

SUBSURFACE ENERGY R&D INVESTMENT PROGRAM AGREEMENT – AMENDMENT #1

THIS AMENDMENT effective as of the 1st day of July, 2026 (the “**Effective Date**”)

BETWEEN:

HIS MAJESTY THE KING IN RIGHT OF THE PROVINCE OF NOVA SCOTIA, as represented by the Minister of Energy (the “**Province**”)

- and -

DALHOUSIE UNIVERSITY, located in Halifax, Nova Scotia (“**Dalhousie**”)

RECITALS:

WHEREAS the Province created a Subsurface Energy Research and Development Investment Program (the “**Program**”) to attract prospective companies to search for natural gas in the Province.

AND WHEREAS the Province and Dalhousie entered into Subsurface Energy Research and Development Investment Program Agreement dated January 30, 2026 (the “**Agreement**”) which set out the roles and responsibilities of Dalhousie and of the Province in relation to the funding that the Province is providing to Dalhousie to administer the Program.

AND WHEREAS in response to strong interest and constructive feedback from industry, the decision was made to issue additional calls to participate (each, a “**Call**” and collectively, the “**Calls**”) in the Program.

AND WHEREAS the parties desire to amend the Agreement to amend timelines and certain scope from the Services, as a result of the additional Calls.

The Parties agree as follows:

NOW THEREFORE the parties agree as follows:

- 1.1 Unless otherwise defined herein, capitalized terms used herein shall have the meaning ascribed to them in the Agreement.
- 1.2 Schedule A (Program and Services Description) to the Agreement shall be replaced with the attached Schedule A.
- 1.3 Schedule B (Payments) to the Agreement shall be replaced with the attached Schedule B.
- 1.4 Section 1.1 of the Agreement is hereby amended as follows:

“The Term of this Agreement begins on the Effective Date and ends on March 31, 2028.”

- 1.5 Except as expressly amended by this Amendment, all other provisions of the Agreement remain the same.
- 1.6 The parties may sign this Amendment in counterparts, each of which being an original. Such counterparts will together constitute one and the same agreement. Counterparts may be signed either in original or electronic form and the parties shall adopt any signatures received electronically as original signatures of the parties.

THIS AMENDMENT and everything contained herein will enure to the benefit of and be binding upon each of the parties and their respective successors and permitted assigns as fully and as effectively as if the same had been mentioned herein.

The parties have executed this Amendment effective as of the date first above written.

WITNESSED BY:

DATED AT Halifax, Nova Scotia
__20__ th day of __August__, 2026

DALHOUSIE UNIVERSITY



Witness Signature

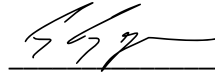


Dr. Kim Brooks
President and Vice-Chancellor

DALHOUSIE UNIVERSITY



Witness Signature



Dr. Graham Gagnon
Vice-President, Research & Innovation

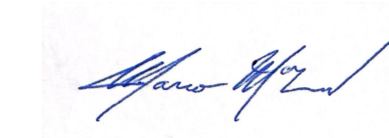
WITNESSED BY:

DATED AT Halifax, Nova Scotia
__28__ th day of __August__, 2026

**HIS MAJESTY THE KING in right of the Province of
Nova Scotia, as Represented by the Minister of
Department of Energy**



Witness Signature



Honourable Marco MacLeod,
Minister of the Department of Energy

SCHEDULE A – PROGRAM AND SERVICES DESCRIPTION

1. Program Overview

The Subsurface Energy R&D Investment Program (the “Program”) is a provincial initiative designed to understand the potential to explore Nova Scotia’s onshore natural gas while ensuring environmental stewardship and transparency. The program aims to enhance geological knowledge and assess resource viability and extraction and is supported by a budget of \$30 million.

It is intended that the Program participants agree (through a separate agreement between Dalhousie and the participants) to share their data and environmental impact findings with Dalhousie project research advisors for inclusion in a research report.

The Program will offer financial investments to operators to explore Nova Scotia’s petroleum potential as part of a controlled research initiative. This work will advance scientific understanding of subsurface geology, new energy potential in geothermal or carbon capture utilization and storage and modern drilling and stimulation technologies applied in the Nova Scotia environment, helping shape future energy policy and economic development.

