Nova Scotia's Natural Gas is Key to Lower Power Costs

Nova Scotia Power appears more focused on their bottom line than yours.

They buy energy from numerous sources: coal, gas, wind, solar, and whatever they pay, a part of that cost is passed along to you. This is why we must ensure Nova Scotia Power buys energy at the lowest possible price - to keep rates as low as possible for consumers.

There is one obvious way to lower these costs: use Nova Scotia natural gas. We have enough natural gas to meet our power demand for nearly 200 years. But, instead of drawing it from beneath our feet, Nova Scotia has to import natural gas through the United States at a significant, inflated cost.

In fact, in Nova Scotia we pay (approximately) over $15 a unit for natural gas. Compare that to Alberta and parts of British Columbia—self-producing provinces—where they pay just over $3 a unit. Imagine the difference if we were able to use our own gas, like Alberta, and not have to import it at exorbitant rates.

There are many of us who use gas but don't realize it. If you are living in an apartment building, there's a chance you use natural gas. There's also a chance your employer uses it—many farms and factories do.

No matter what, if the cost of natural gas comes down (by using local gas), you will benefit. The benefits will come because Nova Scotia Power uses it and the current high cost of natural gas would be reflected in your bill.

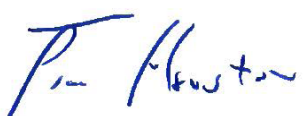
If we used local gas, at a lower price, it has the ability to lower our bills. We could actually develop our own natural gas resources. People often ask, "*But Tim, is it really possible to develop our gas safely?*" Well, this is a question that must be properly answered. That's why our government is working with Dalhousie University and launching a new research program. It will assess our onshore reserves, review new technologies, and answer outstanding questions.

The world—and technologies—has evolved, but until now we've ignored those advancements. It's like we are still using a landline phone because we are nervous to accept the cellphone as a true advancement.

This Dalhousie research will help us understand what can truly be done safely. It can also ultimately lay out the science-based best practices for gas development that will work in Nova Scotia.

It's past time that we stop simply saying "no" and instead roll up our sleeves and put in the work necessary to answer the fair questions that exist. The investment through Dalhousie will do this. It's a $30 million research project and it is a critical part of the path to lower power bills.

This is one opportunity we should all want to say yes to.



Premier Tim Houston

Subsurface Energy R&D Investment Program

Introduction

The Subsurface Energy Research and Development (R&D) Investment Program aims to evaluate the potential for responsible drilling and hydraulic fracturing within Nova Scotia's prospective on-shore hydrocarbon-bearing basins.

Guided by scientific and technical approaches, this initiative will further our understanding of the resource and of practices that ensure environmental stewardship to inform public policy, economic development and public education.

Nova Scotia's Challenge

Nova Scotia is facing headwinds that could hold us back from the prosperity and self-reliance we aspire to. We still rely on the resources and wealth of others when we have what it takes to thrive right here.

The reality is:

- Nova Scotia ranks 59th out of 60 in GDP per capita in North America.
- Health, education and other public services are becoming more expensive to deliver.
- The cost of living continues to pressure Nova Scotia families.
- Population growth has slowed, and we are competing for talent and investment globally.
- Global climate change requires cleaner, more sustainable energy sources.
- Nova Scotia is not energy secure—dependent on imported energy from or through the USA and other countries where environmental and safety standards are weaker.
- Nova Scotia is at the end of the pipeline—pay higher prices because the gas travels a greater distance.

This is why Nova Scotia is leveraging our expertise, natural resources and strategic partnerships to pursue opportunities that will provide a better quality of life for people across the province.

The Opportunity

Nova Scotia has the opportunity to develop a local economic sector that will lower fuel costs, offer an alternative to Nova Scotia Power, create good-paying jobs in rural areas, accelerate innovation and the energy transition, provide more energy security for Nova Scotians and generate new revenue sources and community benefits.

Nova Scotia's Onshore Petroleum Atlas (2017) estimates a potential seven trillion cubic feet of recoverable natural gas. After years of no new exploration or commercial production, other jurisdictions have seen advancements in drilling technologies, water use, well construction and regulatory oversight, allowing for more production of gas with reduced environmental risk.

Subsurface Energy R&D Investment Program

Safe, sustainable development of Nova Scotia's onshore natural gas can lead to growth in the Province's GDP, the creation of high-paying local jobs as well as cheaper, cleaner energy options for Nova Scotian households.

This program offers a framework to attract industry to explore and apply industry best practices in Nova Scotia, with the potential for establishing commercial level projects.

Program Overview

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

Program participants agree to share their data and environmental impact findings with project research advisors for inclusion in a published research paper.

Administered by Dalhousie University, the program will offer financial investments to operators to explore Nova Scotia's gas 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 technologies in the Nova Scotia environment, helping shape future energy policy and economic development.

