

Tender Ref. No:

TENDER DOCUMENT

For the

**Architectural and structural designing of Gamma Radiation Processing Plant
with integrated pack house for fruits and Vegetables as per APEDA
guidelines, and other utility facilities**

&

**Supply, Installation and Commissioning of Plant & Machinery for Setting up
3000KCi Gamma Radiation Processing Plant for Integrated Export Facility
with Irradiation and Pack house unit at Industrial Area, Patna District, Bihar**

At

Tender being invited by:

Infrastructure Development Authority,

1st floor Udyog Bhawan, East Gandhi Maidan, Patna.

**Email-md@idabihar.com , Web-www.idabihar.com, phone: 0612-2675933,
2675935 Fax: 2675934**

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1. Notice Inviting Tender

INFRASTRUCTURE DEVELOPMENT AUTHORITY (A Government of Bihar Undertaking).” invites sealed tender in Single-Stage i.e One-Envelope bidding procedure; Bidders submit Bids in one envelope containing both the Technical and Financial **Bid from eligible and qualified bidder for Architectural and designing of pack house, irradiation unit and other facilities & Designing, Supplying, Erecting, and Commissioning of Plant and Machinery for Setting up 3000KCi Gamma Irradiation Plant for Integrated Export Facility with Irradiation and Pack house unit at district Patna, Bihar.**

The details are summarized below:-

- a) Tender number: 51/TEN/IDA/19
- b) Bidder: **Infrastructure Development Authority, 1st Floor Udyog Bhawan, East Gandhi Maidan, Patna.**
- c) **Scope of Work:**
 - a. Architectural and Structural designing of Integrated pack house for fruits and vegetables as per APEDA Guidelines and Gamma Radiation plant for 3000KCi Design capacity as per the Design code of Atomic Energy Regulatory Board, (AERB) Department of Atomic Energy, Govt of India. and other Utility Facilities (2 nos -Muti-Chamber of 2000 Mt capacity each and 2 nos- Dry Warehouse with 2000Mt capacity each)
 - b. Design, Supplying, Installation, Commissioning and approvals from AERB in different stages of Plant and Machinery for Setting up 3000KCi Gamma Irradiation Plant (Item List As per Annexure A)
- d) **Specification/ details of machine/services:** The detailed specifications of machine are specified in tender and placed at : Annexure A
- e) **Location of supplies:** The machine(s) is proposed to be supplied at Patna, Bihar.
- f) **Tender Documents:** The Tender documents can be seen on our website www.idabihar.com. The Tender document can be downloaded from www.eproc.bihar.gov.in
- g) **The bidder should submit Earnest money of Rs. 02 (Two) Lakh** in form of Bank Guarantee issued by scheduled / nationalized bank with the Technical bid. Firms or company Registered with National Small Industry Corporation (NSIC) are exempted from EMD, Upon submission of valid NSIC Certificate.
- h) **Date of Pre-Bid meeting and last date for submission of queries:** 21 September 2019 at 15.00 hr at INFRASTRUCTURE DEVELOPMENT AUTHORITY (A Government of Bihar Undertaking), First

Floor, Udyog Bhawan, East Gandhi Maidan, Patna. Phone No: 0612-2675933, 2675935. Email: md@idabihar.com, Website: www.idabihar.com.

- i) **Last date of submission of tender: Tender document must be uploaded online on www.eproc.bihar.gov.in on or before 21st October 2019 up to 15:00 hours. Incomplete / Late bids will be rejected Address.**
- j) **Date of opening of Technical Bid: 25 October 2019 Time: 15.30 hrs on www.eproc.bihar.gov.in**
- k) **Date of opening of Financial Bid: To be notified later.**

Note: In case of any further details required, the same can be collected from the office of **Executive Engineer (PDA), INFRASTRUCTURE DEVELOPMENT AUTHORITY (A Government of Bihar Undertaking), First Floor, Udyog Bhawan, East Gandhi Maidan, Patna.** Phone No: 0612-2675933, 2675935. Email: eeepda@idabihar.com Website: www.idabihar.com

Executive Engineer (PDA),
Infrastructure Development Authority,
First Floor, Udyog Bhawan,
East Gandhi Maidan, Patna.
Phone No: 0612-2675933, 2675935.
Email: eeepda@idabihar.com
Website: www.idabihar.com

2. Instructions to the Tenderers

The Tender shall be submitted in accordance with these instructions, as under.

1. Abbreviations:

Throughout this tender document”, the word/ term:

- a) “Tender” means **Infrastructure Development Authority**
- b) “Machine” means the machines/ equipment/software/accessories as detailed at Annexure-A.
- c) “Bid” means the document and financial details submitted by bidder.
- d) “Bidder” means the eligible and qualified Designer, Equipment Manufacturers.
- e) “Tenderer” means the eligible and qualified Equipment Manufacturers / Authorized Distributors/Authorized Dealers.

3. Eligible Bidder:

1. The eligibility criteria for the tender participation is as follows:

- a) The bidder shall be registered under the Company Act 1956
- b) Achieved a minimum annual financial turnover of Rs 3.00 Cr in last 3 years.
- c) Should have profound experience in design, manufacture, installation and commissioning on Gamma Radiation Processing plant for Food Processing Projects
- d) Satisfactorily completed at least three Gamma Irradiation project preferably as per Atomic Energy Regulatory Board Safety Standard, Mumbai, India Commissioning certificates needs to be submitted.
- e) The intending Bidder, shall **submit a self-declaration on their letter-head, along with the Technical Bid, confirming that they are regular in designing, manufacturing & supplying the similar machines, as asked in this tender, for the last five (5) years.**

For all category of Machinery / Equipment as mentioned in **Annexure-A** there has to be a single set of Bid, which means, intending Bidder is required to supply machine/equipment/accessories and provide services for all the machine/equipment as specified in Annexure-A; partial supplier of enlisted machines will disqualify from bidding process.

4. Project Location:

a) The details of location where the machine(s) supplied through this tender are as under:

	Project Location	Address for bidder
1	District-Patna, Bihar	Patna, Bihar

- b) The bidder is free to inspect the location before submitting the bid under this tender.
- c) It may be noted that Infrastructure Development Authority have full rights to cancel tender even after calling the offers from bidders but before the issue of supply order or signing of agreement to execute the supply by the bidder. The reason for cancellation of tender may not be disclosed to the bidders.

5. Scope of Work:

a) **Scope of Work for design:**

a. Designing of Facility

- i. Undertaking site visits to collect details/data/information required for planning purpose, holding necessary discussion with the client and IDA and obtaining requirements of projects and attending meetings at site of work or IDA Office, Client's Office as and when required by IDA.
- ii. To conduct detailed survey and soil investigation for the site of the project & submission of a copy to the client.
- iii. Preparation and submission of project report based on requirements of project and interaction with IDA/Client and submissions of "cost estimates" indicating specifications to be adopted for various structures/ services for getting necessary approval from the client.
- iv. Preparation and submission of detailed "master plan" of entire complex for obtaining necessary approvals from client and statutory bodies wherever required including preparation, submission of models, photographs and other documents required in connection with approval from client and statutory bodies wherever required. Approvals require from State Government should be initiated and facilitated by IDA, Such as construction Approval from Town planning department or Panchayet, NOC from State Pollution control Board, NOC from Fire department etc, Consultant will provide all necessary documents required by IDA.
- v. Preparation and submission of preliminary drawings, designs, specifications and preliminary cost estimates for each and every structure including internal services complete for getting necessary approvals from client and statutory bodies like Atomic Energy Regulatory Board, BRIT etc wherever required.
- vi. Preparation and submission of detailed Architectural drawings, Structural designs and Detail Bill of materials with detail specifications along with Quality assurance plan to be maintained during construction for structure