2. Dalhousie’s responsibilities

In addition to those roles and responsibilities set out in the main terms and conditions of this agreement Dalhousie shall:

- a) Establish a governance structure for the Program, as set out in more detail later in Section 7 of this Schedule “A”.
- b) Set qualification criteria for proponents to the Program, issue open calls for Program participation, and evaluate proponents against qualification criteria. More details in relation to the development of the calls for Program participation is set out in Section 8 of this Schedule “A”.
- c) Lead communication with the public before exploratory drilling commences, and manage ongoing stakeholder engagement. For greater certainty, Dalhousie shall have no obligation to manage stakeholder engagement with respect to site location or exploratory drilling activities. Any such engagement or communication shall be the responsibility of the Province and/or Program participants.
- d) Engage researchers to gather more data and knowledge about this activity specific to Nova Scotia’s geology and community readiness.
- e) Validate allowable expenditures and administer reimbursement payments.
- f) Submit a final report to the Province in March 2028, as described in Section 5 of this Schedule.

- g) Complete a research report that includes sections on geological assessment, technical assessment and environmental stewardship.
- h) Dalhousie does not have an on-site role with respect to the exploratory drilling, other than as may be required for carrying out Dalhousie's research activities.

3. Province's Administrative Responsibilities

In addition to those roles and responsibilities set out in the main terms and conditions of this agreement the Province shall:

- a) Appoint Department of Energy representatives to serve on Program committees, as required, and as further described in Section 7 of this Schedule.
- b) Negotiate agreements with successful companies from the calls for participation, including investment and financial benefits for the province and people.
- c) Manage regulatory process for onshore oil and gas activities including but not limited to:
 - i. drilling approvals and authorizations from Department of Energy
 - ii. possible approvals from Department of Environment and Climate Change
 - iii. occupational health and safety requirements
 - iv. constitutional Section 35 consultations
- d) Assess non-prospective wells for viability to be decommissioned or assessed for potential geothermal energy and carbon capture/storage research and development.
- e) Receive research learnings to inform public policy.

4. Research Programs

Dalhousie will engage researchers to undertake research during the exploratory stage to ensure scientific integrity and public confidence. This research is expected to include (but may be subject to change as the Program evolves):

- Exploratory Drilling Analysis: Analysis of drilling results and reservoir characterization using datasets provided by proponents or the Department of Energy.
- Geological Studies: Geological assessments to inform decision-making.
- Groundwater and Wastewater Studies: Baseline community monitoring of water resources and evaluation of treatment and disposal practices to inform future policy.
- Methane Emissions Studies: Quantifying baseline emissions to inform future policy.
- Seismic Analysis: Establishing a clear seismic baseline to inform future policy and risk assessment.
- Transport & Infrastructure Studies: Analyze transport and infrastructure needs to inform future planning.
- Community Health Impact Studies: Understand community health supports and needs to inform future policy development.
- Technology Advancements in Reservoir Stimulation: Analysis of technological and regulatory progress in Canada and elsewhere.

As part of the Final Report, Dalhousie will submit to the Province a research report that includes sections on geological assessment, technical assessment and environmental stewardship.

The details of the research expected to be undertaken are attached as Appendix 1 to this Schedule.

5. Timeline

The timeline shall begin January, 2026 and continue until March 31, 2028. The Parties agree that all timelines and milestone dates expressly identified as being within the direct control of Dalhousie shall be firm. With respect to all other timelines and milestones, Dalhousie shall use commercially reasonable efforts to achieve such timelines; however, the Parties acknowledge and agree that such timelines are estimates only and may be subject to adjustment where circumstances arise that are beyond Dalhousie's direct control, including but not limited to delays caused by third parties, regulatory approvals, industry feedback and proponent drilling schedules.

The Parties acknowledge that the Program may be delivered through more than one call for participation issued at different times during the Program term. As a result, activities described below may occur on a rolling, overlapping, or iterative basis, and may be repeated in whole or in part for each call.

