DEVELOPMENT AND PURCHASE AGREEMENT

This **DEVELOPMENT AND PURCHASE AGREEMENT** (the "**Agreement**") made effective on August 18th, 2020 ("**Effective Date**") by and between:

PyroGenesis Canada Inc., a corporation organized and existing under the laws of Canada, having its head office at 1744 William Street, Suite 200 Montreal (Quebec) Canada H3J 1R4 herein acting and represented by Mr. P. Peter Pascali, its President and Chief Executive Officer, duly authorized as he so declares for the purposes hereof;

(Hereafter referred to as « **PCI** »)

-and-

HPQ Nano Silicon Powders Inc. (a 100% owned subsidiary of HPQ Silicon Resources Inc.), a corporation organized and existing under the laws of Canada, having its head office at 3000 Omer-Lavallée St., suite 306, Montreal (Quebec) Canada H1Y 3R8, herein acting and represented by Bernard Tourillon, its President and CEO; duly authorized as he so declares for the purposes hereof;

(Hereafter referred to as « **HPQ NANO**»)

(Hereafter referred to individually as a « **Party**», collectively as the « **Parties** »)

RECITALS

WHEREAS PCI has developed a second generation reactor and one-step process that uses a plasma arc within a vacuum furnace to produce high purity silicon, directly from quartz (the "**PUREVAP™ QRR**") and has transferred ownership of the intellectual property related thereto to HPQ Silicon Resources Inc ("**HPQ Silicon**") on August 1st, 2018, hereinafter referred to as the "**PUREVAP™ QRR IP**");

WHEREAS HPQ Silicon is seeking to expand the downstream applications of the silicon produced using the PUREVAP™ QRR in the field of Micron size and Nano size Silicon Powders and Silicon Nanowires (the "**Field**") and has therefor asked PCI to develop a new reactor and processes that comprise:

(A) [redacted]

and [redacted]

P B

(B) [redacted]

(the vacuum electric arc furnace (A) and the filtration system (B) and related processes are hereinafter collectively referred to as the **"PUREVAP™ NSiR Process"**);

WHEREAS HPQ Silicon has duly constituted the company HPQ NANO for the purposes of: (a) managing the development and financing of the PUREVAP™ NSiR Process and the subsequent commercialisation ventures associated with the PUREVAP™ NSiR Process in the Field and; (b) owning any intellectual property rights in the PUREVAP™ NSiR Process that shall accrue to it under the terms of this Agreement (the **"PUREVAP™ NSiR Process IP"**, as further defined in Schedule B);

WHEREAS PCI has completed preliminary research for the development of the PUREVAP™ NSiR Process and has already filed on October 9, 2019 a U.S. provisional patent application for this novel PUREVAP™ NSiR Process (Patent Application No.: 62/913,152);

WHEREAS the Parties hereto wish to enter into this Agreement for the purpose of: (a) establishing the PUREVAP™ NSiR Process development program and schedule and the payment terms thereof; (b) determining the payment terms and the ownership of the PUREVAP™ NSiR Process IP, which shall include the ownership of the Patent Application No.: 62/913,152; (c) determining the terms and conditions of: (i) the royalties that shall be payed by HPQ NANO to PCI on the sale of any powder produced with the PUREVAP™ NSIR Process or; (ii) the alternative shareholding rights in HPQ NANO that PCI may decide to acquire in lieu of the royalties; and (d) determining the principal terms and conditions of the exclusive licence on the PUREVAP™ NSiR Process IP that HPQ NANO shall grant to PCI (these objectives are individually and collectively referred to as the **"Purpose"** of the Agreement);

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. **DEFINITIONS**. In this Agreement, the capitalized terms shall have the meanings attributed to them hereafter:

   "Agreement" has the meaning set forth in the Recitals of this Agreement.

   "Confidential Information" has the meaning set forth in Section 31 of this Agreement.

   "Development Costs" means the costs associated to carrying out the NSiR Process Development Program.

   "Disclosing Party" has the meaning set forth in Section 31 of this Agreement.

PP V

"**Effective Date**" means the first date written in the introductory paragraph of this Agreement.

"**Field**" has the meaning set forth in the Recitals of this Agreement.

"**PUREVAP™ QRR**" has the meaning set forth in the Recitals of this Agreement.

"**Gen1 NSiR Process**" means the reactor and process developed by PCI in Phase 1-A of the NSiR Process Development Program.

"**Gen2 NSiR Process**" means the reactor and process developed by PCI in Phase 2-A of the NSiR Process Development Program.

"**Licenced Assets**" has the meaning determined in Section 18 of this Agreement.

"**Milestone**" has the meaning determined in Schedule A.

"**Nano Royalty**" means the fee that shall payed by HPQ NANO to PCI on a annual basis, in the amounts detailed in Section 19 of this Agreement.

"**Purchase Price**" means the price of acquisition by HPQ NANO of the NSiR Process IP, as defined in Schedule D of this Agreement.

"**PUREVAP™ QRR IP**" has the meaning set forth in the Recitals of this Agreement.

"**PUREVAP™ NSiR Process**" has the meaning set forth in the Recitals of this Agreement and, for more certainty, encompasses both the Gen1 NSiR Process and the Gen2 NSiR Process, but does not include the PUREVAP™ QRR.

"**PUREVAP™ NSiR Process IP**" means all intellectual property rights specified in Schedule B, that are to be developed by PCI pursuant to this Agreement and that shall be assigned to HPQ NANO as counterpart to the payment by the latter of the Purchase Price defined in Schedule C.

"**PUREVAP™ NSiR Process Development Program**" means the program for the development, testing and installation of the NSiR Process, detailed in Schedule A.

"**Purpose**" has the meaning set forth in the Recitals of this Agreement.

"**Recipient**" has the meaning set forth in Section 31 of this Agreement.

"**Remaining Equity Stake**" means, in relation to HPQ NANO's equity, the total remaining equity stake held by HPQ Silicon in HPQ NANO, after any sale, donation, grant of options and any other transfer of ownership rights therein to third parties.