- suitable for construction and releasing to site for getting necessary approval from Client wherever required.
- vii. Wherever applicable, preparation and submission of detailed designs, drawings and documents pertaining to all interior decoration, furniture, furnishing and other similar services for proposed buildings components. Structures suitable for construction and release at site including getting necessary approvals from client.
 - viii. Preparation and submission of detailed structural designs drawings, fabrication and erection drawings and detailed bar bending schedule (if required by IDA/client) based on approved Architectural drawings.
 - ix. Preparation and submission of detailed designs, drawings and documents for all internal utility services like plumbing, fire fighting, electrification, fire detection, HVAC, lifts, telephones, EPABX, public address system, communication, networking, acoustics and other specialized services as per the requirements of the project suitable for construction and release to site for getting necessary approval from Client.
 - x. Preparation of designs drawings and documents pertaining to external utility services like Internal sewerage, storm water drainage, fire hydrants schemes, treatment plants for water and sewerage, Internal roads, streets lighting, CCTV, boundary walls, rain water harvesting structure and any other specialized extra services as per project requirement suitable for construction and release to site for getting necessary approvals from Client.
 - xi. Preparation and submission of detailed bills of quantities, detailed estimate including preparation and submission of detailed take off calculation sheets, analysis of rates and tender documents for all works covered under clauses 5.a (point i to x) along with 6 sets of drawings for the purposes of inviting tender. Consultant will provide market rate justification in case of non-schedule items based on the patatre of CPWD market rate analysis/ as per IDA requirements.
 - xii. Carrying out all modifications/ deletions/ addition in design/ drawings/ documents as required by client and IDA or **suggestions of AERB for proper** execution of works at site till completion and handing over of the project to the client.

Consultant has to depute **an experienced civil engineer** for constant supervision having experience of construction of Radiation cell stage wise during entire construction period. Periodic supervision of structural engineer and designer on request of works to ensure adherence on the part of the contractor's execution of work as per detailed drawings and specifications including sorting out problems and issue of necessary clarification at site including preparation of additional drawings and details for proper execution for work at site.

- xiii. Preparation and submission of completion reports, completion drawings and documents for the projects as required and acceptable to client.

- b) The consultant shall get the structural design checked & vetted from reputed technical institute/College viz any NIT, IIT, govt. Engineering college of state/Central universities before issuing the structural drawing for execution. All costs related to checking/vetting shall be borne by the consultant and is deemed to be included in the fees. The bidder may simultaneously submit a copy of the structural design to IDA and Govt Engineering college along with submission to AERB for preliminary safety analysis report. The bidder will have to incorporate, revise and re-submit the revised-design as per suggestion of AERB and NIT/IIT/Govt Engineering college after vetting. However; the checking of design and drawings of the consultant by technical institute as above shall not absolve the responsibility of the consultant.
- c) The specifications of the machine as mentioned in the **Annexure- A**, are the requirements of tender, however higher specifications of machine may be considered subject to their cost economics i.e. competitiveness in financial terms for the particular location.
- d) The material/services shall be supplied in compliance to the specifications mentioned in the tender document. (**Annexure – A**)
- e) After the supply of machine at the site (i.e no extra charges shall be paid for transportation and other Charges) as mentioned in the **Annexure-A**, the bidder has to execute its Installation, Commissioning, Trial Run, 15 days Operation Support Cum Training and maintenance support for one year at the designated site after approvals from AERB and trial run. No extra cost shall be paid for this reason.
- f) After the installation & commissioning of machine, the **training to the local operators shall be given for fifteen (15)** working days wherein the training about the **machine's operations, maintenance, information about Do's & Don'ts** as well as trouble shooting & all other areas which are necessary for smooth functioning of machine shall be provided to at least three persons designated by purchaser, at site, by the bidder. No extra cost shall be paid to the successful bidder for imparting this training.
- g) The bidder shall offer on-site comprehensive warranty of machine for **at least one years** from the date of successful commissioning of machine at the designated location. The purchaser is not liable to pay any extra charges on any account during warranty period.
- h) Successful Bidder has to perform commissioning dosimetry of High and Medium dose material along with BRIT's Expert and Dummy materials required for Dosimetry has to arrange by the bidders, along with Dosimeters.

6. Timeline for Delivery:

- a) The successful bidder should submit the Design and Drawing within 90 days of the award of the bid to IDA and simultaneously submit for the vetting from reputed agency (as per Section 5.b)

- b) The bidder should complete the delivery of machine within 12 months after approval of PSAR by AERB. However, the bidders should take into consideration progress of civil work at site and suitably modify the delivery schedule with approval from IDA. The timeline of delivery do not includes the time of Installation and Commissioning of the Plant.
- c) The delivery of plant and machines should be as per the civil work progress at site. The bidder shall plan the delivery as per the site condition.
- d) The material shall be duly inspected by the bidder before dispatch and bidder shall be responsible for any damage during the transit of machine/ equipment.
- e) The bidder shall provide complete price break up of plant and machinery arrange part shipments to site phase wise. The insurance cover including insuring the goods against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery/Installation & Commissioning before handover of the facility to IDA, shall be responsibility of the bidder. **Purchaser will provide space and allow bidder to built site office and store at site for storage of plant and machinery.**
- f) **The bidder will have to create the temporary storage structure from own cost. The responsibility for loading, unloading and handling of the machines/equipments will be with the bidder.**
- g) The bidder shall, as soon as possible but not later than 7 days from the date of arrival of goods at destination, shall notify the bidder of any loss or damage to the goods.

7. Warranty

- a) The bidder shall offer on-site **comprehensive warranty of machine for one years** from **the date of successful commissioning** of machine & shall cover each and every part of the machine including parts having limited life etc. The purchaser is not liable to pay any extra charges on any account during warranty period.
- b) Any part or parts fail or proved defective within the on-site warranty period specified above, owing to defect in design, material or workmanship, the bidder shall have to replace them at the place of installation without asking for any charges.
- c) During the warranty period, expert(s) shall be deputed at site by the bidder within five working days from the date of request from purchaser, to rectify and fixing the defects of machines at the project site. The cost of deputation of expert(s) and any other associated expenditure shall be borne by the bidder.
- d) The service engineer of the bidder should make quarterly visits during the warranty period and submit a report to IDA on performance of the equipments supplied free of cost.

8. After Sales Services:

- a) The bidder shall ensure to render after sales services during the warranty period.
- b) The bidder will depute their engineer/mechanics **within five working days** to attend the service call received in writing from purchaser.

9. Manuals for running of the plant and machinery:

- a) The bidder to **supply three (3) sets of the following manuals** in hard format and one (1) soft format along with machine:
 - i. Operation and Maintenance Manual ,
 - ii. Radiation Protection Manual.
 - iii. Final Safety Analysis report.

10. Tender documents:

- a) The tender document can be seen on www.idabihar.com and can be seen & downloaded from www.eproc.bihar.gov.in from **30.09.2019 To 19.10.2019 upto 15:00 hrs.** on (www.eproc.bihar.gov.in).
- b) At any time prior to the deadline for submission of bids, the IDA may amend the Bidding Documents by issuing addendum. The prospective bidders are advised to remain in touch with the website for any update in respect of this tender.

