



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux
Canada
Place Bonaventure,
800 rue de la Gauchetière Ouest
Voir aux présentes - See herein
Montréal
Québec
H5A 1L6
FAX pour soumissions: (514) 496-3822

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Pasteuriseurs	
Solicitation No. - N° de l'invitation 01B30-180193/A	Date 2017-07-20
Client Reference No. - N° de référence du client 01B30-18-0193	
GETS Reference No. - N° de référence de SEAG PW-\$MTA-405-14432	
File No. - N° de dossier MTA-7-40092 (405)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-08-30	Time Zone Fuseau horaire Heure Avancée de l'Est HAE
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Séguin, Caroline	Buyer Id - Id de l'acheteur mta405
Telephone No. - N° de téléphone (514) 496-3734 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DE L'AGRICULTURE ET DE L'AGROALIMENTAIRE CDRSH - ST-HYACINTHE 3600, BOUL. CASAVANT OUEST ST-HYACINTHE Québec J2S 8E3 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure,
800 rue de la Gauchetière Ouest
Voir aux présentes - See herein
Montréal
Québec
H5A 1L6

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

***** CHANGE OF ADDRESS – BID DELIVERY *****

In person or by mail:
Place Bonaventure, 1st Floor
800 de la Gauchetière Street West, Suite 1110
Montreal (QC), H5A 1L6

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PART 1 - GENERAL INFORMATION

1.1 Security Requirements

This request does not include a security requirement.

1.2 Requirement

The requirement is detailed under Article 6.2 of the resulting contract clauses.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Canadian Free Trade Agreement (CFTA).

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the *Standard Acquisition Clauses and Conditions Manual* (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of 2003, Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days
Insert: 120 days

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation, which is:

Place Bonaventure, 1st Floor
800 de la Gauchetière Street West, Suite 1110
Montreal (QC), H5A 1L6

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

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2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Quebec.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that Bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid: two (2) hard copies

Section II: Financial Bid: one (1) hard copy

Section III: Certifications: one (1) hard copy

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that Bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, Bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

3.1.2 Exchange Rate Fluctuation

[C3011T](#) (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

Bidders must fill out the Attachment 1 "Mandatory Technical Criteria" below in order to demonstrate their technical compliance.

A technical document should be provided with the bid in order to demonstrate the compliance with the technical criteria indicated in Attachment 1.

A list of parts, including consumable products and accessories should be provided with the bid.

Although bidders must propose products meeting all mandatory specifications and components outlined in Annex A; at the bid closing date, bids will be evaluated on following preselected mandatory criteria mentioned in Attachment 1 to be demonstrated in the bid.

4.1.2 Financial Evaluation

The total price for the items (Items 1+2+3+4+5+6 = TOTAL) indicated in Annex B "Basis of Payment" will be evaluated.

4.1.2.1 SACC Manual Clause

[A0222T](#) (2014-06-26), Evaluation of Price

4.2 Basis of Selection

4.2.1 Basis of Selection – Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the *Employment and Social Development Canada (ESDC) - Labour's* website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

There is no security requirement applicable to the Contract.

6.2 Requirement

The Contractor must provide the items detailed in accordance with the Requirement at Annex "A" and the Contractor's technical bid entitled _____, dated _____.

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2010A (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.3.2 Supplemental General Conditions

4001 (2015-04-01), Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to April 30th 2018 inclusive

6.4.2 Delivery Date

All the deliverables must be received on or before March 31st 2018.

6.4.3 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Annex "A" of the Contract.

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6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Caroline Séguin
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Quebec Region
Address: 800 de la Gauchetière Street West, Suite 1110, Montreal (QC), H5A 1L6
Telephone: (514) 496-3734
Facsimile: (514) 496-3822
E-mail address: Caroline.Z.Seguin@tpsgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Technical Authority

This section will be completed at contract award.

