibility including cost of damages/legal issues, compensation etc. shall be with the Contractor.

## **18 Changes and Modifications**

VSSC reserves the right to modify the qualitative/quantitative requirements and other specifications related to the work at any time that shall be covered by the Contract.

## **19 Duration**

It is envisaged that the GOCO CONTRACT shall be operated for a total period of 5 years.

## **20 Payment terms**

The cost and applicable GST towards the activities carried out in GOCO mode at VSSC shall be paid to the Contractor after completion of activity and submission of corresponding Document. On completion of processing, the Contractor shall submit the adequate documents in prescribed format. Based on review of the Documents, CMC

shall recommend for the payment and the same shall be made with the approval of the competent authority. Contractor shall submit the invoice based on CMC clearance. The payment cleared by CMC shall be made subject to submission of Invoice and supporting documents.

100 % payment (on monthly basis) shall be released for the all completed / stage activities by the contractor. If any rework is caused due to the inefficiency / deviation from the Contractor, no payments will be made for the rework items / activities. For reworks called for due to reasons other than that of the Contractor, payments will be made as per the original type, and will be treated as fresh activity. The items / activities that are beyond the scope of rework, the recovery of the cost of Raw material / Hardware shall be applicable.

VSSC shall take all efforts to ensure continuous production. However, in the event of nil production due to unforeseen circumstances, and the reason(s) for nil production is not attributable to the Contractor, and the Contractor is retaining the minimum specified human resources inside VSSC premises, for 2 consecutive months, the Contractor will be entitled for Subsistence Amount for each month at a flat rate of 0.8 % of the total PO value, for each month (i.e approximately 50% of monthly expected production). Contractor is not eligible for claiming payment for the production output if any (based on unit cost or stage wise cost) whenever Subsistence amount is claimed. Quantification of the production output, during the period in which Subsistence Amount is claimed by the party, will be finalized by CMC based on defined stage wise cost. In the event of the period of nil production (where subsistence amount is claimed by the Contractor) continuing beyond 2 months, VSSC and Contractor can jointly decide for a planned activity call-off for a stipulated period with notice period not less than one month. The decision of the planned call-off shall be recorded in CMC and signed by the representatives of both VSSC and Contractor.

During the period of planned activity call-offs jointly taken by VSSC and Contractor due to change in the requirement or due to any other reason, no payment shall be made by VSSC to the Contractor.

If the period of no production is due to reasons totally attributable to the Contractor, no payment shall be made by VSSC for the period, and a penalty as approved by CMC shall be recovered from the Contractor (as per LD clause).

## **21 General guidelines**

### **21.1 Working schedule**

The working schedule shall be planned by the Contractor towards meeting the requirements. Under normal conditions only regular shift operation is envisaged for the GOCO model. However, in case of exigencies Contractor shall depute personnel for extended working hours in order to complete the work as per the schedule indicated by VSSC.

The working time for the regular shift shall be from 08:45 hrs to 17:15 hrs from Monday to Friday. Activities requiring 3 shift operations are mentioned explicitly. However, for meeting the production requirements or completing certain activities that cannot be discontinued unfinished, the working time can be started/extended before/beyond regular time or work can be planned on holidays on a case-to-case basis with the prior permission of VSSC. For any work beyond office hours or specific GOCO where round the clock operation is envisaged, deployment of personnel in 24x7 (3 shift operations) is also envisaged based on the CMC recommendations.

Contract Manager of Contractor shall prepare the daily schedule of activity in advance according to the CMC cleared production/activity schedule and get approval from the Facility Manager of VSSC. The respective Contract /Facility Manager shall be the focal point for the activities and shall be responsible for the day-to-day management and monitoring of the production activities.