Phase 1 – Program Design & Governance

January – February 2026

Build the Incentive Program - **COMPLETE**

Key activities:

- Province formalizes agreement with Dalhousie University
- Dalhousie establishes the governance structure for the Program
- Dalhousie will develop:
 - Program objectives and scope;
 - Guidelines for participation in the Program, which may include:
 - Investment program details (as developed by the Province)
 - Data sharing
 - Qualification criteria for proponents in consultation with the Province.
- The Province will develop investment and revenue-sharing frameworks (equity/royalty options) and will share such frameworks with Dalhousie
- Dalhousie, in collaboration with the Province, will develop initial public communication strategy

Milestone: Program framework and governance approved; initial public communication strategy - **COMPLETE**

Phase 2 – Market Attraction & Application Review

March – December 2026 (Attraction, Open

Calls & Application Review)

Key activities:

- Dalhousie issues open calls for Program participation
- Outreach to qualified exploration companies (Dalhousie)
- Province will market the Program in parallel with Dalhousie

- Receipt, screening, and technical evaluation of applications (Dalhousie)
 - In the event that an insufficient number of submissions are received from qualifying entities interested in participating in the Program, the parties will undertake a review, including meeting with industry representatives, to attempt and determine why there was less interest than anticipated. Following such review, the parties will consult and cooperate in good faith to develop and agree on a revised path forward for the delivery of the Program, which may include, without limitation, changes to the terms of the Program or the timing of the work to be completed by the proponents.
- Dalhousie confirms qualified proponents at the close of the first call and at intervals throughout subsequent calls
- Province identifies preferred proponents
- Stakeholder and First Nations engagement by Dalhousie (ongoing for duration of the Program as necessary)
 - One round of in-person public engagement will occur over the duration of the Program; targeted stakeholder engagement (e.g., special interest groups, First Nations, natural gas users, business owners) may continue throughout the Program.
 - After the first round of in-person public engagement, any additional community engagement will focus on education and awareness-building rather than further in-person engagement sessions.

Milestone: Shortlisted proponents approved for negotiation after the close of the first call and throughout the subsequent calls (as received)

Phase 3 – Licensing & Agreements

May 2026 – January 2027

Exploration Agreement Issuance

Key activities:

- Province negotiates investment agreements with successful proponents
- Section 35 consultations with First Nations by the Province (if required)
- Province issues of exploration agreements, conditional on regulatory compliance, finalization of Provincial equity or royalty participation and research and data sharing obligations with Dalhousie
- Dalhousie negotiates data-sharing agreement with successful proponents

Milestone: Exploration agreements granted

Phase 4 – Due Diligence & Site Selection

June 2026 - June 2027 (concurrent with Exploration Agreement issuance)

Data Review & Site Selection

Key activities:

- Successful proponents comply with application regulatory requirements, which may include but is not limited to:

- Detailed subsurface data review
- Environmental studies
- Site selection and validation
- Surface access agreements
- Ongoing Section 35 consultations with First Nations by the Province (if required)
- Proponents advance permit applications as required

Milestone: Final drill targets and sites confirmed

Phase 5 – Mobilization & Drilling

July 2026– October 2027

Mobilization & Initial Drilling

Key Proponent activities:

- Mobilization of drilling rigs and crews
- Site preparation and logistics
- Initial exploration drilling and data collection

Milestone: Completion of initial exploration drilling program

Phase 6 - Final Reporting & Knowledge Mobilization

January–March 2028

Key activities

- Dalhousie to compile the Final Report for the Province;
- Public dissemination: executive summary, data visualizations, FAQs.
- Dalhousie will archive datasets and methods;
- Return of uncommitted funds and financial reporting.

Milestone: Final Report submitted to the Province by March 31, 2028. Completion of archiving, return of uncommitted funds.

6. Stakeholder outreach and communication

Dalhousie will be responsible for overseeing stakeholder outreach and communication, including:

- a) Engaging an external public relations firm to assist in the development and implementation of a stakeholder outreach plan;
- b) Carrying out in-person community stakeholder meetings in advance of the exploratory work commencing
- c) Receiving advice and input from the Oversight Committee on issues that are relevant and important to interested stakeholders and communities

7. Governance Structure

Dalhousie will create the following governance structure for the Program:

a) **Oversight Committee:** This committee will advise and report on the planning and coordination among all projects undertaken under the Program, with a specific emphasis on how those projects may impact different stakeholder groups including the First Nations and other communities that may be directly impacted. The committee will include:

- Dalhousie administrators
- faculty members
- Member of the First Nations community
- Provincial Department of Energy Representatives (2)
- Industry representative
- Community representative

b) **Technical Oversight Committee:** This committee will advise Dalhousie on the technical requirement for proposals to be submitted to the Program, including pre-qualifications of proponents. This committee will also provide advice, as required, on the review of the proposals received with respect to the Program. This committee will include:

- Dalhousie administrators
- Provincial Department of Energy Representatives
- Industry representative
- A geologist

c) **Management Committee:** This committee will ensure that the Program is managed responsibly, and in accordance with this Agreement, and Dalhousie regulations and policies, while minimizing legal and financial risk and liability to the stakeholders. This committee is entirely Dalhousie staff.

8. Development of Call for Participation and Administration of Reimbursement of Investment Program

Dalhousie will undertake the development of one or more calls for proposals to participate in the Program, and administer the reimbursement aspect of that Program. For greater certainty, any material increase in the level of effort required of Dalhousie to support such calls beyond that reasonably contemplated by this Schedule shall be subject to discussion and mutual agreement by the Parties.

This will include:

- a) Development of the call(s) for proposals to participate in the Program, including:
 - a. Engaging an external consultant with expertise in this field
 - b. Consultation with the Department of Energy and industry partners through the development of a technical oversight committee
 - c. Draft call for proposals to participate in the Program, which shall include

- qualification criteria for applicants and assessment metrics
 - d. Development of a suggested list of expenses which would qualify for reimbursement
 - e. Development of criteria for reimbursement of eligible expenses, including timing of reimbursement
 - f. Development the terms and conditions for data sharing between proponents, the Province and Dalhousie
 - g. Work with the Province to confirm the details of the investment program
- b) Issuance of one or more calls for proposals to participate in the Program
- c) Reviewing proposals that are received and confirm to the Province which proponents have met the qualification requirements
- d) Receiving advice from the Province on which proponents the Province intends to approve for participation in the Program
- e) Providing the Province support, as may be reasonably required for the purpose of administering the Program, as they develop their agreement with the preferred Proponents
- f) Upon receipt of a letter from the Province confirming which projects have met the reimbursement criteria and are now eligible for reimbursement, administer the reimbursement aspect of those agreements, including ensuring that only qualifying expenses are reimbursed. Dalhousie reserves the right to contract this service to a third party.

Appendix 1 to Schedule A.

SERDIP Proposed Research Project Summaries

Geological Studies: Geological assessments to inform decision-making

A primary project will help identify important formations, faults, data gaps, and possible locations for future test holes by using existing geological and geophysical information to better understand the Horton Bluff shale and surrounding basin structure in onshore Nova Scotia. The work will reprocess older seismic data using modern methods to produce clearer images of subsurface layers, faults, and zones requiring further study. It will also review existing geological datasets and test available core or rock samples to assess source-rock quality, maturity, mineralogy, brittleness, and geomechanical properties. Where useful, the team may recommend outcrop sampling, new seismic surveys, or stratigraphic test holes to fill important knowledge gaps. The final report will integrate the seismic, geological, and rock-property results to describe geological concepts, areas for further study, structural risks, and the further information needed to reduce uncertainty.

Another smaller project involves a risk-based technical review and assessment to examine subsurface risks that could be relevant if future subsurface energy activities were ever contemplated, including how methane, formation fluids, or contaminants could potentially move through faulty wells, poorly abandoned legacy wells, faults, fractures, or other subsurface pathways. The work will conduct legacy well and geological reviews using provincial databases and other available information, and will synthesize information from SERDIP research teams, including geology, groundwater, methane monitoring, and microseismic data. The final report will identify where current information is strong (or will be strong based on the research program), where uncertainties could remain, and what further monitoring, study, or engineering controls could be needed in the future to support evidence-based decisions.

Groundwater and Wastewater Studies: Baseline community monitoring of water resources and evaluation of treatment and disposal practices to inform future policy

Groundwater and wastewater researchers will collaborate on a comprehensive program to protect Nova Scotia's water resources if future onshore oil and natural gas exploration were ever considered. The program would establish strong baseline data on surface and groundwater quality and quantity and dissolved gases in key basins and expand monitoring during any authorized drilling to quickly detect any changes linked to exploration activities. The work may include identifying natural and established subsurface features that could influence groundwater movement. The program also studies how to safely handle, treat, and potentially reuse or extract value (such as critical minerals) from flowback and produced water, which could be created during drilling and hydraulic fracturing. By combining baseline science, ongoing monitoring, and proactive planning for wastewater management, the program helps assess how communities, ecosystems, and drinking water supplies could be protected under possible future scenarios. It also equips the province with the evidence needed for future policy decisions and supports transparent, science-based decision-making and public understanding.