"**Systems**" means the following equipment: PUREVAP™ Gen2 QRR, the Gen1 NSiR Process and the Gen2 NSiR Process.

"**Test Results**" means all test results disclosed in the Interim and Final Reports delivered by PCI to HPQ NANO.

2. **RECITALS AND SCHEDULES.** The above recitals and Schedules A, B, C and D are incorporated by reference into this Agreement and are deemed to be an integral part hereof.

3. **PUREVAP™ NSIR PROCESS DEVELOPMENT PROGRAM.** PCI agrees to complete the development project contemplated by this Agreement in accordance with the PUREVAP™ NSiR Process Development Program detailed in Schedule A.

   PCI will notify, as soon as possible, HPQ NANO of the date it intends on commence the development and testing phases of the PUREVAP™ NSiR Process Development Program.

4. **MODIFICATION OF DEVELOPMENT PROGRAM SCOPE.** Without invalidating this Agreement, HPQ NANO may order changes in the type or quantity of Systems that shall be developed, fabricated and tested according to the PUREVAP™ NSiR Process Development Program, within the general scope of this Agreement; provided that any such change shall entitle PCI to an equitable adjustment in the Development Costs and\or Purchase Price and the time allowed to PCI for performance. No such change in the scope of supply shall be performed by PCI until so ordered, and approved, in writing, by a duly authorized representative of both HPQ NANO and PCI.

5. **MODIFICATION OF SCHEDULES.** If PCI believes that it will not achieve a Milestone in the time expected therefor in Schedule A, it shall notify HPQ NANO in writing in advance of the relevant deadline. PCI shall include with such notice (a) a reasonable explanation of the reasons for such failure and (b) a reasonable plan for promptly achieving the extended or amended Milestone. If HPQ NANO does not agree with the proposed plan, it shall communicate with PCI and the Parties shall discuss how to modify the proposed plan in order to resolve the issue in a manner that is satisfactory to both Parties.

   In no event shall the modification of a proposed schedule or the failure to achieve a Milestone in the expected time constitute a material breach of this Agreement, which shall entitle HPQ NANO to terminate the Agreement as per Section 32.

6. **DEVELOPMENT COSTS.** HPQ NANO agrees to pay the Development Costs detailed in Schedule C, in accordance with the payment schedule and terms set forth therein.

7. **R & D CREDITS.** HPQ NANO and PCI agree that all reimbursable research and development tax credits will be claimed by and will accrue to HPQ NANO.

8. **ASSEMBLY AND INSTALLATION OF THE SYSTEM**. HPQ NANO shall be responsible for obtaining any required governmental consents, approvals, authorizations and permits needed for the installation and operation of the System in PCI's facilities.

9. **MANDATORY TESTING.** HPQ NANO shall be responsible for all costs associated with any environmental tests using the Systems as defined in Schedule A, including, but not limited to, air emission tests, which may be required or mandated by the relevant authorities.

10. **SYSTEMS OWNERSHIP.** Complete ownership rights of the Systems shall be transferred to HPQ NANO upon signature of this Agreement by all Parties and payment by HPQ NANO to PCI of one Canadian dollar (CAD $1.00).

    While the Development program is completed by PCI, HPQ NANO, together with PCI, may decide to keep the Systems in PCI's facilities for further testing or other research & development or commercial reasons. However, in no event whatsoever, shall PCI be held liable for any damages related to the loss or damage of the Systems, while in its facilities, and in no event shall it be incumbent to PCI to subscribe to or maintain any insurance to cover the potential loss or damage to any Systems, after the development program is completed and is transferred to HPQ NANO.

    At any time after the ownership of the Systems is transferred to HPQ NANO in accordance with the terms above, the latter may elect to physically claim the Systems and arrange and pay for their transportation outside of PCI's facilities and their installation in theirs. Reasonable notice shall be given to PCI in order to allow its employees to prepare the Systems for transportation.

11. **TEST RESULTS OWNERSHIP.** Ownership rights in the Test Results shall accrue to HPQ NANO, who shall become the sole owner thereof, as of the date of full payment of the IP Purchase Price.

12. **IP PURCHASE PRICE.** PCI agrees to assign to HPQ NANO the PUREVAP™ NSiR Process IP specified in Schedule B, and HPQ NANO agrees to pay PCI the Purchase Price therefor according to the terms detailed in Schedule D.

13. **DISCLOSURE OF NSIR PROCESS IP.** PCI will promptly disclose HPQ NANO any invention or industrial design relating to the PUREVAP™ NSiR Process that is likely patentable or registrable as an industrial design and that may be included in the definition of PUREVAP™ NSiR Process IP, as per Section III of Schedule B.

14. **PATENT AND DESIGN APPLICATIONS.** Upon disclosure to HPQ NANO of an invention or design that relates to the NSiR Process, in conformity with Section 13, the Parties shall discuss:

    a) whether or not patent or industrial design applications shall be filed and prosecuted; and
    b) in which jurisdictions.

B P

PCI shall hold the ultimate discretion and authority to conclude on the above elements a) and b), as it deems reasonable and commercially beneficial to one or both Parties and shall proceed to filing and prosecuting the applications in opportune time, subject to Section 20.

15. **PUREVAP™ NSIR PROCESS IP OWNERSHIP.** In accordance with the terms specified in Schedule D, HPQ NANO will acquire the sole and exclusive titles, rights and interests in and to the PUREVAP™ NSiR Process IP described in Schedule B. PCI shall ensure that all its employees undertaking work in connection with this Agreement (i) assign to HPQ NANO all right, title and interest in and to any PUREVAP™ NSiR Process IP in which such employees would have any right, title or interest and (ii) cooperate in patent filings (by providing affidavits, etc.)