### **21.2 Guidelines for Contractor**

- Contractor shall ensure medical fitness of GOCO Team. Annual medical checkup of all members of the GOCO Team must be done preferably by a Doctor qualified in Occupational Health or by a General Physician (MD General Medicine) and the reports to be made available for audit by VSSC. The cost towards this shall be borne by the Contractor.
- Exclusive tamper proof Contractor's Identity Cards shall be issued by the Contractor for the persons of the GOCO Team. Entry of GOCO Team members into VSSC campus shall be controlled by smart card that shall be provided by VSSC. Only authorized persons of the Contractor shall enter VSSC campus for executing the Contract. VSSC shall implement security measures such as CCTV surveillance, Biometric access control entry for the GOCO Team members at their work places.
- Members of the GOCO Team of Contractor shall open a savings bank account in a Nationalized Bank and Contractor shall furnish the bank details of their GOCO Team members to VSSC. Contractor should credit monthly salary of the GOCO Team members to their respective bank accounts and give the monthly salary payment statement to VSSC. Contractor shall produce the insurance premium payment status to VSSC for verification.
- Electronic gadgets like Mobile phone/Laptop/portable storage devices or any other electronic gadgets are NOT PERMITTED inside VSSC campus.

### **21.3 Liquidated Damages (LD)**

The schedule of the activity/service is the essence of the Contract. In the event of the Contractor failing to complete the activity within schedule and if the delay or failure is entirely attributable to Contractor, VSSC shall have the right to recover as LD (as approved by CMC) from the Contractor, a sum at the rate of half per cent per week or the part thereof not exceeding a total of 10% (ten percent) of the cost of the activity or combination of activities, so delayed.

#### **21.4 Price Variation Formula**

The best and final quoted price shall remain firm and fixed for 24 months from the date of commencement of operation. After 24 months, price variation as per GFR 2017 (Appendix-11) guidelines shall be applied. Details at **Annexure 5**. Party shall agree for the same (mandatory).

#### **21.5 Security Deposit**

To ensure successful completion of the Contract, the Contractor should furnish interest free Security Deposit in the form of Bank Guarantee/FDR/ISB/DD from any Scheduled Bank for 3% of the annual value of the Contract without GST and the same should be valid beyond two months from the validity of the Contract. The Security Deposit shall be returned only after successful completion of all contractual obligations.

#### **21.6 Statutory Duties and Taxes**

All statutory levies, as applicable from time to time shall be claimed by the Contractor and shall be paid by VSSC. However, in case any special exemption/concession from payment of the same is notified by the Government, the Contractor shall avail the same by obtaining the necessary Certificate, if any, from VSSC.

In the event of such payments of duties and taxes still being demanded, Contractor shall make the payment under protest after obtaining the concurrence of VSSC. For this purpose, the Contractor shall comply with the instructions given by VSSC and provide all requisite information as may be required by VSSC.

#### **21.7 Exchange of Additional Technological Data**

If at any time during the tenure of this Contract, any additional technological data relating to the surface treatment (Anodising & Chromating of aluminium alloys) is generated by VSSC, the same shall be communicated to the Contractor by VSSC. Such additional data generated by VSSC, if necessary, shall be incorporated in the Procedure/Process Document.

#### **21.8 Confidentiality**

The Contractor shall be abided by the following:

- a. All information and documents to be exchanged pursuant to the contract shall be kept confidential by the Contractor and shall be used subject to such terms as each party may specify. The Contractor shall not use the information for purposes other than that specified without prior written consent of VSSC.
- b. All confidential information shall remain the exclusive property of VSSC. The Contractor agrees that this Contract and the disclosure of the confidential information do not grant or imply any license, interest or right to the recipient in respect to any intellectual property of VSSC.



- c. Unpublished information, whether oral, in writing or otherwise, discovered or conceived by the Contractor and exchanged under the provisions of this contract shall not be transmitted to a third party unless otherwise agreed by VSSC.
- d. The Contractor shall not sub-license, assign or sub-assign partly or fully the activities, rights, obligations, permissions, etc. received in the Contract to third parties, under any circumstances without the prior written permission of VSSC.
- e. VSSC shall enter in to Non-Disclosure Agreement with the Contractor at the time of PO placement.

### **21.9 Security**

The Contractor shall follow all VSSC security instructions applicable for people & processes prevailing at present and those issued from time to time. If any person/persons of the GOCO Team of Contractor violates the security instruction(s) of VSSC, misbehaves or commits any misconduct, VSSC reserves the right to refuse permission to such persons to enter VSSC. In such cases VSSC shall have the right to terminate the Contract without notice.