The Technical Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: ____-____-_____
Facsimile: ____-____-_____
E-mail address: _____

The Technical Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Contractor's Representative

The Contractor's representative for this contract is:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: ____-____-_____
Facsimile: ____-____-_____
E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in Annex B "Basis of Payment" for a cost of \$_____ (*will be completed at contract award*). Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16), Limitation of Price

6.6.3 Single Payment

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all such documents have been verified by Canada;
- c. the Work delivered has been accepted by Canada.

6.6.4 SACC Manual Clauses

SACC Manual Clauses C2000C (2007-11-30), Taxes – Foreign-based Contractor

6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

Each invoice must be supported by:

- a. a copy of time sheets to support the time claimed.
2. Invoices must be distributed as follows:
 - a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____.

6.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions [4001](#) (2015-04-01), Hardware Purchase, Lease and Maintenance;
- (c) the general conditions [2010A](#) (2016-04-04), General Conditions - Goods (Medium Complexity);
- (d) Annex A, Requirement;
- (e) Annex B, Basis of Payment;
- (f) the Contractor's bid dated _____.

6.11 SACC Manual Clauses

[A9068C](#) (2010-01-11), Government Site Regulation
[B1501C](#) (2006-06-16), Electrical Equipment
[G1005C](#) (2016-01-28), Insurance – No Specific Requirement

6.12 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

- a. Free on Board (Destination) common carrier Agriculture Canada, Saint-Hyacinthe Research and Development Centre located at 3600 boulevard Casavant Ouest, St-Hyacinthe, (QC), J2S 8E3 for shipments from the United States government; or
- b. Delivered Duty Paid (DDP) –, Incoterms 2000 for shipments from a commercial contractor.

ANNEX "A"

REQUIREMENT

1. Background

Refurbishment of a pilot plant at the Saint-Hyacinthe Research and Development Centre, (Saint-Hyacinthe, Quebec).

Agriculture and Agri-Food Canada is replacing outdated and aging equipment in the pilot plant, which directly supports the food processing industry by providing facilities that foster innovation. This includes the development of new or improved product, the adoption of technology to improve productivity, and support for start-up companies. The refurbishment of the plant will modernize and improve science and technology capacity, allowing federal researchers to better support innovation, adoption and sustainability in the sector.

In this context, this request is for the purchase, delivery and installation of two types of pasteurizers, as described below.

2. Mandatory general criteria

- 2.1 Both units and their components must be water resistant and must be accessible for cleaning operations;
- 2.2 Both pasteurizers must be CSA-certified;
- 2.3 The unit must comply with Chapters 11 and 14 of the Canadian Food Inspection Agency (CFIA) Dairy Establishment Inspection Manual, and must comply with good manufacturing practices (GMP);
- 2.4 All materials and components of the systems must be compatible with cleaning-in-place (CIP) products and must be able to withstand operating and CIP temperatures;
- 2.5 The supplier will have to provide a written certification demonstrating that the unit was pre-tested at the manufacturer's facility.

3. Mandatory technical criteria

3.1 Criteria

Both units must have the following characteristics:

- 3.1.1 The systems or its components must not exceed: 7 feet (7') width and 10 feet (10') height;
- 3.1.2 The systems must be compatible with a 60 Hertz (Hz) and 208 volts (V) single-phase, 208 V three-phase, 347 V single-phase or 600 V three-phase electrical system;
- 3.1.3 Holding time options must, at a minimum, be 18, 60, 120, 180, 240, 300, 480 and 600 seconds.