11. Authorization for Submission of Tender:

- a) The original and all copies of the bid shall be signed by a person duly authorized to sign on behalf of the Bidder. The written confirmation of authorization (in form of letter on the bidder's letter head) to sign on behalf of the bidder confirming the signature as a person duly authorized to sign should be attached with the technical bid of the tender.
- b) The person signing the tender form or any other documents on behalf of the Bidder shall be deemed to warrant that he has authority to bind the Bidder. If subsequently comes to light that the person so signed had no authority to do so, the purchaser may without prejudice to any other civil & criminal remedies cancel the tender and hold the Bidder liable for all costs, charges and damages.

12. Submission of Tender:

- a) The bidder to examine all instructions, forms, terms and specifications in the tender documents and to furnish with its bid all documents or information as required by bidding document.
- b) The language for all the correspondence and documents related to the tender shall be in English/Hindi only. Moreover, the printed literature/technical details for the machine shall also be in English/ Hindi.
- c) The tender must be submitted on www.eproc.bihar.gov.in
- d) For all category of service, Machinery / Equipment as mentioned in Annexure-A there has to be single set of Bid.
- e) All the documents of the tender shall be duly, properly and exhaustively filled in. Any cutting/over writing etc. in the tender must be signed by the person who is signing the tender.

13. Financial Bid Submission:

- a) Bidder shall take into account all costs including transportation, unloading at the location of purchaser; and other services as per requirement etc. for giving delivery of material at site before quoting the rates. In this regard, no claim whatsoever shall be entertained.
- b) The price quoted in financial bid shall include all cost i.e transportation, loading-unloading at the location of purchaser; and other services as per requirement etc. for giving delivery and installation of material at site, services during warranty period and shall exclude applicable GST which shall be quoted separately. Any variation in the taxes till the commissioning of machines to the location(s) shall be to the bidder's account.
- c) No extra payment shall be paid on account of any discrepancy in nomenclature of items. The Bidder shall seek clarifications if any before submitting the tender.
- d) No representation for the enhancement of the prices of the accepted tender or alteration of the terms and conditions will be entertained till supplies are completed to the designated location(s).

14. Last date of submission of Tender:

- a) The last date for uploading the tender document is 21.10.2019 upto 15:00 hrs. on website (www.eproc.bihar.gov.in)
- b) The purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Tender Documents, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. The prospective bidders are advised to remain in touch with website for any update in respect of their tender.

- c) The purchaser shall not consider any bid that arrives after the deadline for submission of bids. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected and returned unopened to the Bidder.

15. Opening of Technical Bid:

- a) The technical bid of tenders will be opened on www.eproc.bihar.gov.in on **25.10.2019 at 15:30 hours.**

16. Eligibility Criteria for Technical Proposal Evaluation

Technical proposal of all such bidders who have not submitted requisite documents as per the check-list given in Section 18 as evaluation of technical bid will be treated as non-responsive and shall be liable to be rejected.

17. Evaluation of Bids:

- a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected.
- b) If there is an error in a total corresponding to the addition or subtraction of sub totals, the subtotals shall prevail and the total shall be corrected; and
- c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- d) The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to supply order, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically Bid document shall be promptly returned to the Bidders.
- e) The purchaser have right to verify the particulars furnished by the bidder independently.

18. Technical Evaluation of Bid

All bidders fulfilling technical requirements of the client mentioned in following would be technically qualified and would only move into the next stage of financial evaluation.

- a) The bidder shall be registered under the Company Act 1956

- b) Achieved a minimum annual financial turnover of Rs 3.00 Cr in last 3 years.
- c) Should have profound experience in designed, manufacture , installation and commissioning on Gamma Radiation Processing plant for Food Processing Projects
- d) Satisfactorily completed at least three Gamma Irradiation project preferably Food products—as per Atomic Energy Regulatory Board Safety Standard, Mumbai, India t-least 3 commissioning certificate should attaché.
- e) The intending Bidder, shall **submit a self-declaration on their letter-head, along with the Technical Bid, confirming that they are regular in designing, manufacturing & supplying the similar machines, as asked in this tender, for the last five (5) years.**

For all category of Machinery / Equipment as mentioned in **Annexure-A** there has to be a single set of Bid, which means, intending Bidder is required to bid for all the machine/equipment/accessories and provide services for all the machine/equipment as specified in Annexure-A; partial supplier of enlisted machines or services will disqualify from bidding process.

19. Evaluation of Commercial/Financial Bid:

The commercial bid shall not be opened till the technical evaluation is complete. Commercial bid of only those bidders shall be opened who have fulfilled the criteria mentioned in above para for Evaluation of technical proposals. The date & time for opening of Technical & Commercial Bid shall be the same as mentioned as bid opening date.

However, the Commercial Bid shall be opened only for those who qualify in the Technical Bid. The bid will be declared successful in terms of L1 in commercial Bid. The L1 shall be considered on the total price of supplies i.e cost of the total Architectural & Structural Consultancy, Cost of Plant & Machinery and the cost of 3 yrs Maintenance after Warranty Period including necessary accessories as per requirement in Annexure-A.

20. Award of Contract:

The tender will be awarded to the successful bidder whose proposal has been determined to be substantially responsive and has been determined as the most responsive bids as per the process outlined above. The tender for both Architectural and structural designing of Gamma Radiation Processing Plant with integrated pack house for fruits and Vegetables as per APEDA guidelines, and other utility facilities & Supply, Installation and Commissioning of Plant & Machinery for Setting up 3000KCi Gamma Radiation Processing Plant for Integrated Export Facility with Irradiation and Pack house unit at Industrial Area, Patna District, Bihar will be awarded after to the successful bidder.

The purchaser in letter/notification to successful bidder shall specify the sum that the Purchaser will pay to the bidder in consideration of the delivering services & supply of machines/equipments.

IDA may issue single or separate work order for both the work.

21. Performance Guarantee:

The selected bidder will require providing a **Performance Bank Guarantee** of any nationalized bank / scheduled commercial bank within 15 days from the notification of award, for an amount of **5% of the total tender value excluding taxes valid for the period of one year** from the acceptance date of contract.

The supplier shall furnish guarantee and sign an agreement in respect of performance and against any manufacturing defect for a period of **minimum 12 months** from the **date of trial run and** for defect free operation of machine supplied.

22. Performance Security:

The bidder shall submit 10% of the tender value as performance security in cash or bank guarantee after the award of the work order for plant and machinery or bidder shall permit IDA at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5 % (five percent) of the gross amount of each running bill till full amount of security deposit (10%) of agreement value or value of work (whichever is higher) is reached. If value of work exceeds the agreement value, security deposit (10%) will be recovered from the running bills.

All compensations or the other sums of money payable by the bidder under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the bidder by the IDA on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by Scheduled Banks or Government Securities (if deposited for more than 12 months) endorsed in favour of the IDA, Bihar any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above and the Earnest money if deposited in cash at the time of tenders will be treated a part of the Security Deposit.

23. Signing of Contract:

The Contract agreement will be signed with successful bidder only after submission of the Performance Guarantee.

24. Packing:

- a) The bidder shall supply machine on site which means that bidder shall provide undamaged machine at the site. Therefore undamaged transit to the location is the responsibility of bidder. The purchaser shall not be responsible for any damage during transit for whatsoever reasons and compensation in any means.
- b) The machine & equipment shall be securely boxed, crated and protected from mechanical damage, moisture etc. suitable for both storage and transit according to the nature of the material and mode of transport.