The Parties agree that should any of the following events occur, titles, rights and interests in and to the PUREVAP™ NSiR Process IP, including ownership thereof, transferred to HPQ NANO pursuant to this Agreement shall revert to PCI:

a) If HPQ NANO intends to abandon any patent or design included in the PUREVAP™ NSiR Process IP, HPQ NANO shall advise PCI of its intention in opportune time so that PCI can pay in due time all maintenance costs or any other fees required for avoiding the loss or abandonment of the rights, without incurring late fees or penalties.
b) In the event HPQ NANO refuses, neglects, fails, or decides not to, for any reason whatsoever, make commercial use of the Systems and\or the PUREVAP™ NSiR Process IP;
c) In the event of a change of control of HPQ NANO, as defined in this Agreement, coupled with the refusal, failure or neglect of HPQ NANO to commercialize, or the decision of the new owners or the board of directors of HPQ NANO not to commercialize, for any reason whatsoever, the Systems and\or the PUREVAP™ NSiR Process IP. These provisions do not apply in the event PCI exercises its right to the conversion of the Nano Royalty into equity stake into the Capital of HPQ NANO as per Section 20 of this Agreement.

In any of the above situations, HPQ NANO shall be responsible for the payment of the costs relating to the drafting, by outside intellectual property counsel, of the assignments and any other documents that may be necessary to give effect to this Section.

16. **PRE-EXISTING INTELLECTUAL PROPERTY**: Notwithstanding any provision of this Agreement to the contrary, any methodologies, processes, products, formulations, inventions or technologies invented, created, adapted by PCI prior to this Agreement or used by PCI in its business generally, including all associated intellectual property rights, shall be and remain the sole property of PCI, and HPQ NANO shall have no interest in or claim to the aforementioned, except as necessary to exercise its rights in the Systems and NSiR Process. In addition, notwithstanding any provision of this Agreement to the contrary, PCI shall be free to use any ideas, concepts, or know-how developed or acquired by PCI during the performance of this Agreement.

17. **OBTENTION OF PATENT RIGHTS.** The Parties agree that they will cooperate in the prosecution of the patent applications / patents covered by this Agreement, including with regards to the scope of the claims and argumentation submitted in support thereof, in order to ensure that the patent rights of HPQ NANO and the licence rights of PCI therein are taken into consideration and safeguarded.

18. **LICENCE.** HPQ NANO hereby grants PCI a worldwide, non-revocable, perpetual, royalty-free, exclusive license (which also excludes HPQ NANO) to register, market, distribute, commercialize and otherwise use and exploit the following assets for any research and development or commercial purposes <u>outside</u> of the Field:

    a) The Test Results;
    b) The PUREVAP™ NSiR Process IP;
    c) The Gen1 and Gen2 PUREVAP™ NSiR Process (reactors).

    (collectively, the "**Licenced Assets**")

    PCI may not sublicence to any third party the rights granted herein by HPQ NANO.

    HPQ NANO does <u>not</u> retain for itself or any of its affiliates the rights to register, use, market, distribute, commercialize and exploit the Licensed Assets, except <u>in</u> the Field or for the sole purpose of fundamental research.

    Should PCI be approach by other parties for any research and development or commercial purposes <u>outside</u> of the Field, HPQ NANO shall have a right of first refusal, provided that, however, HPQ NANO exercise its right of first refusal within thirty (30) days of PCI receiving a bona-fide offer.

    HPQ NANO accepts to execute all documents or additional agreements reasonably required by PCI to give full force and effect to the license rights herein granted.

19. **NANO ROYALTY.** HPQ NANO shall pay to PCI, on an annual basis, until the conversion defined in Section 20 below, the following minimum royalty, on the gross sales of nano materials produced with the PUREVAP™ NSiR Process and Systems:

    a) For 2021, the greater of 10% of **HPQ NANO** gross sales or fifty thousand Canadian dollars (CDN$50,000);
    b) For 2022, the greater of 10% of **HPQ NANO** gross sales or one hundred thousand Canadian dollars (CDN$100,000);
    c) For 2023, the greater of 10% of **HPQ NANO** gross sales or one hundred and fifty thousand Canadian dollars (CDN$150,000);
    d) For 2024 and beyond, the greater of 10% of HPQ NANO gross sales or two hundred thousand Canadian dollars (CDN$200,000).

    The Nano Royalty payments shall be made no later than ten (10) business days following the end of HPQ NANO's financial years.

20. **CONVERSION OF NANO ROYALTY.** The Parties agree that, PCI may, at any time and at its sole discretion, elect to convert the Nano Royalty that HPQ NANO would owe to it in the future under the terms of the above Section 19, into equity stake into the capital of HPQ NANO, in accordance with the terms below:

    a) PCI may elect to convert the Nano Royalty into fifty percent (50%) of HPQ NANO's Remaining Equity Stake;

    b) Upon being notified of PCI's decision to convert the Nano Royalty, the Parties shall commence negotiating and drafting a shareholder agreement between HPQ NANO and PCI establishing, amongst other things, the contribution of each Party into the funding of the future commercial endeavors of HPQ NANO;

    c) Within 10 days of being notified by PCI of the latter's decision to avail itself of the right to the convert the Nano Royalty in accordance with this Section, HPQ NANO shall pay to PCI the Nano Royalty accrued before the day of the notice.

21. **REDUCTION OF REMAINING EQUITY STAKE** Should any contemplated transaction between HPQ NANO and a third-party foreseeably result in the reduction of the Remaining Equity Stake, HPQ NANO shall notify PCI of its intention of proceeding to the conclusion of the contemplated transaction at least ten (10) business days prior to the conclusion of the transaction, in order to allow : i) PCI to exercise its right to convert the Nano Royalty as per Section 20 of this Agreement before the transaction takes place; or ii) the Parties to renegotiate the terms of the Nano Royalty and of the right of conversion of the Nano Royalty.

22. **PAYMENT DELAYS PENALTIES.** Any payment due under this Agreement that is not paid on the date when due and giving that PCI is not late with regard to delivery terms as per Schedule A, shall bear interest at the rate of 1.5% per month (19.6% per year)) or the maximum rate permissible by law, whichever is less.