Methane Emissions Studies: Quantify baseline emissions to inform future policy.

The proposed research aims to give Nova Scotia the evidence it needs to evaluate possible onshore natural gas activities by focusing on methane emissions - an issue critical to public trust, regulation, and environmental accountability. The work would establish the first reliable baseline of natural methane seeps across key regions, using mobile labs, isotopic sampling, and drones to distinguish natural methane from any future industrial emissions. It would also conduct real-time, independent emissions monitoring if exploratory drilling were authorized, to show exactly what methane levels look like in Nova Scotia's complex, forested landscapes and to test how accurately emissions can be detected and quantified. Finally, a regulatory scan would compare methane rules and outcomes across Canada and emerging international standards, helping Nova Scotia understand what effective, modern oversight requires. Together, this research strengthens the evidence base, fills major knowledge gaps, and gives the province the tools and evidence needed to make informed decisions about whether any future onshore gas activity could meet environmental requirements and broader public-interest expectations.

Seismic Analysis: Establishing a clear seismic baseline to inform future policy and risk assessment

The proposed seismicity project will study Nova Scotia's past and present earthquake activity to create a solid baseline before any future onshore natural gas exploration could be considered or authorized. Using modern seismology tools - including machine-learning analysis of 20 years of archived earthquake data and a new, temporary network of 30 seismometers in key basins - the research will identify how often small earthquakes occur naturally, where they happen, and what faults may be active. This baseline is essential because activities like drilling, hydraulic fracturing, and wastewater disposal can change underground stresses and sometimes trigger small or even felt earthquakes. By understanding the region's natural seismic behaviour in advance, the province and communities gain the information needed to distinguish natural events from industry-related ones, assess risks, design protective rules, and support transparent monitoring and responsible management of seismic risks under any future scenario.

Transport and Infrastructure Studies: Analyze transport and infrastructure constraints to inform future planning.

This project will focus on understanding how people and goods move in regions where potential onshore energy activity may be considered, and what infrastructure constraints or upgrades could arise under hypothetical development scenarios. Using expertise in travel behaviour modelling, GIS analysis, and transportation simulation, the team would assess current road capacity, traffic patterns, emergency-response access, and the condition of rural transportation networks. The research would also examine how increased industrial activity - such as heavy-vehicle trips, equipment movement, or workforce commuting - might affect safety, congestion, and community wellbeing. The benefit of this work is that it would give the province and communities a clear, evidence-based picture of what infrastructure limitations, upgrades, or planning measures could be relevant before any activity were considered, helping minimize community disruption.

Community Health Impact Studies: Understand community health supports and needs to inform future policy development.

This project will compile the evidence needed to understand possible community health implications if onshore natural gas development were ever considered in Nova Scotia. It will review health findings from existing oil and gas production regions, including respiratory, cardiovascular, reproductive, mental health, and other outcomes, and examine how risks can vary by demographics and social vulnerability. Because Nova Scotia's resource potential, feasibility, and likely development locations remain uncertain, the project will not conduct site-specific community engagement or assume development will occur. Instead, it will carry out a desk-based health equity assessment for potentially affected rural areas to identify baseline health conditions, vulnerable populations, primary care access issues, and future information needs. This preliminary work would not replace any future community engagement, Indigenous consultation, or formal health-impact assessment. The results will guide what health studies, monitoring, communication tools, and community supports could be needed later.

Exploratory Drilling Analysis: Analysis of drilling results and reservoir characterization using datasets provided by proponents or the Department of Energy.

This activity will involve the review and interpretation of data generated through exploratory drilling activities, if such activities occur. Using datasets provided by proponents or the Department of Energy, the work may include examination and synthesis of drilling results and other subsurface information typically collected during drilling programs. Where appropriate, these data could be considered in the context of existing geological and geophysical information to improve understanding of subsurface conditions and reservoir characteristics without presuming commercial viability or future development, and to identify key uncertainties and limitations relevant to future policy considerations.