25. Payment Milestone:

The project fee has been divided into 2 component: i) Fee for Design and ii) Fee for supply of equipments:

S.No	Milestone	Fee
1.	Design Component	
a)	Completion of survey, Contour Mapping, Soil Investigation report along with concept Plan and PPR (Preliminary Project Report)	5% of the total fee for design component.
b)	After approval of the PPR Plan	Up to 10% of total fee for design component.
c)	On submission of all architecture drawing, structural drawing etc. along with detail design calculation and vetting by NIT/IIT & AERB	up to 50% of total fee for design component.
d)	On submission of the detail estimate along with BOQ as per prevailing schedule of rate of building Construction Department/CPWD/DSR/Analyzed Rate (In case of non scheduled items)-	Up to 60 % of total fee for design component.
e)	During the execution of work (on pro-rata basis) commensurate with the value of the work executed	Up to 80 % of total fee for design component.
f)	After successful completion of the project and submission of completion drawing (as built drawing)-	up to 100% of total fee for design component.
2	Supply of equipment	
a)	Advance payment* on issue of work order and acceptance of same	10% of the total equipment value
b)	Approval of Preliminary Safety Analysis Report (PSAR) from AERB prior to start of manufacturing and construction.	15% of the total equipment value
c)	Delivery of equipment on a pro-rata basis as per the breakup cost provided. (Equipment will be delivered in lots to the site)	65% of the total equipment value and applicable tax
d)	Installation and commissioning of the plant after submission of Final Acceptance Test Reports to AERB and approval from AERB	Up to 100% of the total equipment cost & applicable tax

*Mobilization advance not exceeding 10% of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. In such a case the bidder shall execute a Bank Guarantee Bond from a Scheduled Nationalized Bank as specified by the Engineer-In-Charge for the full amount of such advance is released.

26. Claims:

- a) If the material supplied are found to be off size and shape different than those in the accepted offer and are of specifications lower than those stipulated in the accepted offer, the purchaser shall have right to totally reject the machine/ equipment and/or to claim for compensation from bidder. The bidder shall reimburse to purchaser, the claim lodged in writing within **15(fifteen)** days of its demand. The bidder shall also compensate for losses, if any, sustained by purchaser due to defective packing and/or wrong marking of the machine/ equipment.
- b) The bidder shall be responsible for arranging the rejected machine/ equipment to be removed at his cost from purchaser premises.

27. Address for Communication:

All the communication with respect to the tender shall be addressed to:

**The Managing Director,
Infrastructure Development Authority,
1st floor Udyog Bhawan, East Gandhi Maidan, Patna.**

28. Force Majeure:

In the event of any unforeseen circumstances directly interfering with the supply of goods/work/service arising during the execution of order such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, earthquakes, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the Bidder shall, within a week from the commencement thereof, notify the same in writing to the Purchaser with reasonable evidence thereof. Either party shall have the option to terminate the contract on expiry of 120 days of commencement of such force majeure by giving 14 days "notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other.

29. Confidentiality:

Information relating to the examination, clarification, evaluation for selection, and recommendation of the Preferred Bidder/ Successful Bidder shall not be disclosed to any person who is officially not concerned with the Bidding Process or is not a professional advisor advising the Client in relation to, or matters arising out of, or concerning the Bidding Process. The Client shall treat all information submitted as part of Proposal as confidential and shall require all those who have access to such material to treat the same in confidence. The Client shall not divulge any such information unless it is ordered to do so by any

authority that has power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity.

30. Code of Ethics:

The Purchaser as well as the Bidder shall observe the highest standard of ethics including laws against fraud and corruption in force in India namely “Prevention of Corruption Act 1988”, during the procurement or execution of such contracts. If the bidders are found in Bid pooling or against law against fraud and corruption then their firms may be blacklisted.

31. Jurisdiction:

- a) In the event of any dispute the legal matter shall be subjected to the jurisdiction of Patna Court only. We confirm with our acceptance to the instructions (S.No-1 to 31 above) as given above.

**BIDDER’S NAME & SIGNATURE WITH
SEAL**

These duly signed “Instructions to the Tenders” as under shall be attached with technical bid of the tender as a mark of acceptance of bidder and any tender not confirming the instructions as under is liable to be rejected.

ANNEXURE-A

Details of requirements and technical Specifications of Machine

S.N	Total Quantity	Unit	Total Quantity
1.	Architectural and Structural designing of Integrated pack house for fruits and vegetables as per APEDA Guidelines and Gamma Radiation plant for 3000KCi Design capacity as per the Design code of Atomic Energy Regulatory Board, (AERB) Department of Atomic Energy, Govt of India. and other Utility Facilities (2 nos -Muti-Chamber of 2000 Mt capacity each and 2 nos- Dry Warehouse with 2000Mt capacity each), etc	Complete service specified in scope of tender	
2	Supply of equipment		
a)	Supplying, installation, testing and commissioning of Product transport system having cell, labyrinth & loading /unloading conveyors with structural support members, scissor lift and platform as per specification.	1 Set (one set)	1 Set (one set)
b)	Supplying, installation, testing and commissioning of Tote boxes of size is as per the design, tote (70 Nos) made of aluminum alloy.	1 Set (one set)	1 Set (one set)
c)	Supplying, installation, testing and commissioning of source holding/ raising mechanism hydraulic cylinder, interlocked with personnel entry door through SS wire ropes as per specification.	1 Set (one set)	1 Set (one set)
d)	Supplying, installation, testing and commissioning of Ventilation system as per specification.	1 Set (one set)	1 Set (one set)
e)	Supplying, installation, testing and commissioning of Cask handling system with 7.5/ 10 ton hoist as per specification.	1 Set (one set)	1 Set (one set)
f)	Supplying, installation, testing and commissioning of assorted embedment's / SS EP for pool and ventilation duct , Water pool SS lining as per the design.	1 Set (one set)	1 Set (one set)
g)	Supplying, installation, testing and commissioning of De Mineralization / RO plant with fitments as per specification along with complete pool water circulation system and online filtration arrangement and online pool water conductivity measurement system with conductivity meter.	1 Set (one set)	1 Set (one set)
i)	Supplying, installation, testing and commissioning of field instrumentation & safety systems for the entire irradiation plant as per specification.	1 Set (one set)	1 Set (one set)

j)	Supplying, installation, testing and commissioning of Fire fighting system including all type of system as per the guide line of AERB Design Code as per specification.	1 Set (one set)	1 Set (one set)
k)	Supplying, installation, testing and commissioning of Control system (PLC based control & safety system with SCADA and HMI backup) as per specification. PLC system should be off Siemens/ Rockwell make.	1 Set (one set)	1 Set (one set)
l)	Supply of Source rack and frame of Design capacity 3000 Kci along with under water source loading tools and tackles, 2 nos under water light and all accessories require for source loading.	1 Set (one set)	1 Set (one set)
m)	Supplying, installation, testing and commissioning of Laboratory equipment for dosimetry and micro biology as per specification. Detail specification of all equipment and accessories has to be given by the bidders.	1 Set (one set)	1 Set (one set)
n)	Supplying, installation, testing and commissioning of X-ray package scanner as per specification.	1 Set (one set)	1 Set (one set)
o)	Supplying, installation, testing and commissioning of 200 KVA DG Set along with 63 KVA on line ups as per specification.	1 Set (one set)	1 Set (one set)
p)	Supply of Radiation protection equipment for plant operators and also personal monitoring system	1 Set (one set)	1 Set (one set)