3.2 Materials

Both units must have the following characteristics:

- 3.2.1 Tubing must be 304 or higher grade stainless steel;
- 3.2.2 The constant level closed tank must be 304 or higher grade stainless steel, #4 interior and exterior finish, with all welds ground and polished inside and outside;
- 3.2.3 The heat exchanger plates must be 316 or higher grade stainless steel;
- 3.2.4 The tubular or plate heat exchanger for all hot water must be American Society of Mechanical Engineers (ASME) certified (150 lbs/in²) stainless steel;
- 3.2.5 The centrifugal pump for all hot water must be 304 or higher grade stainless steel;
- 3.2.6 All holding tubes must be 304 or higher grade stainless steel;
- 3.2.7 The control panel must be 304 or higher grade stainless steel;
- 3.2.8 A constant level closed tank equipped with a pressure reading analog control;
- 3.2.9 A plate heat exchanger with non-adhesive nitrile seals and adjustable legs;
- 3.2.10 Centrifugal pumps with adjustable Horse power (HP) and Revolutions per minute (RPM), depending on use;
- 3.2.11 A hot water set including:
 - a. Adjustable temperature;
 - b. Open expansion tank with electrode-fitted level sensor, including a drain valve;
 - c. Steam control valve;
 - d. Ball-fitted shut-off valve, with pneumatic cylinder, for steam;
 - e. Steam trap;
 - f. Steam inflow and condensate outflow filters;
 - g. A set of holding tubes with automatic bypass valves.

3.3 Possible temperature profiles

Both units must have the following characteristics:

- 3.3.1 Consumer milk production:
 - a. Preheating section before separation (1st regeneration)
 - i. Inlet temperature of 4°C
 - ii. Outlet temperature of 52°C
 - b. Pasteurized milk:
 - i. Inlet temperature of 57°C
 - ii. Outlet temperature of about 9°C
 - c. Preheating section before homogenization (2nd regeneration):
 - i. Inlet temperature of 52°C

- ii. Outlet temperature of 70°C
- d. Pasteurized milk:
 - i. Inlet temperature of 75°C
 - ii. Outlet temperature of about 57°C
- e. Hot water pasteurization section:
 - i. Inlet temperature of 70°C
 - ii. Outlet temperature of 75°C
- f. Ice water or glycol water cooling section:
 - i. Inlet temperature of 12°C to 15°C
 - ii. Outlet temperature of 3°C
- g. Ice water:
 - i. Inlet temperature of 1°C
 - ii. Outlet temperature of about 8°C

3.3.2 Milk product for cheese-making

- a. Preheating section (1st regeneration):
 - i. Inlet temperature of 4°C
 - ii. Outlet temperature of 33°C
- b. Pasteurized milk:
 - i. Inlet temperature of 58°C
 - ii. Outlet temperature of about 14°C
- c. Preheating section before homogenization (2nd regeneration):
 - i. Inlet temperature of 33°C
 - ii. Outlet temperature of 43°C
- d. Pasteurized milk:
 - i. Inlet temperature of 75°C
 - ii. Outlet temperature of about 58°C

NB: The desired final outlet temperature is about 34°C. It must be attained and adjusted using the temperature control valve.

- e. Hot water pasteurization section:
 - i. Inlet temperature of 43°C
 - ii. Outlet temperature of 75°C

3.3.3 Production of fruit juice and other liquid products

- a. Preheating section (1st regeneration)
 - i. Inlet temperature of 4°C
 - ii. Outlet temperature of 50°C
- b. Pasteurized milk
 - i. Inlet temperature of 60°C
 - ii. Outlet temperature of about 14°C

- c. Preheating section before homogenization (2nd regeneration)
 - i. Inlet temperature of 50°C
 - ii. Outlet temperature of 85°C
- d. Pasteurized juice
 - i. Inlet temperature of 95°C
 - ii. Outlet temperature of about 60°C
- e. Hot water pasteurization section
 - i. Inlet temperature of 85°C
 - ii. Outlet temperature of 95°C
- f. Ice water or glycol water chilling section
 - i. Inlet temperature of 12°C to 14°C
 - ii. Outlet temperature of 4°C
- g. Ice water
 - i. Inlet temperature of 1°C
 - ii. Outlet temperature of about 8°C

3.4 Technical criteria specific to Pasteurizer #1

The system must have the following characteristics:

- 3.4.1 Minimum overall hot water flow of 3,000 liters/hour (L/h);
- 3.4.2 Minimum centrifugal separator capacity of 1,500 L/h of raw milk at 4°C including base, skimming and standardization valves, pressure gauges, manual and tools;
- 3.4.3 Homogenizer with a capacity of at least 500 L/h to 1,500 L/h;
- 3.4.4 Manual two-stage homogenization valves;
- 3.4.5 Variable flow by means of a variable frequency regulator;
- 3.4.6 Can be sterilized with option to connect following holding sections;
- 3.4.7 Homogenization pressure of at least 2,000 to 6,000 pounds per square inch (psi);
- 3.4.8 Product flow for consumer milk production:
 - a. Raw milk flow of at least 500 L/h to 1,500 L/h in the preheating section before separation;
 - b. Standardized milk flow of at least 450 L/h to 1,350 L/h in the preheating section before homogenization;
 - c. Homogenized milk flow of at least 450 L/h to 1,350 L/h in the hot water pasteurization section;
 - d. Pasteurized milk flow of at least 450 L/h to 1,350 L/h in the cooling section;
 - e. Ice water flow of at least 1,000 L/h to 3,000 L/h

3.4.9 Product flow for the production of milk for cheese-making and of fruit juice and other liquid products:

- a. Raw milk/juice flow of at least 500 L/h to 1,500 L/h in the preheating section before separation;
- b. Pasteurized milk/juice flow of at least 500 L/h to 1,500 L/h;
- c. Standardized milk/juice flow of at least 500 L/h to 1,500 L/h in the preheating section before homogenization;
- d. Homogenized milk/juice flow of at least 500 L/h to 1,500 L/h in the hot water pasteurization section

3.5 Technical criteria specific to Pasteurizer #2

The system must have the following characteristics:

3.5.1 Minimum overall hot water flow of 1,000 L/h

3.5.2 Product flow for consumer milk production:

- a. Raw milk flow of at least 100 L/h to 500 L/h in the preheating section before separation;
- b. Standardized milk flow of at least 9 L/h to 450 L/h in the preheating section before homogenization;
- c. Homogenized milk flow of at least 9 L/h to 450 L/h in the hot water pasteurization section;
- d. Pasteurized milk flow of at least 9 L/h to 450 L/h in the cooling section;
- e. Ice water flow of at least 500 L/h to 1,000 L/h

3.5.3 Product flow for the production of milk for cheese-making and of fruit juice and other liquid products of at least 10 L/h to 500 L/h in preheating sections before separation, in preheating sections before homogenization, in preheating sections before hot water pasteurization, and for pasteurized milk/juice.

3.6 Control system

3.6.1 It must be possible to operate the system in automatic, manual and maintenance modes;

3.6.2 The door must have a continuous hinge and must be closed by means of a stainless steel handle that can be locked and which is fitted with an attachment point mechanism controlled by a single handle;

3.6.3 A minimum of 20% free space on the mounting plate must be provided;

- 3.6.4 All components and instruments inside the panel must be identified with lamicoid plates;
- 3.6.5 A grounding bar beneath the panel for analog signals must be provided;
- 3.6.6 There must be a minimum de 40% free space in each element used as a wire way or electrical cord way;
- 3.6.7 Cables and conductors must be:
 - a. #18 American Wire Gauge (AWG) calibre, shielded, stranded wire with a drain wire for 4-20 mAD analog signals;
 - b. 24 V AC or 120 V AC and electrical feed for digital signals.
- 3.6.8 Twelve (12) terminals for each type (analog, digital and power supply) or 25% of terminals (whichever number is higher) must be provided as spare terminals;
- 3.6.9 One shielded 120V electrical receptacle for a maximum of 3 amp must be installed inside the control panel;
- 3.6.10 Communication between programmable logic controllers and other components must be on an Ethernet/IP network;
- 3.6.11 At minimum, the panel must have a five-port unmanaged network switch and at least one spare port for the programmer;
- 3.6.12 Remote connection equipment must be submitted as an option to the purchaser in order to allow minimum remote access to the programmable logic controllers and the control screen or any other item of equipment connected to the Ethernet/IP network;
- 3.6.13 The programmable logic controllers must include, without being limited to, the following:
 - a. One central processor unit;
 - b. Power supply units;
 - c. Digital input and output modules;
 - d. Analog input and output modules.
- 3.6.14 A colour touch screen must be included with each system to make it possible to follow the production and washing operating stages, as well as display the following, without being limited to, parameters:
 - a. Pasteurizer function: production, washing, inspection;
 - b. Flow diagrams;
 - c. Production type;
 - d. Production stage and conditions to be met in order to go to the subsequent stage;
 - e. Operating temperature (°C);