### **21.10 Technology Rights**

Notwithstanding any further development in technology of the GOCO activity by the Contractor, the technical know-how and technology shall remain the property of VSSC even after completion of the Contract.

### **21.11 Sales to Third Party**

At any time during the tenure of this Contract, the Contractor shall not sell or exchange or mix with or part with technology, drawings, data, process and Production Documents, hardware etc. related to surface treatment (Anodising & Chromating of aluminium alloys) to any third parties.

Violation of this clause made by the Contractor, if any, shall lead to termination of the Contract by VSSC unilaterally in addition to initiation of legal action by VSSC.

### **21.12 Security and Protection of information & Intellectual Property**

The Contractor shall not divulge the process know-how and basic engineering data regarding the surface treatment (Anodising & Chromating of aluminium alloys) to any third party or otherwise make it public. However, this provision shall not apply to such technical information and data those are available in the public domain. The Contractor shall not disclose the terms and conditions of this agreement to any third parties during & after completion of the Contract without prior written consent of VSSC except as required under any law or for compliance with any statutory requirements.

The Contractor shall not assign any rights and obligations arising out of the Intellectual Property Rights (IPRs) generated from inventions/activities carried out under the contract to any third Party, without prior written consent of VSSC. All confidential information shall remain the exclusive property of VSSC. Disclosure of the confidential

information shall not be construed as licence, interest or right to the receipt in respect to any Intellectual Property Right of the Other party. An undertaking shall be obtained from the contractor in stamp paper.

Party should not copy the Procedure/Process Documents/drawings/Log sheets/Test reports or any other documents pertaining to activity, in part or full and take it outside premises of VSSC as hard copy or soft copy. The personnel involved in the work are to be confined within their area of work, shall not move out of work place and should not interfere with the works carried out in other areas.

### **21.13 Grievance Redressal and Arbitration**

The technical/administrative issues, clarifications and other matters that needs resolution during the execution of the Contract shall be discussed and resolved in CMC. Such decisions shall be approved by Deputy Director, ESAE, VSSC. The appellate authority for the CMC decisions shall be DD, VSSC (ESAE). Issues related to financial matters shall be discussed and decided by Competent Authority as per norms of VSSC.

Any dispute, disagreement or question arising out of or relating to or in consequence of the Contractor to its fulfilment, or the validity of enforcement thereof which cannot be settled mutually through CMC or by DD, VSSC (ESAE) or by any Competent Authority of VSSC or the settlement of which is not herein specifically provided for, shall be referred to arbitration within 30 (thirty) days from the date either party informs the other in writing that such dispute, disagreement exists.

The Arbitration proceedings shall be conducted in the court of Thiruvananthapuram District, in accordance with and subject to the provisions of Indian Arbitration and Conciliation Act 1996 (Act 26 of 1996) and Arbitration and Conciliation [Amendment] Act, 2015 and as amended from time to time. Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses of the Arbitrator shall be shared equally by the parties unless the award provides otherwise. The enforcement of the award shall be governed by the rules and procedures in force in the state of Kerala in which it is to be executed. Performance under this Contract shall, however, continue during arbitration proceedings and no payment due or payable by the parties hereto shall be withheld unless any such payment is/or forms a part of the subject matter of arbitration proceedings.

### **21.14 Indemnity**

The Contractor shall indemnify VSSC for any patent infringement on the process knowhow supplied by VSSC. Also, the Contractor shall be required to indemnify VSSC for any damage to VSSC or to third parties due to negligence on his part (including actions of his GOCO Team).

### **21.15 Force Majeure**

Neither VSSC nor Contractor shall be considered in default in the performance of its obligations under the Contract, if such performance is prevented or delayed for any

causes beyond the reasonable control of the party affected by eventualities such as war, hostilities, revolution, riots, civil commotion, strikes etc., or because of any epidemics, fire accidents, floods, earthquake etc., or because of any law and order situation, proclamation or regulation or ordinance of any government or sub-division thereof, or because of an act of God provided notices in writing of any such cause with necessary evidence that the obligation under the agreement is affected or prevented or delayed is given within 14 days from the happening of the event and in case it is not possible to serve notice within the said fourteen day period, then, within the shortest possible period without delay. As soon as the cause of force majeure has been removed, the party whose ability to perform his obligation has been affected shall notify the other party of the actual delay that has occurred due such force majeure condition.