ANNEXURE B

SPECIFICATION SHEET FOR MULTIPURPOSE IRRADIATION PLANT

S. NO.	FEATURE	DESCRIPTION
1.	Category of Irradiator	Panoramic wet source storage. Category IV as per AERB/ RF-IRR/ SS-6, (Rev-1).
2.	Required Floor area for the plant and pack House along with 2 nos storage 25 ton cold and pre cooling unit.	100 X 75 sq mtr
3.	Products to be irradiated.	Fresh Fruits, Vegetables, Cereals, Pulses, Medical Disposables, Pet Foods, Spices, Medicinal Herbs.
4.	Maximum design source strength.	3000 KCi of BC 188 /ISO W-91 pencils.
5.	Mode of operation.	Continuous type of plant with Shuffle dwell operation.
6.	Radiation source Geometry.	Rectangular split stainless steel source plaque with larger outer source frame and a smaller inner source frame with max designed capacity of 3000 KCi.
7.	Source movement system.	Hydraulic cylinder, interlocked with Personnel entry door through SS wire ropes.
8.	Product Tote Dimension	To be suggested by the designer as per their design.
9.	Maximum design throughput	16 to 20 Tons/ hr. @ 0.6 gm/cc
10.	Major Subsystems.	<ul style="list-style-type: none"> • Close loop Product Handling System for cell, and labyrinth with in-cell shuffling feature. • Conveyors for completely automated loading and unloading products into the tote boxes with multiple loading/unloading station to handle the low dose Irradiation along with hydraulic power pack • Scissor lift for unloading products. • Source Raise system with Hydraulic power pack and mechanical interlock with personnel entry door. • Electrical hoist for source cask handling system. • DM plant and pool water conditioning and monitoring system. • Irradiation cell Ventilation System. • PLC based control and safety systems with SCADA and HMI interface. • Radiation monitors and other instrumentation. • In cell firefighting and lighting system. • Carbon and Stainless steel structural parts (Embedded parts) to be embedded into the civil structure.

11.	Others Items	<ul style="list-style-type: none"> • DG s & X-ray baggage scanner. • Typical Laboratory equipment and dosimeters.
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SPECIFICATIONS OF PLANT AND MACHINERY

1. THE PRODUCT HANDLING SYSTEM

- The product handling system shall be a tote box type conveyor system with floor and roof mounted roller conveyors for handling the product totes in irradiation cell and labyrinth.
- All motors or actuators shall be located outside the irradiation cell, in the cell rooftop or labyrinth areas.
- Loading and unloading area conveyors shall be designed for easy access to the product storage area.
- All sensors used in the irradiation cell shall be able to function properly with a min dose of 10^9 Rads. The Supplier shall provide documentation to support this requirement.
- All cabling and wires used for sensors and instrumentation within the radiation cell shall be of radiation resistant type, capable of withstanding at least 10^9 Rads. Documentary evidence for the same shall be provided by the supplier.

2. PRODUCT TOTE BOX

- The product totes shall be designed for a max product holding capacity of 350 Kg.
- The tote boxes shall be optimized for ideal packing, taking into account the expected product package dimensions. Doors shall be provided on two sides (not facing the source) for loading and unloading of products.
- The tentative internal dimensions of the tote box are (LxWxH): 1.05x0.45x1.5 meters.
- The product box shall be made of high-strength aluminum alloy with stainless steel frame work. The totes shall be designed for easy loading and unloading of products into and from them.

3. SOURCE HOLDING AND RAISING SYSTEM

a. COBALT-60 SOURCE FRAME

- The source frame shall be designed for a maximum design capacity of 1000 kCi.
- The source frame shall be guided by SS 304/316 wire ropes held tight between the pool bottom anchors and roof functioning device.
- The source frames (both inner and outer) shall be made of stainless steel conforming ASTM A240 Grade 304L.
- A direct source sensing mechanism shall be provided that detects the position of the source frame in the pool & in the cell during plant operation.

a. SOURCE RAISING/LOWERING SYSTEM

- The source raising/ lowering shall be accomplished with the help of a hydraulic cylinder working through the Stainless Steel wire rope system. The hydraulic cylinder shall be interlocked with the personnel entry door via a mechanical latch bar system so that the door can only be opened when the source is lowered in the pool.
- The hydraulic cylinder shall be driven by a hydraulic power pack with 2 motors (one active and one standby). The hydraulic system shall have the following features:
 1. Accumulator for minimizing pressure fluctuations.
 2. Pressure switch for maintaining hydraulic pressure between two fixed set points. The pressure switch shall be interlocked with the control system to ensure that the source raise command cannot be activated unless the hydraulic pressure is in the normal range.
 3. Spring operated solenoid direction control valve to ensure that the source returns to safe position by gravity in case of alarm or power failure. Two such valves shall be provided for redundancy.

4. Hydraulic oil cooling system to ensure proper functioning of the power pack.

- The raising and lowering of the source shall be interlocked with the personnel entry door to ensure that the source can only be raised with the door closed and the door cannot be opened if the source shall be in raised condition. These interlocks shall be of mechanical, electro mechanical (figure interlock), hydraulic and electrical (solenoid interlock).

b. SOURCE CASK HANDLING SYSTEM

- The source cask shall be handled by a 10 MT Electric Hoist suspended from beam on rooftop above the irradiation cell top.
- The cask shall be lowered through the roof opening of the cell (Roof Plug).
- Roof plug shall be provided with electrical interlocks & mechanical locking system to ensure the roof plug shall be in position before raising the source.

c. SOURCE HANDLING TOOLS AND UNDERWATER LIGHTS

- The supplier shall provide one set of source handling tools and underwater lights for source loading operation.

4. DE-MINERALIZED WATER PLANT

- The Cobalt 60 pencils, when not in use, shall be stored underwater in the pool. The pool water shall be demineralized to protect the pencils from the onset of galvanic and other type of corrosion. Pool water shall be circulated through a DM water plant.
- The DM plant specifications shall be as follows:
 - **Type of Plant:** Cation and Anion Columns (FRP Columns)
 - **Filter:** PP filament wound filters in SS 304 filter housing. Radiation monitor shall be mounted on the filter housing.
 - **Type of Sensor:** Digital conductivity meter with sensor.
 - **Piping:** PP diaphragm type of valves with PP / PVC piping.
- PH (7.5 TO 8.0) of the pool water shall be checked periodically by testing in a laboratory or with the in-house facility.
- To maintain the conductivity of water less than 20 micro Siemens / cm ($\mu\text{S}/\text{cm}$) the pool water shall be circulated through the ion exchange columns (cation & anion cols).
- The Pumps and piping connections between the pool & D. M. water plant shall be made of stainless steel SS 304 material.
- The pool level shall be monitored by float switches. They shall detect full level, make up level and emergency make up levels. These float switches shall be interlocked with the control system.
- Solenoid valves shall be provided for normal make up and emergency make up tanks.

5. VENTILATION SYSTEM

- The ventilation system shall be used to keep noxious gases, such as Ozone and other oxides of nitrogen generated due to radiolysis of air, in the radiation cell lower than threshold limits at the time of opening the door.
- A minimum ventilation rate of 30 air changes of radiation cell volume including labyrinth per hour shall be kept.

- The airflow shall be monitored by an airflow switch, which shall be interlocked with the control system, provided at the common outlet of the exhaust fans and if the ventilation failure shall be sensed by the air flow sensor the stand by axial fan shall be switched on.
- To prevent the rain water flooding through ventilation duct an exhaust Cowl shall be provided at the exhaust point.
- Two ventilation exhaust fans shall be provided, one shall be in working condition and the other one shall be standby.