- f. Outlet temperature (°C);
- g. Flow (L/h);
- h. Hot water temperature (°C).

3.6.15 It must be possible to modify the parameters on screen and to protect them by administrator access. The changeable parameters must be a minimum of, with being limited to, the following:

- a. Setpoints;
- b. Loop parameters;
- c. All control parameters in production or Clean in place (CIP) mode;
- d. Alarm.

3.6.16 There must a minimum of the following two access categories:

- a. Operator: Is able to start, pause and stop sequences;
- b. Administrator: Is able to start, pause and stop sequences, and change parameters.

4. Delivery and Installation

The units must be delivered and installed no later than March 31 2018.

The units must be delivered to the Saint-Hyacinthe Research and Development Centre, at the following address:

Agriculture and Agri-Food Canada,
Food Research and Development Centre,
3600 Casavant Boulevard West,
St-Hyacinthe, Qc, J2S 8E3, Canada

5. Training

Complete training, ideally in French, otherwise in English, must be provided at the Saint-Hyacinthe Research and Development Centre for up to four (4) users. The training must include, but is not limited to, the maintenance, use and operation of the equipment. Two (2) hard copies or the electronic version of a user and maintenance manual, ideally in French, otherwise in English, must be provided with each piece of equipment. A parts list that includes consumables and accessories must be provided.

The training must be provided no later than March 31st 2018.

ANNEX "B"

BASIS OF PAYMENT

The contract will be awarded in Canadian dollars (\$CAD)

The prices indicated below exclude applicable taxes.

Item no.	Item description	Quantity	Unit Price *
1	Pasteurizer #1 as described Annex «A». Make offered : _____ Model offered : _____	1	\$ _____
2	Pasteurizer #2 as described Annex «A». Make offered : _____ Model offered : _____	1	\$ _____
3	OPTION: Remote connection equipment	1	\$ _____
4	User manuals in French and/or English	1	\$ _____
5	Transport, delivery and installation fees	1	\$ _____
6	On-site training	1	\$ _____
Total			\$ _____