#### **21.16 Termination of Contract**

Under normal circumstances, termination of the contract is not foreseen. However, in the case of non-compliance to or non-performance of the terms and conditions of the agreement set out in this Contract by either the Contractor or VSSC, both the parties shall have the right to terminate this Contract, wholly or partly, by giving a notice of one month in writing to the other party. The termination of this Contract for any other reason shall be by mutual consent.

Upon termination of the Contract:

- a. The Contractor shall not be entitled either to use in part or full the know-how relating to surface treatment (Anodising & Chromating of aluminium alloys) obtained from VSSC or to transfer it to any third party.
- b. The Contractor shall return to VSSC forthwith all technical documents, technical data, including drawings, free issues etc. given by VSSC or generated during the Contract period by the Contractor.
- c. Both parties shall settle accounts expeditiously, by mutual agreement.

#### **21.17 Ownership**

The complete ownership of the facility shall be with VSSC, ISRO, Govt. of India and the Contractor shall at no point of time have any ownership rights on the facility. The GOCO Team deployed shall be employees of the Contractor and shall not claim to have been employed by VSSC. VSSC has no responsibility towards the Contractor's employees.

#### **21.18 Applicable Law**

This Contract shall be governed by and interpreted and construed in accordance with the laws of India.

#### **21.19 Jurisdiction**

The Courts of Thiruvananthapuram District only shall have jurisdiction to deal with the award and decide any matter relating to disputes arising out of this Contract.

### **21.20 Infringement**

VSSC shall not be responsible if the Contractor infringes any applicable laws or statutes in force during the currency of the Contract.

### **21.21 Notices**

Any notice to either party under this agreement shall be deemed to be validly served, if sent by registered post or electronically like fax/e-mail followed by a copy in confirmation by registered post to the registered office, hereinbefore mentioned.

### **21.22 Languages and System of Measurement**

All documents and correspondence should only be in the English-Hindi language. The SI system of measurement shall be used for this Contract.

### **21.23 VSSC's Banker**

VSSC's Bankers shall be State Bank of India (SBI), Thumba Branch, Thiruvananthapuram, Pin 695022, Kerala, India.

## **22 Criteria for Evaluation of Proposal**

### **22.1 General**

The RFP responses shall contain complete information of the Contractor, its human resources, infrastructure, assets, financial standing, line of business and credentials, details of similar works executed etc. Every claim shall be supported with documentary evidence. The responses shall be evaluated and processed with the objective of maximizing production while minimizing the unit cost of production.

### **22.2 Essential criteria for evaluation of Proposal**

1. Contractors registered in India under Company Act/Society/JV firm, Partnership firm/Pvt. Ltd. Company/Public Ltd. Company/ PSE/ LLP need only participate.
2. The activities in VSSC are unique, schedule critical, highly specialized and complex in nature. Hence it is necessary for the Contractors to have adequate experience in the specified domain of activities. Towards this, prior experience of the contractor for a minimum period of 2 years strictly in the specified domain of activities as per **Annexure 1** and clause 10 is essential. Relevant purchase orders / work orders obtained from and executed in a Union Government or State Government / All PSUs need to be attached with the bid. Clause no. 10 to be read with this clause for considering the area of expertise of the contractor. This shall apply to sl. No. 2 of table of checklist for supporting documents.
3. The contractor should have executed at least a single purchase order of the bidding value or two purchase orders each for 50% of bidding value or three purchase orders each for 33% of bidding value with in last 5 financial years starting with the current financial year.

4. Contractors should have an established management structure and shall possess human resources with adequate knowledge, skill and experience in the areas of activity domain specified.
5. For participation in bidding process and submission bids, all interested bidders shall attend the pre-bid meeting online or offline and the date of which is indicated in the RFP document/tender.
6. The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 and the preferences that are extendable to the MSME Units including Women and SC/ST Entrepreneur's as issued by the Government of India from time to time and wherever feasible, will be applicable for this RFP. In order to avail of the benefits extended by the Government of India to Micro and Small Enterprises, Contractors are requested to submit Entrepreneur Memorandum Part-II duly signed by the General Manager, District Industries Centre or NSIC Registration/Udyog Aadhar/Udyam Registration details.