6. FIRE DETECTION & EXTINGUISHING SYSTEM

- Heat and smoke sensing devices with audio and visual alarms shall be provided to detect fire inside the cell area. Heat detector shall be activated when temperature in the cell increases to 55 °C.
- Activation of heat or smoke detector alarm shall cause:
 - Automatic lowering of source rack to shielded position.
 - Automatic shutdown of ventilation system to cut off airflow.
- The heat detectors shall be mounted just below the roof at two points near the source centerline. The temperature of the cell area shall be monitored continuously and displayed in the DM plant room. The temperature sensors shall give an indication to the control system when the irradiation cell temperature exceeds set temperature (55 ± C).
- The smoke detectors shall be mounted in the ventilation duct just before the suction fan intake. As any smoke formed in the cell shall rapidly get sucked into the ventilation ducts, detection of smoke shall be possible in the ventilation ducts.
- Water sprinklers shall be provided in the cell and in the loading area, with water supply from a fire hydrant connected to a fire hydrant pump. A manually operated fire switch shall be provided for switching on of the sprinkler system in the cell and adjoining areas. The fire switches shall be provided with a breakable glass cover and shall be located in the control room as well as at prominent points at loading and unloading area.

7. CONTROL SYSTEM

- The control system shall be designed to meet all the control and safety functions specified in AERB/ RF-IRR/ SS-6, (Rev-1).
- The control system shall be based on fail-safe principle. It shall consist of PLC with latest PC and color monitor for operator interface, data logging and fault annunciation. The operator communication for regular operation shall also be possible by an HMI.
- All operating and safety sensors shall be connected to the analogue and digital input modules of the PLC. The outputs to the various control elements shall be through buffered relays.
- The control system shall also have over voltage and under voltage sensors for signaling the PLC an unsafe condition.
- The system status shall be displayed on the active mimic of the PC. The fault annunciation system displays all faults and these can be printed out for records. The faults triggering a fail-safe action shall be reset by the operator after rectifying the fault before restarting the irradiation.
- The time of irradiation shall be set by dose requirements and by the prevailing source strength. The control system shall be programmed to automatically update the irradiation time for a given source strength, taking into account the source decay.
- Service Key and emergency push buttons shall be provided at permanent locations to prevent accidents. The plant returns to safe mode if any of the above shall be operated.

7. CELL CHILLING SYSTEM (OPTIONAL)

- The cell chilling system shall be used to maintain the temperature inside the irradiation cell at 0-12 °C for treatment of products such as chilled meat, seafood and other temperature sensitive products.
- The cell chilling system shall be integrated with the ventilation system. The supplier shall provide the design for the same including radiation scatter calculations for the chilling duct, along with suitable compensatory shielding to be embedded into the concrete works.
- When the chilling system is turned on, the ventilation system shall be turned off and the system shall provide an additional time delay prior to cell opening after the irradiation cycle, to ensure that the ozone levels have fallen below permissible levels. An active ozone monitor shall be provided to confirm this prior to cell entry.

8. SAMPLE IRRADIATION LOOP

- The purpose of the sample irradiation loop shall be, to irradiate small samples of various products for validation, testing and research purposes.
- The sample Irradiation loop shall be routed through the personnel entry pathway into the Irradiation chamber.
- This loop shall be operated independently and shall not be tied to the main conveyor system for Irradiation.
- The loop shall contain at least two sample tote boxes, each capable of holding 30 kg of material.

9. SAFETY FEATURES AND INTERLOCKS

The safety system shall consist of the following:

a. Latch Bar Interlock with Personnel entry door:

- Mechanical interlock of source cylinder through latch bar.
- Hydraulic interlock through Cam operated Directional control valve.
- Radiation and Pool water level interlock of latch bar through electrical solenoid.
- Electro mechanical (Figure interlock) through a figure key.
- Electrical interlock by two numbers of Limit sensors for door.
- If the source shall be up and any of the above interlock signals unsafe condition the source returns to the shield. The return of source to shield shall be by gravity only and thus any interruption of safety interlocks or loss of power returns the source to shielded condition. Second parallel Directional control valve for ensuring safe return of source to pool shall also be provided.

b. Other safety features shall be provided to ensure the following:

- Ensuring that the shielding door is properly secured and locked electrically and mechanically. **(Limit sensors)**
- Ensuring that ventilation is on. **(Air flow switch)**
- Ensuring that pool water/ radiation level monitors are in working conditions. **(Float switch and electrical solenoid)**
- Ensuring that hydraulic pressure shall be sufficient and hydraulic oil cooling system and temperature is appropriate. **(Pressure switch)**
- Fire detection circuit is complete. **(Fire & smoke sensors)**
- All interlock functions are provided in the display panel.
- Product tote box movement in cell area is normal

c. Interlocks

The following interlocks shall be provided:

- All interlocks common to radiation plants, mentioned in AERB/ RF-IRR/ SS-6, (Rev-1).or latest applicable safety standard at time of project execution.
- A start up search procedure interlocks shall be provided.
- Source cylinder interlock with personnel entry door by mechanical, electrical, hydraulic and radiation interlocks shall be provided.
- Figure key switch interlock on control desk and figure key interlock on mechanical latch bar interlock shall be provided.
- Interlocks involving emergency conditions pertaining to trip wire, emergency pushbutton, service key, source position, pool water level and water contamination, ventilation and fire detection etc. shall be provided.
- Any other required Interlocks pertaining to plant operation, product safety and safety of plant personnel shall be provided.

Note: The specifications provided above are not exhaustive. The supplier shall be free to suggest any improvement for increasing the performance of the plant. However, the right to accept or reject the suggestions lies exclusively with the purchaser.

10. Dosimetry System laboratory equipment.

- PC based opto chromic reader. Optichromic dosimeters from FWT USA
- Double beam scanning spectrophotometer
- Electrochemical cells and milli voltmeters
- 5 and 15 millimolar Ceric cerrous dosimeters -1000 nos.

11. Radiation Monitor

a. Area Monitor for the Product entry/exit port

- Type of detector – GM type
- Ranges:0.1mR/h-100 mR/h with potential free contacts and 4 – 20 mA output for interlocking.

b. Area monitor with extended probe at control room.

One area monitor with external probe to be mounted in labyrinth for interlocking (with 4 – 20 mA output and potential free contacts

The display unit of this area monitor should be located near the personnel access door while its radiation sensitive probe should be located inside the irradiation cell. This should be interlocked with the Personal Access Door Type of detector-GM type Ranges:0.1mR/h-100 mR/h

c. Contamination monitor-on line :

- Type of detector – GM type
- Ranges: 0.5-4 mR/h One area monitor for water contamination monitoring (with 4 – 20 mA output and potential free contacts

d. Portable Survey meter:-

Teletector type MT- 69 with extended probe. Type of detector – GM type.
Ranges:0-2.5mR/h, 0-50mR/h, 0-2.5R/h, 0-50R/h, 0-1000 R/h

e. Hand held radiation survey meter (2 Nos).

GM type: Ranges: 0-5 mR/h, 0-50mR/h, 0-500mR/h, 0-5R/h

f. Pocket dosimeters (6 Nos.)