23. **EXCLUSIVE SUPPLIER OF SYSTEMS.** Should HPQ NANO desire to make commercial use of the Systems and have additional reproductions thereof manufactured, it shall negotiate with PCI the terms of an exclusive supply agreement, under which PCI shall be the sole and exclusive manufacturer and supplier of the Systems for HPQ NANO and its affiliates in the world. HPQ NANO agrees <u>not</u> to licence or transfer its intellectual property rights in the PUREVAP™ NSiR Process in order to allow a third party to manufacture Systems.

24. **ROYALTIES ON SALE OF SYSTEMS.** If Section 20 is not executed, then in the event HPQ NANO intends on selling to any third-party Systems for the production of nano products by that third party, HPQ NANO shall ensure that the sale\purchase agreement by which it shall transfer ownership of said systems to the third-party contains a clause binding the latter to the payment, directly to PCI or through HPQ NANO, of a royalty equal to the Nano royalty, which terms shall be substantially equivalent to those of Section 19 of this

pm

Agreement. If the third-party intends on using the Systems for internal production of nano products, the royalty to be paid shall be equal to the fair market value of 10% of the volume of nano products produced, should said volume be sold to another third-party in an arms length transaction.

25. **NO LIABILITY.** EXCEPT WITH RESPECT TO THE GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, IN NO EVENT SHALL PCI BE LIABLE TO HPQ NANO FOR SPECIAL, EXEMPLARY, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, BODILY INJURY, DEATH, PROPERTY DAMAGE, LOST BUSINESS OPPORTUNITIES, BUSINESS INTERRUPTION, LOST PROFITS AND, PATENT OR DESIGN INFRINGEMENT, RESULTING FROM: A) THE PERFORMANCE OF DEVELOPMENT PROJECT CONTEMPLATED THIS AGEEMENT; B) THE REPLACEMENTS, MODIFICATIONS, MAINTENANCE, OR OTHER USE, OPERATION, ATTENDANCE OR HANDLING OF THE SYSTEMS BY HPQ NANO, WHETHER OR NOT SUCH ACTIONS ARE TAKEN IN CONFORMITY WITH THE OPERATION, SAFETY OR MAINTENANCE INSTRUCTIONS, INFORMATION, GUIDES, PRECAUTIONS OR ADVICE GIVEN TO HPQ NANO BY PCI.

    IN NO CIRCUMSTANCE WILL PCI BE RESPONSIBLE FOR ANY REPAIRS, REPLACEMENTS OR MAINTENANCE OF ANY PARTS OF THE SYSTEMS, ONCE THEIR OWNERSHIP IS TRANSFERRED TO HPQ NANO.

26. **FREEDOM TO OPERATE.** Before commercializing the Systems or any product produced therewith, HPQ NANO agrees to have a freedom to operate research performed by an intellectual property lawyer or agent, in order to assess the risk of infringing third-party rights in the jurisdictions where commercialization is intended. Should the freedom to operate research report indicate a significant risk of infringement, the Parties shall discuss how the Systems could be modified in order to render them non-infringing before the commencement of the commercialization.

27. **NO WARRANTIES.** Nothing contained in this Agreement shall be construed as a warranty on the part of PCI that the performance of the development project contemplated herein will:

    a) Yield any PUREVAP™ NSiR Process IP other than the Patent Application No.: 62/913,152;
    b) The PUREVAP™ NSiR Process Development Program will be successful or meet its objectives or expected timelines;
    c) Result in the grant of patents or any other titles conferring exclusive rights in or to the PUREVAP™ NSiR Process;
    d) Result in the development and fabrication of any Systems or NSiR Process IP that will be suited for a particular purpose or commercially exploitable in any respect.

28. **MANUFACTURER'S WARRANTIES**. PCI shall take the necessary actions to ensure that all manufacturers' warranties on the parts and equipment constituting the Systems shall inure to the benefit of HPQ NANO upon transfer of ownership of the Systems.

29. **PCI REPRESENTATIONS**. PCI represents that:

a) PCI is the sole and undisturbed owner of all components of the Systems;
b) PCI is the sole and undisturbed owner of the PUREVAP™ NSiR Process IP; and
c) PCI is not a "non-resident" within the meaning of the Income Tax Act.

30. **REPRESENTATIONS.** Each Party represents and warrants to the other:

a) that it has the requisite power and authority to execute and perform under this Agreement;
b) that the execution and performance of this Agreement have been duly authorized by each Party;
c) that the execution and performance of this Agreement will not result in any breach or violation of third party right, or constitute a default under any agreement, instrument, or document to which either Party may be a party; and
d) that it has not received any notice, nor, to the best of its knowledge, is there pending or threatened notice, that the terms of this Agreement would violate any applicable laws, ordinances, regulations, rules or decrees which would materially adversely affect its ability to perform under this Agreement.

31. **CONFIDENTIAL INFORMATION. "Confidential Information"** means non-public information that is disclosed by a Party (the "**Disclosing Party**") in confidence or which, under the circumstances surrounding the disclosure should be reasonably known to the receiving Party (the "**Recipient**") to be confidential. Confidential Information shall include, without limitation, information, tangible or intangible, relating to the Disclosing Party's current and future products, product plans, technology, research, specifications for equipment or parts, finances, computer systems, hardware, networks, software, screens, advertising or market research, marketing strategies, marketing techniques or plans, business plans, strategies or practices, designs, plans, drawings, data, algorithms, laboratories, prototypes, discoveries, research, developments, methods, processes, procedures, improvements, "know-how," compilations, customer names and other information related to customers, price lists, pricing policies and financial, business, technical and other information and materials disclosed or made available to the Recipient during this Agreement and information received from others that the Disclosing Party is obligated to treat as confidential. The Confidential Information shall include all of the preceding information whether disclosed in written, oral, demonstrative, graphic, electronic or machine-readable form or by any other media whether disclosed prior to the date of this Agreement or after.