**Note:**

1. *All information provided above by the CONTRACTOR shall be supported with documentary evidence. Brochure, if any, detailing the CONTRACTOR profile shall be submitted. Copy of the previous similar purchase/work orders executed by the CONTRACTOR also may be appended.*
2. *The final evaluation of the responses form Contractors shall be based on inputs furnished against our criteria, assessment based on feedback from customers and overall assessment.*

Contractors who are meeting the requirements as specified in clause 22.2 above and are interested in associating with ISRO for surface treatment (Anodising & Chromating of aluminium alloys) at VSSC, Thiruvananthapuram shall submit their bid along with copies of supporting documents for verification/evaluation at VSSC and attend the mandatory pre-bid meeting.

**Checklist for the supporting documents**

*(Filled checklist to be submitted by the Contractor along with the bid)*

**Table 1: Checklist for Supporting Document**

Sl. No.	Document / Proof	Attached / Not-attached	Page number of supporting documents attached	Remarks
1	Company registration details <i>(Clause 22.2.1)</i>			

Sl. No.	Document / Proof	Attached / Not-attached	Page number of supporting documents attached	Remarks
2	Proof of prior experience of the contractor for a minimum period of 2 years strictly in the specified domain of activities as per <b>Clause 10 &amp; Annexure 1</b> (Clause 22.2.2)			
3	Copy of previous purchase/work orders executed by the Contractor (least a single purchase order of the bidding value or two purchase orders each for 50% of bidding value or three purchase orders each for 33% of bidding value with in last 5 financial years starting with the current financial year)(Clause 22.2.3)			
4	Company profile, management structure, human resources and their experience (Clause 22.2.4)			

## 23 RFP Process

### 23.1 RFP Terminology

**Table 2: Terminology**

Acceptance tests	Testing/evaluation done in test facility/laboratory to evaluate the quality and accept the product for use.
Accounts	The Division in VSSC dealing with payment of bills and settling the payment related matters pertaining to this Contract.
DD Entity	Deputy Director of respective Entity in VSSC.
Calibration	Process by which all the measuring/testing/analysis equipment/instruments are verified periodically for accuracy & precision.
Contract	An agreement between the VSSC and the Contractor mentioning the agreed terms for the execution of the activities as stipulated in the RFP.
Contract Manager	Officer duly appointed by the Contractor representing their respective entities and responsible for managing and monitoring the day-to-day activities under the Contract.

Facility Manager	Officer duly appointed by the VSSC representing their respective entities and responsible for managing and monitoring the day-to-day activities under the Contract.
Configuration Control	The process of approving drawings/documents supplied by the VSSC by the Configuration Control Board (CCB) set up by the VSSC. Any change from the existing approved drawing/document shall be reviewed and approved by CCB.
VSSC	Vikram Sarabhai Space Centre (VSSC), the lead center of ISRO, which is soliciting the RFP.
ISRO	Indian Space Research Organisation
DOS	Department of Space
Drawings	The drawings of all the components, finished product, accessories and fixtures, sub-assemblies and stages which form part of Process Document supplied by VSSC.
Engineer	Qualified personnel (Graduate engineer/Science post-graduate level) who are responsible for overall supervision and management of each process/stage ensuring safety and quality as per specified safety/process document. He shall responsible for safe conduct of all the operations during processing as per the safety precautions mentioned in the Procedure/Process Document.
FIM	Free Issue Materials are chemicals/materials/equipment/accessories/spares issued by VSSC to the Contractor during the Contract period. The items other than consumables and raw materials for processing are to be returned by the Contractor in good condition on completion/termination of Contract. Necessary security/indemnity requirement as specified by the VSSC shall have to be borne by the Contractor in this regard. The Contractor shall also provide a periodic consumption statement for the consumable and raw materials.
Fixtures	The accessories like work tables, compressors, furnaces etc. provided by VSSC for component fabrication, assembly etc.
Inspection	Activity carried out to check the quality of the process/activity/product at an intermediate stage. This includes dimensional inspection and non-destructive (Visual, Radiography and Ultrasonic test) evaluation.
CMC	Contract Management Committee (CMC) formed with persons from both VSSC and Contractor respectively. The CMC is formed to schedule and monitor the production activities as per the RFP. All the issues related to schedules and processing activities shall be brought to the CMC for its resolution. The CMC shall also certify the production for the month at the end of each month which shall be the basis for the payment to the Contractor.