Technology Advancements in Reservoir Stimulation: Analysis of technological and regulatory progress in Canada and elsewhere

This project will produce an objective technical review of modern hydraulic fracturing technologies and their possible relevance to Nova Scotia. It will summarize how drilling, well design, multi-stage fracturing, fracture fluids, proppants, water management, well integrity, monitoring, emissions controls, and surface operations have changed over the past two decades, including limitations and unresolved risks. The work will compare current international practices with Canadian experience, especially Western Canada and British Columbia, where operational and regulatory approaches may offer useful lessons. The project will be led by qualified academic and technical specialists, to guide interpretation and interview engineers, geoscientists, regulators,

and practitioners. The final report will give government, researchers, and stakeholders a current evidence base for future policy, risk, resource, technology, and regulatory discussions.

SCHEDULE B - PAYMENTS

This schedule to the Agreement describes the payment terms.

B.1 Budget and Eligible Use of funds

Provincial funds may only be expended on the Program permitted under this Agreement and for no other purpose unless expressly agreed otherwise by the parties in writing.

Category	Budget	Eligible Expenditure
A) Personnel	\$977,000	Salaries, benefit costs and contracts of Program staff
B) Direct program operating costs	\$73,000	Non-salary costs directly attributable to the Program
C) External consultants	\$700,000	Funds paid to external consultants
D) Research	\$4,000,000	Direct and indirect costs of research
E) Exploration incentives	\$24,250,000	Funds disbursed to approved proponents

Dalhousie may, without amending this Agreement, increase expenditure in budget categories A, B and C by up to 10% of the amounts allocated to those categories, provided that any such increase is funded through the reallocation of amounts from other budget line items (excluding categories D and E). Where expenditure in categories A, B, C and D is less than the amount allocated and such savings can be reasonably confirmed, Dalhousie commits to reallocating those unspent amounts to category E, subject to the overall budget cap under this Agreement.

“Eligible Expenditure” means an expenditure incurred by the Dalhousie or other payments made under the Program between the execution of this Agreement and the Agreement End date that is eligible for payment in accordance with the terms and conditions outlined below.

The following are Eligible Expenditures, if directly incurred for the purposes of the Program if the terms and conditions set out in this Agreement are met by Dalhousie and consistent with summary breakdown outlined below:

Eligible Expenditure	Allocation
(a) Salaries, and benefits of the Project staff (costs that are “caused” by and directly attributable to the Program.)	These costs are to be allocated based on employee assignments specific to the Program
(b) Direct Program Costs (costs that are “caused” by and directly attributable to the Program.)	
(c) Administrative and Operational Overhead Costs (costs that are not directly “caused” by the Program which include without limitation: rent, insurance, IT equipment, senior management and administrative staff and governance including audit and professional fees).	

(d) Funds disbursed to 3 rd party recipients in accordance with the Agreement and as approved by the Province.	
---	--

Expenditures, other than those herein allowed, are ineligible unless specifically approved in writing by the Province prior to the time the expenditures are incurred.

B.2 Payment

Amounts to be paid will be invoiced as follows:

- \$5 million shall be paid before March 31, 2026 for government fiscal year 1 of the Services.
- \$25 million shall be as follows for government fiscal year 2 of the Services.
 - \$10 Million before May 30, 2026;
 - \$10 Million before September 30, 2026; and
 - \$5 Million before March 31, 2028.

Notwithstanding the above, each allocation will not be issued until approved by the Province to ensure compliance with this agreement.

- The Province may holdback 10% of the amounts being paid to Dalhousie for categories A, B, and D listed in the budget table above (i.e. excluding exploration incentives) until Dalhousie has provided their Final Report and it has been accepted by the Province.

Payments will be made under the provisions of Article 2 of this Agreement.

B.3 Investment of delayed use funds

The Recipient shall invest any payments for the Program that are not reasonably expected to be required for ninety (90) days following receipt in short-term Canadian investment grade securities with a rating of AA or higher, or a high yield account, whichever provides a higher interest rate. Any investment income or gains (minus applicable fees) must be reported by Dalhousie to the Province and shall be added to the funds available for the Program under this Agreement.