Confidential Information shall not include any information that: (i) is or subsequently becomes publicly available without Recipient's breach of any obligation owed to Disclosing Party under this Agreement; (ii) became known to Recipient prior to Disclosing

P Ŋ

Party's disclosure of such information to Recipient; (iii) became known to Recipient from a source other than Disclosing Party other than by the breach of an obligation of confidentiality owed to Disclosing Party; (iv) is independently developed by Recipient or (v) shall be disclose under requirements of applicable law, rules, politics or regulations (vi) is information relative to the PUREVAP™ NSiR Process IP as of the date HPQ NANO becomes the owner thereof and all patents or designs applications therefor have become public.

Recipient shall not disclose any Confidential Information to any third party until such information loses its confidential nature according to the preceding paragraph, except to Recipient's employees, subcontractors, directors, agents, officers, on a need to know basis only. For greater clarity, Recipient may disclose Confidential Information only to Recipient's employees, subcontractors, directors or employees who have a business-related need-to-know in furtherance of the objectives of this Agreement and who agree in writing (e.g. as a condition to employment or otherwise) to be bound by terms protecting the use and nondisclosure of the Confidential Information at least as comprehensive as the terms of this Agreement; provided, however, that Recipient shall not disclose Confidential Information to any such subcontractor, director or Affiliate that is an indirect or direct competitor of the Disclosing Party.

Furthermore, Recipient shall use the Confidential Information only in furtherance of the Purpose of this Agreement, in accordance with the terms and conditions of this Agreement. Recipient shall use the same degree of diligence and effort to protect such Confidential Information from disclosure to third parties as Recipient uses to protect its own confidential information, but in no event shall Recipient use less than reasonable and customary diligence and effort in protecting such Confidential Information.

Neither Party shall make any copies of Confidential Information except as necessary to perform this Agreement. Upon expiration or termination of this Agreement or at any other time upon the written request of Disclosing Party, Recipient shall, at its own expense, promptly return to Disclosing Party or destroy all originals and copies of the writings and hardware in its possession which contain Confidential Information; provided that, however, Recipient may retain an archival copy of the Disclosing Party's Confidential Information in the possession of its legal counsel for use solely in the event a dispute arises hereunder and only in connection with such dispute. If any writing or hardware has been destroyed, an adequate response to a return request therefor by the Disclosing Party will be in written notice, executed by duly authorized representative of Recipient, that such writing or hardware has been destroyed.

Furthermore, HPQ NANO shall not use at any time (whether during the continuance of this Agreement or after its termination), for its own benefit, or purposes or for the benefit or purposes of any other person, firm, corporation, association or other business entity, any trade secrets, business development programs, or plans belonging to or relating to the affairs of the PCI, including knowledge relating to customers, clients, or employees of PCI, whether for the purpose of this Agreement or related to any other contract, agreement, or project for which PCI is involved.

B P

32. **TERM AND TERMINATION.** This Agreement shall become effective on the Effective Date and shall remain in full force and effect until payments payable under this Agreement to PCI of the Development Costs and the Purchase Price by HPQ NANO (the "**Term**").

In the event that either Party fails to comply with the provisions of this Agreement in any material breach, then the other Party may send to such breaching Party a written notice detailing the failure to comply with this Agreement (a "**Breach Notice**"). If the failure to comply described in the Breach Notice is not cured within 30 (thirty) calendar days after the applicable Breach Notice is received by the Party to whom such Breach Notice is addressed, then the Party sending the Breach Notice may terminate this Agreement upon written notice to the Party to whom the Breach Notice was addressed at any time during the continuance of the breach.

Either Party may terminate this Agreement immediately upon written notice to the other Party in the event that:

a) such other Party becomes insolvent;
b) a trustee or receiver is appointed for such other Party or all or a substantial portion of its property;
c) such other Party is the subject of a petition in bankruptcy, whether voluntary or involuntary, or of any other proceeding under bankruptcy, insolvency or similar laws and that petition or proceedings are successful;
d) such other Party makes an assignment for the benefit of creditors; or
e) such other Party is dissolved or liquidated.

Termination or expiration of this Agreement shall not relieve either Party of any liability or obligation it may have to the other Party arising out of or relating to acts or omissions occurring prior to such termination or expiration. Without in any way limiting the generality of the foregoing, the terms of Sections 1, 2, 15-27, 29-32, and 36-50 shall survive termination or expiration of this Agreement.

33. **CHANGE OF CONTROL.** This Agreement shall survive a change of control of either of HPQ NANO or PCI each referred to as the "corporation"; for the purposes of this agreement, "change of control" means the occurrence of any of the following events or circumstances:

a) any transaction at any time and by whatever means pursuant to which any person or any group of two or more persons acting jointly or in concert (other than the Corporation or a wholly-owned subsidiary of the Corporation) hereafter acquires the direct or indirect "beneficial ownership" (as defined in the Canada Business Corporations Act) of, or acquires the right to exercise control or direction over, securities of the Corporation representing 51% or more of the then issued and outstanding voting securities of the Corporation in any manner whatsoever,

b) the sale, assignment or other transfer of all or substantially all of the assets of the Corporation to a person or any group of two or more persons acting jointly or in concert other than a wholly owned subsidiary of the Corporation or related persons;

c) the dissolution or liquidation of the Corporation except in connection with the distribution of assets of the Corporation to one or more persons which were wholly owned subsidiaries of the Corporation prior to such event;

d) a transaction requiring approval of the Corporation's shareholders whereby the Corporation is acquired through consolidation, merger, exchange of securities, purchase of assets, amalgamation, statutory arrangement or otherwise by any person or any group of two or more persons acting jointly or in concert (other than a short form amalgamation, or an exchange of securities with a wholly-owned subsidiary of the Corporation or with related persons);