* Currency (if other than \$CAD) : _____

ATTACHMENT 1

MANDATORY TECHNICAL CRITERIA

Criteria no.	Criteria description	Technical bid reference (Page and/or Section)
2.1	Both units and their components must be water resistant and must be accessible for cleaning operations;	Page: _____ Section: _____
2.2	Both pasteurizers must be CSA-certified;	Page: _____ Section: _____
2.3	The unit must comply with Chapters 11 and 14 of the Canadian Food Inspection Agency (CFIA) Dairy Establishment Inspection Manual, and must comply with good manufacturing practices (GMP);	Page: _____ Section: _____
2.4	All materials and components of the systems must be compatible with cleaning-in-place (CIP) products and must be able to withstand operating and CIP temperatures;	Page: _____ Section: _____
2.5	The supplier will have to provide a written certification demonstrating that the unit was pre-tested at the manufacturer's facility.	Page: _____ Section: _____
3.1.1	The systems or its components must not exceed: 7 feet (7') width and 10 feet (10') height;	Page: _____ Section: _____
3.1.2	The systems must be compatible with a 60 Hertz (Hz) and 208 volts (V) single-phase, 208 V three-phase, 347 V single-phase or 600 V three-phase electrical system;	Page: _____ Section: _____
3.1.3	Holding time options must, at a minimum, be 18, 60, 120, 180, 240, 300, 480 and 600 seconds.	Page: _____ Section: _____
3.2.1	Tubing must be 304 or higher grade stainless steel;	Page: _____ Section: _____
3.2.2	The constant level closed tank must be 304 or higher grade stainless steel, #4 interior and exterior finish, with all welds ground and polished inside and outside;	Page: _____ Section: _____
3.2.3	The heat exchanger plates must be 316 or higher grade stainless steel;	Page: _____ Section: _____
3.2.4	The tubular or plate heat exchanger for all hot water must be American Society of Mechanical Engineers (ASME) certified (150 lbs/in ²) stainless steel;	Page: _____ Section: _____
3.2.5	The centrifugal pump for all hot water must be 304 or higher grade stainless steel;	Page: _____ Section: _____

3.2.6	All holding tubes must be 304 or higher grade stainless steel;	Page: _____ Section: _____
3.2.7	The control panel must be 304 or higher grade stainless steel;	Page: _____ Section: _____
3.2.8	A constant level closed tank equipped with a pressure reading analog control;	Page: _____ Section: _____
3.2.9	A plate heat exchanger with non-adhesive nitrile seals and adjustable legs;	Page: _____ Section: _____
3.2.10	Centrifugal pumps with adjustable Horse power (HP) and Revolutions per minute (RPM), depending on use;	Page: _____ Section: _____
3.2.11	<p>A hot water set including:</p> <ul style="list-style-type: none"> a. Adjustable temperature; b. Open expansion tank with electrode-fitted level sensor, including a drain valve; c. Steam control valve; d. Ball-fitted shut-off valve, with pneumatic cylinder, for steam; e. Steam trap; f. Steam inflow and condensate outflow filters; g. A set of holding tubes with automatic bypass valves. 	Page: _____ Section: _____
3.3.1	<p>Consumer milk production:</p> <ul style="list-style-type: none"> a. Preheating section before separation (1st regeneration) <ul style="list-style-type: none"> i. Inlet temperature of 4°C ii. Outlet temperature of 52°C b. Pasteurized milk: <ul style="list-style-type: none"> i. Inlet temperature of 57°C ii. Outlet temperature of about 9°C c. Preheating section before homogenization (2nd regeneration): <ul style="list-style-type: none"> i. Inlet temperature of 52°C ii. Outlet temperature of 70°C d. Pasteurized milk: <ul style="list-style-type: none"> i. Inlet temperature of 75°C ii. Outlet temperature of about 57°C e. Hot water pasteurization section: 	Page: _____ Section: _____

	<ul style="list-style-type: none"> i. Inlet temperature of 70°C ii. Outlet temperature of 75°C <p>f. Ice water or glycol water cooling section:</p> <ul style="list-style-type: none"> i. Inlet temperature of 12°C to 15°C ii. Outlet temperature of 3°C <p>g. Ice water:</p> <ul style="list-style-type: none"> i. Inlet temperature of 1°C ii. Outlet temperature of about 8°C; 	
3.3.2	<p>Milk product for cheese-making</p> <ul style="list-style-type: none"> a. Preheating section (1st regeneration): <ul style="list-style-type: none"> i. Inlet temperature of 4°C ii. Outlet temperature of 33°C b. Pasteurized milk: <ul style="list-style-type: none"> i. Inlet temperature of 58°C ii. Outlet temperature of about 14°C c. Preheating section before homogenization (2nd regeneration): <ul style="list-style-type: none"> i. Inlet temperature of 33°C ii. Outlet temperature of 43°C d. Pasteurized milk: <ul style="list-style-type: none"> i. Inlet temperature of 75°C ii. Outlet temperature of about 58°C <p>NB: The desired final outlet temperature is about 34°C. It must be attained and adjusted using the temperature control valve.</p> <ul style="list-style-type: none"> e. Hot water pasteurization section: <ul style="list-style-type: none"> i. Inlet temperature of 43°C ii. Outlet temperature of 75°C; 	<p>Page: _____</p> <p>Section: _____</p>
3.3.3	<p>Production of fruit juice and other liquid products</p> <ul style="list-style-type: none"> b. Preheating section (1st regeneration) <ul style="list-style-type: none"> i. Inlet temperature of 4°C ii. Outlet temperature of 50°C b. Pasteurized milk <ul style="list-style-type: none"> i. Inlet temperature of 60°C ii. Outlet temperature of about 14°C 	<p>Page: _____</p> <p>Section: _____</p>