PPE	Personal Protection Equipment employed for safe conduct of all the process operations without personal injury/suffocation/illness to operators and staff working in the facility. Supply of PPEs shall be decided on case by case by CMC.
Production Schedule	The schedule prepared jointly by VSSC and the Contractor that details the item wise production quantity and sequence with start time/date and end time/date.
Process/ Process document	A document supplied by the VSSC that contain descriptive details of the activity/system, specification, sequential process steps involved, elements/components required (wherever applicable). The Procedure/Process Document also contain details of consumables, tools, equipment required to perform the activity & their specification as well as process log sheets, checklists and drawings.
Production Document	A document containing all the end-to-end essential details of the whole process and product including date/period of activity, identification numbers, process parameters, test results and product evaluation parameters. This document is to be generated by the Contractor and submitted to VSSC for review along with each product/batch in the format prescribed by CMC. This along with Quality Assurance Report generated by the quality agency of VSSC shall be the basis for evaluation of the final product clearance.
Properties	Parameters of intermediate/final product evaluated at identified laboratories for its characterization/evaluation.
Purchase	The Division in VSSC dealing with rules and regulations pertaining to awarding the Contract and operating the same for a specified period.
QC Officer	Quality Control Officer responsible for maintaining the overall quality of all the operations as per the specifications mentioned in the Procedure/Process Document. Qualified QC officers should be deputed by the Contractor and they shall be responsible for in-process checks, and overall quality of activity.
Store	Identified location inside the VSSC premises where all the raw materials, accessories and consumables are stored under specified conditions.
Safety Officer	Officer responsible for maintaining the safety management system and general safety protocols in force. Safety officers shall be deputed by the Contractor and they shall be responsible for in-process & overall safety. Safety lapses, if any, shall be reported to VSSC's Facility Manager.
Supervisor	Qualified personnel (Engineering diploma/Science graduate level) who is responsible for supervising the individual process operations



	and ensuring safety for the operations and quality of the product as per specified safety/Process Document.
Technician	Staff engaged in conducting the operations as directed by supervisor/engineer.
Contractor	A Contractor who enters into a Contract with VSSC for providing the services as stipulated in the RFP.

## 24 Per month throughput & human resources contribution

The human resources requirement per item description and the expected throughput of human resources per month (25 working days) is as given below for correlating human resources with the item description.

**Table 3: HR contribution**

Sl. No.	Item Description	Work Contribution in %		Quantity Per Month (25 Days)	Unit of measure
		BSc	ITI		
1.	Chromating of small components processed in lots	10	100	25	Lot
2.	Chromating of components (upto 100 x 100 mm) & flat components	10	100	300	Nos
3.	Chromating of components (100 x 100 mm to 200 x 200 mm)	10	100	250	Nos
4.	Chromating of components (greater than 200 x 200 mm)	10	100	100	Nos
5.	Anodizing of small components processed in lots	10	100	25	Lot
6.	Anodizing of components (upto 100 x 100 mm) & flat components	10	100	100	Nos
7.	Anodizing of components (100 x 100 mm to 200 x 200 mm)	10	100	75	Nos
8.	Anodizing of components (greater than 200 x 200 mm)	10	100	60	Nos
9.	Selective anodizing of components Size upto 100 x 100 mm (flat)	10	100	45	Nos
10.	Selective anodizing of components Size upto 100 x 100 mm (without cavities)	10	100	40	Nos
11.	Selective anodizing of components Size upto 100 x 100 mm (with cavities)	10	100	15	Nos
12.	Selective anodizing of components Size 100 x 100	10	100	30	Nos