e) any change of the composition of the Board by an aggregate of two-third or more, including by nominating alternative directors to those proposed to be nominated by the Corporation and/or increasing or decreasing of the number of members of the Board, leading to the removal of the senior executives of the Company, occurring (i) at a single meeting or a series of meetings of the shareholders requisitioned or otherwise requested or called by a shareholder of the Corporation, an affiliate of such shareholder and/or any one acting jointly or in concert with such shareholder or its affiliate, (ii) upon the execution of a shareholders' resolution or resolutions presented by a shareholder of the Corporation, an affiliate of such shareholder and/or any one acting jointly or in concert with such shareholder or its affiliate or (iii) otherwise as the result of the actions of any shareholder of the Corporation, an affiliate of such shareholder and/or any one acting jointly or in concert with such shareholder or its affiliate to change the composition of the Board, such that members of the Board prior to the actions set out in (i), (ii) or (iii) no longer constitute two-thirds of the Board after the actions set out in (i), (ii) or (iii) have been completed;

f) any change in the composition of the Board occurring at a single meeting of the shareholders of the Corporation or upon the execution of a shareholders' resolution, such that members of the Board prior to such meeting or resolution no longer constitute two-thirds of the Board after such meeting having approved such change ; or

g) the Board passes a resolution in furtherance of any of the foregoing.

34. **FORCE MAJEURE.** "**Force Majeure**" shall mean any cause or causes which wholly and shall include, without limitation, an act of God, explosion, accident, fire, epidemic, landslide, lightning, earthquake, storms, flood or similar cataclysmic occurrence; an act of the public enemy, war, blockade, insurrection, riot, civil disturbance, sabotage, strikes, lockouts, or other labour difficulties; unavailability of labour, fuel, power or raw materials, plant breakdowns or equipment failure due to cause(s) beyond the reasonable control of the affected Party; inability to obtain supplies; restrictions or restraints imposed by law or by rule, regulation or order of governmental authorities, whether federal, provincial or local; action or failure to act of governmental authorities; interruption or other loss of utilities due to causes beyond the reasonable control of the affected Party; and any other cause beyond

BP

the reasonable control of the Party relying on such cause to excuse its performance hereunder.

If either Party is rendered wholly or partially unable to perform its obligations under this Agreement because of a Force Majeure event, that Party shall be excused, without liability, from whatever performance is affected by the Force Majeure event to the extent so affected, provided that:

a) The non-performing Party, within a reasonable period after the occurrence of the inability to perform due to a Force Majeure event, but no later than ten (10) Business Days thereafter, provides written notice to the affected Party of the particulars of the occurrence, including an estimation of the event's expected duration and probable impact on the performance of its obligation hereunder ("**Notice of Suspension**");
b) The non-performing Party shall, to the extent possible. exercise all reasonable efforts to continue to perform its obligations hereunder and remedy its inability to so perform;
c) The non-performing Party shall provide the affected Party with prompt notification of the cessation of the event of Force Majeure, giving rise to the excusal from performance; and,
d) No obligation of either Party that arose prior to the occurrence of the event of Force Majeure shall be excused as a result of such occurrence.

HPQ NANO shall be responsible for payment pursuant to the terms of this Agreement for any equipment or parts, as detailed in Schedule A, which is supplied to HPQ NANO and have been approved by HPQ NANO prior to receipt by PCI of the Notice of Suspension for Force Majeure.

35. **NON-SOLICITATION**. HPQ NANO and PCI acknowledge and agree that neither Party shall solicit the services, nor shall they hire any employee of the other Party during the term of this Agreement and for a period of five (5) years thereafter, without the prior written consent of the other Party.

36. **GOVERNING LAW**. This Agreement shall be construed and interpreted in accordance with the laws of the Province of Quebec, excluding its conflict of laws principles. The Parties irrevocably agree to submit to the exclusive jurisdiction of the courts of the District of Montreal, Quebec, any claim or matter arising under or in connection with this Agreement or its subject matter or formation (including non-contractual disputes or claims).

37. **INDEPENDENT CONTRACTOR**. Each Party will act as an independent contractor and nothing contained in this Agreement and the relationship created between the Parties hereby shall, directly or indirectly, constitute an agent of the other Party for any purpose, and neither will have the authority to bind the other by virtue of this Agreement.

38. **NO WAIVER**. No provision of this Agreement may be waived except by agreement in writing, signed by the waiving Party. Waiver by a Party of any term or provision of this Agreement shall not be construed as a waiver of future compliance with such term or provision. No delay or failure of a Party to enforce any right or claim which it may have hereunder shall in any way affect, limit or waive such right or claim or the right of a Party to compel strict compliance with each and every term and condition hereof.

39. **SEVERABILITY**. If any provision of this Agreement is declared by any court of competent jurisdiction to be invalid or unenforceable for any reason, such invalidity or unenforceability shall attach only to such provision and all other provisions hereof shall continue in full force and effect.

40. **BINDING EFFECT**. This Agreement shall be binding upon and inure to the benefit of the Parties, their successors and permitted assigns.

41. **AMENDMENT**. This Agreement may not be amended, altered or revoked at any time, in whole or in part, unless it is amended by a written instrument setting forth such changes signed by a duly authorized representative of both Parties.

42. **NOTICES**. All notices required to be given by this Agreement shall be in writing by either personal delivery to the Party requiring notice, with a written receipt, or by mailing such notice to the address of the Party, as shown on the first page of this Agreement, requiring notice by certified mail, return receipt requested, or by facsimile transmission or electronic mail. Notice given by facsimile transmission or electronic mail shall be deemed to have been given on the Business Day of transmittal, if transmitted during normal business hours, or on the next business day if transmitted outside of normal business hours. Notice given by mail shall be deemed to have been given on the fifth (5^{th}) Business Day after mailing.

43. **ASSIGNMENT**. Neither Party to this Agreement shall assign its rights and obligations under this Agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

44. **INDEPENDENT LEGAL REPRESENTATION**. Each Party acknowledges and agrees that:

    a) the terms of this Agreement are fully understood by it;
    b) it has received independent legal representation in connection with this Agreement, or has been offered the opportunity to obtain same and specifically waives any right to independent legal advice or any rights arising out of the failure to obtain same; and
    c) this Agreement has been freely and voluntarily entered into by it.