	<ul style="list-style-type: none"> c. Preheating section before homogenization (2nd regeneration) <ul style="list-style-type: none"> i. Inlet temperature of 50°C iii. Outlet temperature of 85°C d. Pasteurized juice <ul style="list-style-type: none"> i. Inlet temperature of 95°C ii. Outlet temperature of about 60°C e. Hot water pasteurization section <ul style="list-style-type: none"> i. Inlet temperature of 85°C ii. Outlet temperature of 95°C f. Ice water or glycol water chilling section <ul style="list-style-type: none"> i. Inlet temperature of 12°C to 14°C ii. Outlet temperature of 4°C g. Ice water <ul style="list-style-type: none"> i. Inlet temperature of 1°C ii. Outlet temperature of about 8°C; 	
3.4.1	Minimum overall hot water flow of 3,000 liters/hour (L/h);	Page: _____ Section: _____
3.4.2	Minimum centrifugal separator capacity of 1,500 L/h of raw milk at 4°C including base, skimming and standardization valves, pressure gauges, manual and tools;	Page: _____ Section: _____
3.4.3	Homogenizer with a capacity of at least 500 L/h to 1,500 L/h;	Page: _____ Section: _____
3.4.4	Manual two-stage homogenization valves;	Page: _____ Section: _____
3.4.5	Variable flow by means of a variable frequency regulator;	Page: _____ Section: _____
3.4.6	Can be sterilized with option to connect following holding sections;	Page: _____ Section: _____
3.4.7	Homogenization pressure of at least 2,000 to 6,000 pounds per square inch (psi);	Page: _____ Section: _____
3.4.8	Product flow for consumer milk production: <ul style="list-style-type: none"> a. Raw milk flow of at least 500 L/h to 1,500 L/h in the preheating section before separation; b. Standardized milk flow of at least 450 L/h to 	Page: _____ Section: _____

	<p>1,350 L/h in the preheating section before homogenization;</p> <p>c. Homogenized milk flow of at least 450 L/h to 1,350 L/h in the hot water pasteurization section;</p> <p>d. Pasteurized milk flow of at least 450 L/h to 1,350 L/h in the cooling section;</p> <p>e. Ice water flow of at least 1,000 L/h to 3,000 L/h;</p>	
3.4.9	<p>Product flow for the production of milk for cheese-making and of fruit juice and other liquid products:</p> <p>a. Raw milk/juice flow of at least 500 L/h to 1,500 L/h in the preheating section before separation;</p> <p>b. Pasteurized milk/juice flow of at least 500 L/h to 1,500 L/h;</p> <p>c. Standardized milk/juice flow of at least 500 L/h to 1,500 L/h in the preheating section before homogenization;</p> <p>d. Homogenized milk/juice flow of at least 500 L/h to 1,500 L/h in the hot water pasteurization section;</p>	<p>Page: _____</p> <p>Section: _____</p>
3.5.1	<p>Minimum overall hot water flow of 1,000 L/h</p>	<p>Page: _____</p> <p>Section: _____</p>
3.5.2	<p>Product flow for consumer milk production:</p> <p>a. Raw milk flow of at least 100 L/h to 500 L/h in the preheating section before separation;</p> <p>b. Standardized milk flow of at least 9 L/h to 450 L/h in the preheating section before homogenization;</p> <p>c. Homogenized milk flow of at least 9 L/h to 450 L/h in the hot water pasteurization section;</p> <p>d. Pasteurized milk flow of at least 9 L/h to 450 L/h in the cooling section;</p> <p>e. Ice water flow of at least 500 L/h to 1,000 L/h;</p>	<p>Page: _____</p> <p>Section: _____</p>