Sl. No.	Item Description	Work Contribution in %		Quantity Per Month (25 Days)	Unit of measure
		BSc	ITI		
	mm to 200 x 200 mm (without cavities)				
13.	Selective anodizing of components Size 100 x 100 mm to 200 x 200 mm (with cavities)	10	100	13	Nos
14.	Selective anodizing of components Greater than 200 x 200 mm (without cavities)	10	100	15	Nos
15.	Selective anodizing of components Greater than 200 x 200 mm (with cavities)	10	100	7	Nos
16.	Selective anodizing of Extra ordinary components (with more than 3 cavities per side)	10	100	6	Nos
17.	Maintenance of complete line	5	25	1	Nos

## 25 Bid Format

This offer is invited on a two-part bid basis, namely, **Part-I:** Techno Commercial bid & **Part-II:** Price bid

### 25.1 Part-I: Techno Commercial bid:

This part of the bid shall consist of compliance and confirmation of technical specifications of this enquiry. Minor deviations if any, shall be clearly spelt out, without which it shall be deemed that the offer is in compliance with the tender enquiry specification in total (details of parties' capabilities, previous experience etc.). Compliance matrix attached as per **Table 1** shall be duly filled up with appropriate comments, wherever warranted and supporting documentary evidence(s).

### 25.2 Part-II Price bid:

The price bid shall be submitted in the format given below for the detailed scope of work defined under in this RFP.

The Service Provider for GOCO shall submit their quote as per the following matrix:

**Table 4: Quote Matrix**

<b>Sl. No.</b>	<b>Item description</b>	<b>Quantity Per Year</b>	<b>Unit of measure</b>	<b>Unit Rate in Rupees</b>	<b>Cost for One Year</b>
1.	Chromating of small components processed in lots	20	Lot		
2.	Chromating of components (upto 100 x 100 mm) & flat components	1500	Nos		
3.	Chromating of components (100 x 100 mm to 200 x 200 mm)	300	Nos		
4.	Chromating of components (greater than 200 x 200 mm)	75	Nos		
5.	Anodizing of small components processed in lots	20	Lot		
6.	Anodizing of components (upto 100 x 100 mm) & flat components	2250	Nos		
7.	Anodizing of components (100 x 100 mm to 200 x 200 mm)	200	Nos		
8.	Anodizing of components (greater than 200 x 200 mm)	25	Nos		
9.	Selective anodizing of components Size upto 100 x 100 mm (flat)	200	Nos		
10.	Selective anodizing of components Size upto 100 x 100 mm (without cavities)	150	Nos		
11.	Selective anodizing of components Size upto 100 x 100 mm (with cavities)	25	Nos		
12.	Selective anodizing of components Size 100 x 100 mm to 200 x 200 mm (without cavities)	200	Nos		
13.	Selective anodizing of components Size 100 x 100 mm to 200 x 200 mm (with cavities)	20	Nos		
14.	Selective anodizing of components Greater than 200 x 200 mm (without cavities)	20	Nos		
15.	Selective anodizing of components Greater than 200 x 200 mm (with cavities)	30	Nos		

Sl. No.	Item description	Quantity Per Year	Unit of measure	Unit Rate in Rupees	Cost for One Year
16.	Selective anodizing of Extra ordinary components (with more than 3 cavities per side)	10	Nos		
17.	Maintenance of complete line	12	Nos		
Total cost for one year (A)					
Total cost for Five years (B=A x 5)					
Goods & Service Tax (GST)( C=18% of B)					
Grand Total (D=B+C)					
<b>Note:</b>					
<ul style="list-style-type: none"> <li>Quantity per year is for calculation purpose only. VSSC reserves the right to reduce / increase or not to order whole or any of the items above.</li> </ul>					

## 26 Price bid evaluation criterion

Offers with total basic price (B) equal to or higher than 90% of total estimated basic cost of the tender only shall be qualified for tender evaluation. From the qualified offers, the one, in which, the landed cost (grand total) is the lowest, shall be selected.