45. **ENTIRE AGREEMENT**. This Agreement and the Schedules attached hereto embody the entire agreement between HPQ NANO and PCI and supersedes all prior agreements and understandings, both written and oral, among the Parties with respect to the subject matter

hereof. This Agreement is subject to the Schedules attached hereto, which form an integral part hereof.

46. **COOPERATION.** The Parties agree to cooperate fully and execute any and all supplemental documents and take all additional actions that may be necessary to give full force and effect to the basic terms and intent of this Agreement.

47. **SECTIONS AND HEADINGS.** Section headings, paragraphs and articles used herein shall be for convenience only and shall not affect the interpretation of this Agreement.

48. **COUNTERPARTS.** This Agreement may be executed in one or more counterpart copies, each of which shall be deemed an original. Facsimile or other electronic copies of this Agreement and the signatures hereto may be used with the same force and effect as the original. This Agreement shall be deemed fully executed and effective when all Parties have executed at least one counterpart, even though no single counterpart bears all signatures.

49. **LANGUAGE.** The parties have agreed that this Agreement, its schedules and all documents and notices related thereto and/or resulting thereof be drafted in the English language. *Les parties ont convenu que la présente convention ainsi que tous les annexes et tous les documents et avis s'y rattachant et/ou qui en découleront soient rédigés en langue anglaise.*

50. **BUSINESS DAYS.** As used herein, Business Day shall mean any day of the year, other than Saturday, Sunday, or any day in Montreal, Quebec, for which the Parties are closed for business.

IN WITNESS WHEREOF, the Parties intending to be legally bound hereby have duly signed this Purchase Agreement.

For PCI:	**For HPQ NANO:**
(PYROGENESIS CANADA INC.)	**(HPQ NANO SILICON POWDERS INC.)**
P. Peter Pascali President and CEO	Bernard Tourillon President and CEO

SCHEDULE A

PUREVAP™ NSiR Process Development Program

PHASE 1-A

Objective: Modify the existing Gen2 PUREVAP™ QRR reactor into a Gen1 NSiR Process for the purpose of producing nano silicon powders (maximum design capacity 30 kg/month)

Requirements: Modifying the existing Gen2 PUREVAP™ QRR reactor into a Gen1 NSiR Process requires:

[redacted]

Labor Efforts:

[redacted]

Schedule:

A total of 20 weeks is expected for the completion of Phase 1-A of the project with an aggressive scheduling, which includes four milestones indicated in bold in the following schedule ("**Milestones**").

[redacted]

PHASE 1-B

Objective: Using the Gen1 NSiR Process, produce samples and analyse the Nano Si powders characteristics. Other testing goals being:

i. Defining important process parameters;

ii. Fine tune operating parameters and

iii. Assess the performance of the collection unit.*

*The assessment of the performance of the collection unit on the Gen1 NSiR Process may result in the need for modification of the design plans for Gen2 NSiR Process. Should such modifications be deemed necessary by PCI, HPQ NANO and PCI shall negotiate the additional costs for rendering the design services.

Requirements:

PCI shall determine the number and the extent of testing required on the Gen1 NSiR Process in order to see if design and fabrication modification will be needed on the Gen2 NSiR Process.

PCI shall, at first, perform up to 10 tests, as it deems necessary. If less than 10 tests are necessary, the remainder shall be performed by PCI with no additional costs to HPQ NANO during Phase 2-B (testing of the Gen2 NSiR Process). This does not modify the payment schedule established in Schedule C of this Agreement.

If PCI determines that more than 10 tests are required, it shall inform HPQ NANO and await to receive a new PO from the latter before performing any such additional tests. The costs to be payed according Schedule C shall be modified to take in consideration the extra bundle of tests required. If more than 10 tests are required, but less than 20, the remainder of the second 10 test bundle shall be performed by PCI with no additional costs to HPQ NANO during Phase 2-B (testing of the Gen2 NRiS Process).

Labour Efforts for <u>Phases 1-B and 2-B</u>:

[redacted]

CB PM

Schedule: PCI approximates that the testing Phases 1-B and 2-B will take place over a period of 14 to 18 weeks. PCI will notify HPQ on the approximate timeline for the completion the testing phases, before their commencement or soon thereafter.

Deliverables:

- PCI shall deliver to HPQ NANO an interim report in PDF format containing all details and results related to the tests performed in this Phase 1-B. ("**Interim Report**").

PHASE 2-A

Objective: Design, fabricate, assembly, installation and commissioning of a dedicated new semi-continuous small-scale proof of commercial scalability Gen2 NSiR Process production system for the purpose of producing nano silicon powders (maximum design capacity 300 kg/month

Requirements: Phase 2 will focus on building a dedicated new small-scale proof of commercial scalability Gen2 NSiR Process production system and requires:

- Design and fabrication of a new [redacted] eactor [redacted]
- Design and fabrication of a new [redacted]
- Equipment sizing and sourcing [redacted]
- Assembly, installation and integration of new setup with [redacted]

Labor Efforts:

[redacted]

Schedule:

A total of 35 weeks is expected for the completion of the Phase 2-A with an aggressive scheduling. Phase 2-A project schedule includes 6 milestones indicated in bold in the following schedule ("**Milestones**").

[redacted]

PHASE 2-B

Objective: Using the Gen2 NSiR Process, produce samples and analyse the Nano Si powders characteristics. Other testing goals being:

i. Fine tuning operating parameters and;

ii. Validating the scalability of the process

Requirements:

PCI shall determine the number and the extent of testing required on the Gen2 NSiR Process in order to attain the objectives.

Testing will be done in bundles of ten 10 tests. Please refer to Phase 1-B for the details concerning the order and the costs related to the performance of any tests additional to the first 10.

Labour Efforts for Phases 1-B and 2-B:

[redacted]

Schedule: TBD – Please see notes for Phase 1-B Schedule.

Deliverables: PCI shall deliver to HPQ NANO a final report in PDF format containing all details and results related to the tests performed in this Phase 2-B. ("**Final Report**").