Typical Dose Ranges, Overdose Ratio and Production Capacities for Various Products:

Product	Dose Range	Bulk Density (gm/cc)	Production /Hr. @ 3000 KCi	Mode of operation
Rice / Wheat , cereals and pulses	250 to 1000 Gy	0.6	16 MT/ Hr.	Only split source raised
Potatoes, Onions etc.	20 to 200 Gy	0.4	11 MT/ Hr.	Only split source raised
Fresh Fruits	400 to 1000 Gy	0.35	7.5 MT/ Hr.	Only split source raised
Spices & Ayurvedic Herbs	6 to 14 KGy	0.45	7.5 MT/ Hr.	Entire source frame raised
Plastics, Medical disposables and Beekeeping equipment	25 to 30 KGy	0.15	1.5 MT/ Hr.	Entire source frame raised
Pet food	6 to 14 KGy	0.45	7.5 MT/ Hr.	Entire source frame raised
Chilled meat, fish & marine products	1 to 3 kGy	0.6	16 MT/ Hr.	Only split source raised
Honey	1 to 3 kGy	0.6	16 MT/ Hr.	Only split source raised

Note: The above values of throughput are based on standard current output in existing plants. The above values of throughput are expected values and are accurate up to +/-10%.

(Undertaking from Bidder on their official stationery)

To,
**The Managing Director,
Infrastructure Development Authority,
1st floor Udyog Bhawan, East Gandhi Maidan, Patna.**

Subject: Undertaking for the participation to the tender No. 51/TEN/IDA/19 due for opening of technical bid on 04.10 2019

Dear Sir,

We have examined and perused the following documents

1. Notice Inviting Tender
2. Instruction to the Tenderer
3. Technical Specifications of machine (Annexure- A)
4. Technical Specifications of machine (Annexure- B)
5. Annexure – D (Technical Bid)
6. Annexure- E (Commercial Bid)
7. Annexure- F (Bank Guarantee Format)
8. Annexure – G (BID VALIDITY UNDERTAKING)

I/Wedo hereby submit the above tender in prescribed formats duly completed in all respects in accordance with the conditions applicable. If this tender is accepted, I/We agree to abide by and fulfill all the terms and conditions in the tender documents.

I/We hereby distinctly and expressly declare and acknowledge that before the submission of this tender, I/We have carefully followed the instructions and I/We have understood the existing system of supply at the location of purchaser including the scope and nature of duties expected from the Bidder.

I/We distinctly agree that I/We would hereafter make no claim or demand upon the purchaser based upon or arising out of any alleged misunderstanding or misconceptions or mistake on my/our part of the said stipulations, restrictions and conditions.

I/ We declare that our unit has never made any default in supplying the machine/equipment to any Government or Private sector enterprise(s) in terms of quality and financial agreed supply conditions. Any notice required to be served on me/us shall be sufficiently served on me/us by post (registered or ordinary) or courier or left at my/our address furnished herein.

.....
.....

I/We fully understand the terms and conditions in the tender documents. I/We understood that the purchaser is not bound to accept any proposal that it may receive without assigning any reason.

Dated this.....day of.....2019

Authorized Signatory

Seal

ANNEXURE-D

FORMAT & REQUIREMENTS FOR SUBMITTING TECHNICAL BID

1. **Tender Ref. No:**
2. **Name of Bidder:**
3. **Complete office address of Bidder**.....
4. **Confirmation of acceptance of Technical Specifications for the supply of machine:**

Sl.	Technical Specifications	Accept to the specification as placed at Annexure-A and agreed to supply with required quantity (write yes/ no only)	If marked "NO" in the Specification as placed at column before, specify the Annexure-A and agreed to deviation in specification of supply with required Quantity the machine offered for the (write YES/ NO only) supply.
1	Machine Specification :		
2	Machine Technical Specification (Details to be provided) Any other necessary provisions required for satisfactory operation		
3	Complete set of tools, fixtures required for installations (Anti-vibration mountings/ foundation bolts etc.), tools for smooth operations & maintenance of machines such as hand tools, special tools including electrical circuit diagrams and electrical spares etc.		
4	Spare Details (List with quantity)		

5. Confirmation for supply to the location (s):

Sl.	Details	Location Patna Industrial Area, Patna, Bihar
1	Consent to supply: (write YES/NO only in the cells placed at location)	

6. PAN Number of bidder (self-attested copy to be enclosed).....

7. GST Registration number of bidder (self-attested copy to be enclosed).....

8. Details of address with contact details from where the bidder planned to offer After Sales Services during the Warranty & maintenance period:

Details	Location
Details of address of bidder for rendering after Sales services	

9. Details of address with contact details for at least two purchaser to whom the bidder supplied similar services/equipments in the last five (5) years and machine shall be in operations to the satisfaction of buyer for the last three (2) years:

The format for submission of details for at least two purchaser are as under: (the bidder can furnish details of even more than two purchaser)

- a. Address of Purchaser with contact details (email and phone no.):.....
- b. Details of order for supply placed to bidder.....
- c. Description and quantity of ordered equipment:.....
- d. Value of order in rupees.....
- e. Date of completion of delivery:.....

(The purchaser shall have liberty to contact any or all of purchaser to assess the performance of machine supplied by bidder)

10. Documents - Details to be enclosed with the Technical bid by bidder are as under:

- a. Copy of incorporation Certificate
- b. ITR of last 3 years
- c. **Self-Declaration on Official Letter head:** In case the bidder is Original Indian Equipment manufacturers, the bidder to submit a self-declaration on their letter-head, confirming that they are regular in manufacturing & supplying the similar machines, as asked in this tender, for the last Three (3) years.
- d. **Successfully completion certificate for similar projects**
- e. **Undertaking as per annexure-B on Official Letter Head**
- f. **Tender Document Duly signed at all pages with official stamping:** as a mark of acceptance.
- g. **Technical Literature of machine(s)** with particular reference to the model of machine proposed to supply against this tender along with reference of website to assess the further features.

- h. Authorization letter** in favor of personnel to sign the tender behalf of bidder.
- i. Self-attested/ certified copy of all documents attached.**
- j. Technical details of machine/equipment/material:** The Bidders shall furnish complete Technical details of machine/equipment/material for the machine offered to supply through the participation of this tender (use separate sheet to elaborate the details of technical specifications) .
- k.** To submit all supporting information with respect to the technical data, drawings or booklets of product. Any product brief, test certificates available may be enclosed.

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 180 days from the date of opening the Technical Bid of the tender.
- b. Agree to offer services for onsite comprehensive warranty on the machine(s) supplied through this tender.
- c. Agree to offer services for maintenance contract for the next three years for the machine(s) supplied through this tender after end of warrantee period.
- d. Agree to impart onsite training to the designated personnel
- e. No price of any Machine/ Equipment/ Spares/ Accessories shall be given in Technical Bid.
- f. All above machines should be provided with safety features/ curtains/ enclosures/ etc. wherever applicable.
- g. Units should certify that all consumables, electrical and electronic parts of the product conform to national/ international standard(s).

Name & Signature of the authorized bidder with stamp

Contact details of authorized person of bidder who have signed the tender.

Name.....
 Designation.....
 Phone (office).....
 Phone (Mobile).....
 E mail.....