## 27 Time Frame for The Implementation of the Purchase Order

T0 = Order acceptance date (order acceptance shall be communicated within reasonable period)

T1 = T0+2 weeks = Within 2 weeks complete the recruitment, verification, medical check-up of all personnel's who are going to be deployed for GOCO operation.

T2 = T1+1 week = Deployment of Personnel at VSSC for work.

**Major Process/activities (planned, quantified, scheduled) and deliverables of Proposed GOCO Activity**

**Table 5: Annual projections for the surface treatment activities**

<b>Sl. No.</b>	<b>Activity Type</b>	<b>Quantity in numbers</b>
1.	Chromating of components for electronic packages	2200
2.	Anodizing of components for electronic packages	3300
3.	Selective anodizing / chromating of components for electronic packages	700
4.	Maintenance of process lines	12

**List of Facilities, tools, machines, equipment, fixtures, utilities and raw materials, routine up keeping**

**Table 6: List of items for surface treatment**

<b>Sl. No.</b>	<b>Items to be handled</b>
1.	Automated anodizing line
2.	Dyeing and sealing tank
3.	Heaters
4.	Power supply
5.	Glasswares for chemical analysis
6.	Chemicals (acids, alkalis, solvents)
7.	Aluminium wire
8.	Masking tape
9.	Lacquer
10.	Isoscope
11.	Multimeter
12.	Clamp on meter
13.	Thermometer
14.	pH meter
15.	Conductivity meter
16.	DI plant
17.	Weighing balance
18.	Tools

**Annexure 3.****Process flow chart, schedule, QC and safety procedure to be followed****Table 7: List of process documents**

<b>Sl. No.</b>	<b>Processes to be carried out</b>	<b>Reference nos</b>
1.	Anodising	VSSC/AVN/APPG/EPCF/ECF/01/18, dated July, 2018
2.	Chromating	VSSC/AVN/APPG/EPCF/ECF/02/18, dated July, 2018
3.	Selective Anodising / Chromating	VSSC/AVN/APPG/EPCF/ECF/03/18, dated July, 2018

## Process Team

Table 8: Human Resources (tentative) to be deployed and activities identified for surface treatment

Sl. No.	Human resources	Qualification	Works to be carried out
1	Operator (Four persons)	ITI, Electroplating	Anodising / Chromating / Masking of the jobs as scheduled, Preparation of baths, Preventive maintenance of the process lines, Logbook entry, Unpacking / packing of jobs, Upkeep of the facility, Disposal of baths and rinse water, DI water plant maintenance, Process line maintenance, Incoming hardware inspection, Completed hardware inspection, Inprocess inspection during processing of hardware, Inspection logsheet preparation, Inspection report preparation, Receipt & despatch of hardware, etc
2	Chemical Analyst (One person)	BSc. Chemistry	Analysis & maintenance of process baths, DI water analysis, Logging of analysis results, Job register maintenance, Incoming hardware inspection, Inprocess inspection during processing of hardware, Inspection logsheet preparation, Inspection report preparation, Inventory control, Receipt & despatch of hardware, Assistance in planning

Note: VSSC reserves the right to reduce / increase the number of human resources to be deployed during the currency of the contract.



**Price Variation Formula as per GFR 2017**  
**APPENDIX-11**

$$P1 = P0 \left[ F + a \left[ \frac{M1}{M0} \right] + b \left[ \frac{L1}{L0} \right] \right] - P0$$

P1: Adjustment amount payable to the supplier (a minus figure will indicate a reduction in the contract price)

P0: is the contract price at the base level

F: is the fixed element not subject to price variation

a: is the assigned percentage to the material element in the contract price

b: is the assigned percentage to the labour element in the contract price

L0 & L1 are the wage indices at the base month & year and at the month and year of calculation respectively

M0 & M1 are the material indices at the base month and year and at the month and year of calculation respectively

In this case, F = 0, a = 0, b = 1

Base month: Month of release of PO / commencement of activity whichever is later

Note: The price variation will be applicable, if the resultant change is higher than 2 % of previous unit price (from base for third year and from third year for fourth year). Where resultant price increase is less than or equal to 2 %, no price adjustment will be made to the contractor. If there is any reduction in price as result of price variation, same shall be passed onto department.