SCHEDULE B

PUREVAP™ NSiR Process IP

The NSiR Process IP is composed explicitly of all titles, rights, and interests in and to:

I. The U.S. Provisional Patent Application [redacted]

II. Any further patent applications filed subsequently and claiming priority on PCI's provisional patent application on the PUREVAP™ Nano Silicon (Si) Reactor ("NSiR") system related to the production of nano powders and nanowires of Silicon (Si); and

III. Any patent or industrial design, or any applications therefor, relating to the NSiR Process (Gen1 or Gen2) developed by PCI under this Agreement and their potential use in the Field, including any process for the collection of nano powders produced by the NSiR Process process, as well as the mechanical design of the NSiR Process reactor, both in relation to the production of nano powders and nano wires from Silicon (Si).

All aforementioned titles, rights and interests shall be in good standing with respect to the requirements of applicable law, and free and clear of all and any liens, mortgages, hypothecs or encumbrances of any nature whatsoever.

SCHEDULE C

Purchase of Systems, Development Costs and Payment Schedule and Terms

1. Purchase of Systems

Subject to the terms of Section 10 of the Agreement, the ownership of the Systems, which includes exclusively the physical property of the existing PUREVAP™ Gen2 QRR and the new Gen1 and Gen2 PUREVAP™ NSiR Processes, shall be transferred to HPQ NANO upon signature of this Agreement by all Parties and payment by HPQ NANO to PCI of one dollar (CAD$1.00).

2. Development Costs

PHASE	DEVELOPMENT COSTS (CAD $)
1-A	$ 200,000
2-A	$ 210,000
2-A and 2-B	$132,000 for up to 10 tests (maximum) Any additional necessary tests will be available in bundles of 10 tests for $132,000\bundle. The necessity of such additional tests will be discussed by the Parties in opportune time and no additional tests will be charged to HPQ NANO before PCI receives from the latter a PO therefor.

3. Payment Schedule for the Development Costs

NO.	TERM	COST ($CAD) W\O TAXES
1.	Within 10 days from the Effective Date	40,000
2.	30 days from the Effective Date	40,000
3.	60 days from the Effective Date	40,000
4.	90 days from the Effective Date	130,000
5.	HPQ NANO is being notified by PCI of the completion of the Phase 1-A engineering designs	60,000
6.	HPQ NANO is notified by PCI that the Phase 1-A is completed and the Gen1 NSiR Process is ready for testing	40,000

7.	HPQ NANO is notified by PCI that Phase 1-B samples have been produced	39,600
8.	Delivery to HPQ NANO of PCI's Interim Report	26,400*
9.	HPQ NANO is notified by PCI of the completion of any additional services rendered by PCI for the modification of the collection unit design	TBD**
10.	HPQ NANO is notified by PCI of the completion of the Phase 2-A engineering designs	84,000
11.	HPQ NANO is notified by PCI that the Phase 2-A is completed and the Gen2 NSiR Process is ready for testing	42,000
12.	Delivery to HPQ NANO of PCI's Final Report	TBD***

* In addition to $26,400, must also be payed on the same date, the amount agreed upon by the Parties for the completion of any additional tests to the first ten (10) (maximum).

** The costs to be payed shall be determined on an as-needed basis between the Parties. Please see notes in Schedule A, Phase 1-B.

*** The costs to be payed shall be determined in consideration of the number of tests completed by PCI on the Gen 1 and Gen 2 NSiR Processes in the Phases 1-B and 2-B. Please see notes in Schedule A, Phase 1-B and Phase 2-B.

4. Payment Terms for the Development Costs

I. HPQ NANO will have thirty (30) days from the receipt of an invoice from PCI to proceed to the payment of the amount stated therein.

II. In addition to the Development Costs stated above, HPQ NANO shall pay to PCI all provincial and federal taxes applicable thereto. The taxes will be states on the invoices that PCI will send to HPQ NANO according to the above payment schedule.

III. The Development Costs include:

a. The rent of the PCI facility, the expertise, and the labor as well as the parts and consumables necessary for the carrying out of the NSiR Process Development Program, including the Systems testing in Phases 1-B and 2-B and including any costs related to the repair, replacement of equipment required therefor;

b. The Test Results, which ownership shall be transferred to HPQ NANO at the times and under the conditions specified in Section 11 of this Agreement.

PP JB

IV. Notwithstanding the above, the Development Costs stipulated above do not include:

a. Any Silicon (Si) required for the testing of the Systems, which HPQ NANO shall be responsible for supplying and which shall have a minimum purity as may be requested by PCI;

b. Any applicable taxes, which shall be added to the Development Costs and payed by HPQ NANO;

c. Any labor time that is 10% over the estimated labor times in Schedule A, for phases 1-A, 1-B, 2-A and 2-B. Should PCI determine that any additional labor is required for the completion of any of the phases, it shall communicate to HPQ the additional estimated labor time and the Parties shall negotiate the costs related thereto and the applicable payment schedule therefor.

SCHEDULE D

Purchase Price of PUREVAP™ NSiR Process IP and Payment Terms

OBJECT	Purchase Price (CAD $, without taxes)
PUREVAP™ NSiR Process IP (see Schedule B)	2,400,000 $

Payment Terms for the PUREVAP™ NSiR Process IP

I. Within thirty (30) days following the Effective Date of this Agreement, HPQ NANO shall pay to PCI the Purchase Price of two million four hundred thousand Canadian dollars (CAD $2,400,000).

II. Subject to the terms of Section 15 of the Agreement, upon receipt by PCI of the complete payment of the IP Purchase Price, including any applicable taxes, ownership of the PUREVAP™ NSiR Process IP will be transferred and assigned by PCI to HPQ NANO.

III. The Purchase Price does not include:

a. The filing and prosecution costs of the NSiR Process IP;

b. The costs related to the assignment and transfer of the NSiR Process IP to HPQ NANO; and

c. Any applicable taxes, if any, which shall be added to the Purchase Price;

all of which shall be borne by HPQ NANO.

M D