FORMAT FOR SUBMISSION OF COMMERCIAL BID

1. Tender Ref. No SKCN/001/2018-19

2. Name of the Bidder:

3. The financial offer to execute the supply as per the tender for supply of machine to:

**The Managing Director,
Infrastructure Development Authority,
1st floor Udyog Bhawan, East Gandhi Maidan, Patna.**

S. N	Total Quantity	Particular	Rates (to be quoted) (in Rs)
1.	Architectural and Structural designing of Integrated pack house for fruits and vegetables as per APEDA Guidelines and Gamma Radiation plant for 3000KCi Design capacity as per the Design code of Atomic Energy Regulatory Board, (AERB) Department of Atomic Energy, Govt of India. and other Utility Facilities (2 nos -Muti-Chamber of 2000 Mt capacity each and 2 nos- Dry Warehouse with 2000Mt capacity each), etc	Architecture and design consultancy for Civil Work (to quote the fixed total fee)
2	Supply of equipment		
a)	Supplying, installation, testing and commissioning of Product transport system having cell, labyrinth & loading /unloading conveyors with structural support members, scissor lift and platform as per specification.	1 Set (one set) (to be quoted as rate of one set)	
b)	Supplying, installation, testing and commissioning of Tote boxes of size is as per the design, tote (70 Nos) made of aluminum alloy.	1 Set (one set) (to be quoted as rate of one set)	
c)	Supplying, installation, testing and commissioning of source holding/ raising mechanism hydraulic cylinder, interlocked with personnel entry door through SS wire ropes as per specification.	1 Set (one set) (to be quoted as rate of one set)	
d)	Supplying, installation, testing and commissioning of Ventilation system as per specification.	1 Set (one set) (to be quoted as rate of one set)	
e)	Supplying, installation, testing and commissioning of Cask handling system with 7.5/ 10 ton hoist as per specification.	1 Set (one set) (to be quoted as rate of one set)	
f)	Supplying, installation, testing and commissioning of assorted embedment's / SS EP for pool and ventilation duct , Water pool SS lining as per the design.	1 Set (one set) (to be quoted as rate of one set)	
g)	Supplying, installation, testing and commissioning of De Mineralization / RO	1 Set (one set) (to be quoted as rate of one set)	

	plant with fitments as per specification along with complete pool water circulation system and online filtration arrangement and online pool water conductivity measurement system with conductivity meter.		
i)	Supplying, installation, testing and commissioning of field instrumentation & safety systems for the entire irradiation plant as per specification.	1 Set (one set) (to be quoted as rate of one set)	
j)	Supplying, installation, testing and commissioning of Fire fighting system including all type of system as per the guide line of AERB Design Code as per specification.	1 Set (one set) (to be quoted as rate of one set)	
k)	Supplying, installation, testing and commissioning of Control system (PLC based control & safety system with SCADA and HMI backup) as per specification. PLC system should be off Siemens/ Rockwell make.	1 Set (one set) (to be quoted as rate of one set)	
l)	Supply of Source rack and frame of Design capacity 3000 Kci along with under water source loading tools and tackles, 2 nos under water light and all accessories require for source loading.	1 Set (one set) (to be quoted as rate of one set)	
m)	Supplying, installation, testing and commissioning of Laboratory equipment for dosimetry and micro-biology as per specification. Detail specification of all equipment and accessories has to be given by the bidders.	1 Set (one set) (to be quoted as rate of one set)	
n)	Supplying, installation, testing and commissioning of X-ray package scanner as per specification.	1 Set (one set) (to be quoted as rate of one set)	
o)	Supplying, installation, testing and commissioning of 200 KVA DG Set along with 63 KVA on line ups as per specification.	1 Set (one set) (to be quoted as rate of one set)	
p)	Supply of Radiation protection equipment for plant operators and also personal monitoring system	1 Set (one set) (to be quoted as rate of one set)	
q)	Supply of services for 3 years Annual maintenance contact from end of guarantee period		
	Sub- Total		
	Taxes		
	Grand Total (in Rs)		

The followings to be noted while submitting financial details for the supply of machine to the individual location:

- a. The competitiveness of the bid shall be made on individual location basis. The bidder shall offer their competitive offer for the individual location.
- b. The purchaser will not issue any form ('C' and 'D') towards rebate / exclusion of Tax etc.

- c. The bidder will not be entitled to decrease in rate of taxes occurring during the period of delivery even if there is delay in supplies / completion attributed to him.
- d. The item cost quoted above should be all inclusive of basic price, Transportation, Incidental Services (including Insurance, Loading/ Unloading, Packing & Forwarding charges, etc.), Installation & Commissioning, Demonstration & Training, on-site warranty and maintenance contract etc. The taxes should be quoted separately.
- e. The price competitiveness shall be given due consideration while analyzing the Commercial Bid.
- f. Wherever the bidder is providing a quote for bundle of items/services, the bidder should separately provide the item-wise break-up of the cost as annexure/supporting documents.

I/We as bidder certify that:

- a. The tender shall remain valid for acceptance for 180 days from the date of opening the Technical Bid of the tender.
- b. Agree to offer services for onsite comprehensive warranty of 1 year on the machine(s) supplied through this tender.
- c. Agree to offer services for maintenance contract for the next three years for the machine(s) supplied through this tender after end of warranty period.
- d. Agree to impart onsite training to the designated personnel of purchase for 15 working days
- e. Agree that the offer price is valid for the period of 900 days from the date of opening of technical bid of this tender till the commissioning of the project.

Further confirm that we agree with the terms and conditions specified in “Instructions to Tenderers” and if selected, the execution of supplies would be made in compliance.

Name & Signature of the authorized bidder with stamp
 Contact details of authorized person of bidder who have signed the tender.
 Name.....
 Designation.....
 Phone (office).....
 Phone (Mobile).....
 E mail.....

SECURITIES AND OTHER FORMS

(To be filled by Bidder/Employer)

BID SECURITY (BANK GUARANTEE)

WHEREAS, _____ [name of Bidder] (hereinafter called "the Bidder") has submitted his Bid dated _____ [date] for the **Architectural and structural designing of Gamma Radiation Processing Plant with integrated pack house for fruits and Vegetables as per APEDA guidelines, and other utility facilities & ii) Supply, Installation and Commissioning of Plant & Machinery for Setting up 3000KCi Gamma Radiation Processing Plant for Integrated Export Facility with Irradiation and Pack house unit at Industrial Area, Patna, Bihar** [name of Contract hereinafter called "the Bid"].

KNOW ALL PEOPLE by these presents that We _____ [name of Bank] of _____ [name of country] having our registered office at _____ (hereinafter called "the Bank") are bound unto _____ [name of Employer] (hereinafter called "the Employer") in the sum of _____ *for which payment well and truly to be made to the said Employer the Bank itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this _____ day of _____, 20____.

THE CONDITIONS of this obligation are :

- (1) If after Bid opening the Bidder withdraws his bid during the period of Bid validity specified in the Form of Bid;

OR

- (2) If the Bidder having been notified to the acceptance of his bid by the Employer during the period of Bid validity :
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to Bidders, if required; or
 - (b) fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders; or
 - (c) does not accept the correction of the Bid Price pursuant to Clause 27.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note

that the amount claimed by him is due to his owing to the occurrence of one or any of the three conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date _____** days after the deadline for submission of Bids as such deadline is stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this guarantee should reach the Bank not later than the above date.

DATE _____ SIGNATURE _____

WITNESS _____ SEAL _____

[Signature, name and address]

- * The Bidder should insert the amount of the guarantee in words and figures denominated in Indian Rupees. This figure should be the same as shown in Clause 16.1 of the Instructions to Bidders.
- * 45 days after the end of the validity period of the Bid. Date should be inserted by the Employer before the Bidding documents are issued.

BID VALIDITY UNDERTAKING

I, the undersigned do hereby undertake that our firm M/s _____ agree to abide by this bid for a period 180 days days for the date fixed for receiving the same and it shall be binding on us and may be accepted at any time before the expiration of that period.

(Signed by an Authorised Officer of the Firm)

Title of Officer

Name of Firm

DATE