3.5.3	Product flow for the production of milk for cheese-making and of fruit juice and other liquid products of at least 10 L/h to 500 L/h in preheating sections before separation, in preheating sections before homogenization, in preheating sections before hot water pasteurization, and for pasteurized milk/juice.	Page: _____ Section: _____
3.6.1	It must be possible to operate the system in automatic, manual and maintenance modes;	Page: _____ Section: _____
3.6.2	The door must have a continuous hinge and must be closed by means of a stainless steel handle that can be locked and which is fitted with an attachment point mechanism controlled by a single handle;	Page: _____ Section: _____
3.6.3	A minimum of 20% free space on the mounting plate must be provided;	Page: _____ Section: _____
3.6.4	All components and instruments inside the panel must be identified with lamicoid plates;	Page: _____ Section: _____
3.6.5	A grounding bar beneath the panel for analog signals must be provided;	Page: _____ Section: _____
3.6.6	There must be a minimum de 40% free space in each element used as a wire way or electrical cord way;	Page: _____ Section: _____
3.6.7	Cables and conductors must be: a. #18 American Wire Gauge (AWG) calibre, shielded, stranded wire with a drain wire for 4-20 mAD analog signals; b. 24 V AC or 120 V AC and electrical feed for digital signals.	Page: _____ Section: _____
3.6.8	Twelve (12) terminals for each type (analog, digital and power supply) or 25% of terminals (whichever number is higher) must be provided as spare terminals;	Page: _____ Section: _____
3.6.9	One shielded 120V electrical receptacle for a maximum of 3 amp must be installed inside the control panel;	Page: _____ Section: _____
3.6.10	Communication between programmable logic controllers and other components must be on an Ethernet/IP network;	Page: _____ Section: _____
3.6.11	At minimum, the panel must have a five-port unmanaged network switch and at least one spare port for the programmer;	Page: _____ Section: _____

3.6.12	Remote connection equipment must be submitted as an option to the purchaser in order to allow minimum remote access to the programmable logic controllers and the control screen or any other item of equipment connected to the Ethernet/IP network;	Page: _____ Section: _____
3.6.13	The programmable logic controllers must include, without being limited to, the following: <ul style="list-style-type: none"> a. One central processor unit; b. Power supply units; c. Digital input and output modules; d. Analog input and output modules; 	Page: _____ Section: _____
3.6.14	A colour touch screen must be included with each system to make it possible to follow the production and washing operating stages, as well as display the following, without being limited to, parameters: <ul style="list-style-type: none"> a. Pasteurizer function: production, washing, inspection; b. Flow diagrams; c. Production type; d. Production stage and conditions to be met in order to go to the subsequent stage; e. Operating temperature (°C); f. Outlet temperature (°C); g. Flow (L/h); h. Hot water temperature (°C); 	Page: _____ Section: _____
3.6.15	It must be possible to modify the parameters on screen and to protect them by administrator access. The changeable parameters must be a minimum of, with being limited to, the following: <ul style="list-style-type: none"> a. Setpoints; b. Loop parameters; c. All control parameters in production or Clean in place (CIP) mode; d. Alarm; 	Page: _____ Section: _____
3.6.16	There must a minimum of the following two access categories: <ul style="list-style-type: none"> a. Operator: Is able to start, pause and stop sequences; b. Administrator: Is able to start, pause and stop sequences, and change parameters. 	Page: _____ Section: _____