The published research paper will address:

Geological Understanding	Deepening knowledge of subsurface rock formations in Nova Scotia, including: ● characterizing rock and reservoir properties to support the future design of safe and effective stimulation programs (including hydraulic fracturing); ● ensuring proper protection of groundwater resources through responsible well design and monitoring; and ● assessing reservoir quality and storage capacity for natural gas, carbon sequestration, hydrogen, geothermal energy, and water injection.
Technology Assessment	Evaluating drilling and hydraulic fracturing technologies. It is important to evaluate and optimize drilling and hydraulic fracturing technologies under local geological conditions, ensuring efficiency and minimizing environmental impact. This information will be used to understand: ● flow analysis and reservoir modeling to refine understanding of reservoir capacity, recoverable reserves and decline rates; ● well stimulation and hydraulic fracturing responses and controls; and ● injection and storage performance under controlled pilot conditions and with surface micro seismic monitoring for baseline information.
Environmental Stewardship	● assessing any unique aspects of Nova Scotia's geology compared to other prominent regulated production areas to contribute to scientific understanding and verification of environmental safeguards, including groundwater protection and subsurface monitoring.

Program Streams

1) Exploratory Drilling on promising geological formations.

Applicants will propose:

A. Prospective drilling block(s), specific drill locations, geological evaluation and prospectus, depths (expected to range from 1,000 to 4,000 meters) and supporting geological and logistical assessments.
B. Proposed drilling plan and environmental procedures.

2) Flow Testing, Engineering and Production to test production and evaluate well performance.

Applicants will propose:

A. Prospective wells to undergo flow testing, geological evaluation and supporting geological and logistical assessments.
B. Engineering evaluations and demonstration regarding enhanced production and recovery through fracture network connectivity (hydraulic fracturing).

Provincial Investment

Operators may apply for up to 100% cost recovery for eligible expenses including costs for mobilization and demobilization of drilling equipment and ancillary services and drilling and completions.

Costs for permitting or environmental compliance will not be considered as eligible expenses.

Since the provincial financial contribution includes conditions, the Province can hold equity in successful drilling ventures or earn a share of profits of production in a number of ways, such as additional royalties. Nova Scotians should receive economic benefits and each project will produce a return in both jobs created and new source government revenue.

Any provincial revenue earned will be partially, but disproportionately, reinvested in the surrounding local municipalities based on proximity.

Assessed Areas

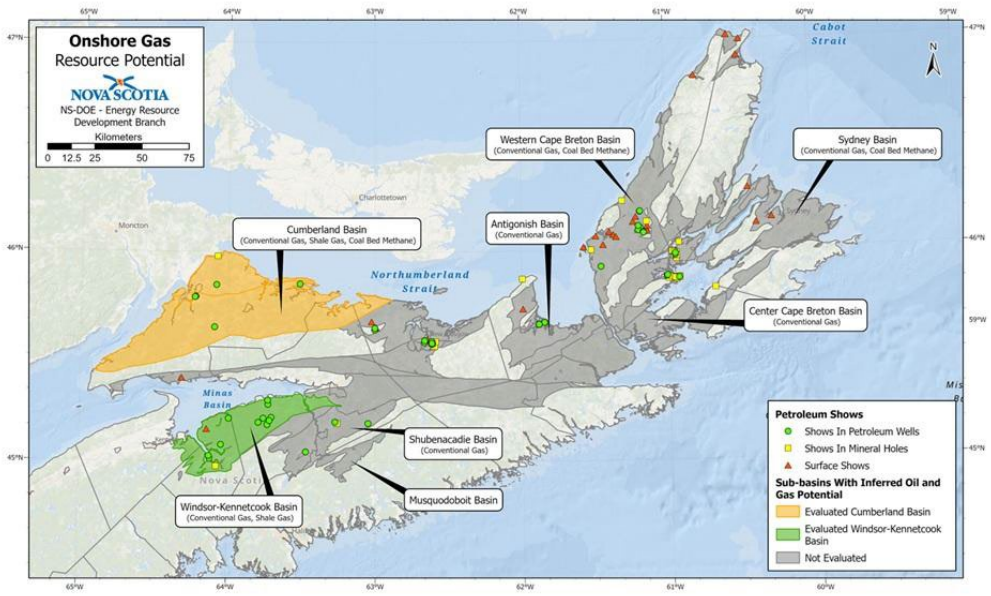
Nova Scotia's Onshore Petroleum Atlas (2017) estimates a potential seven (7) trillion cubic feet of recoverable natural gas. The atlas is available at

https://energy.novascotia.ca/onshore-atlas-version-1-2017/onshore-atlas-open-file-reports.

Areas already assessed:

- Cumberland basin – most of Cumberland County, small part of Pictou County; and
- Windsor-Kennetcook basin – all of Hants County, small parts of Colchester and Kings counties.

Subsurface Energy R&D Investment Program



Roles and Responsibilities

Successful applicants will be offered entrance into the program and access to the following:

1. Eligibility for a provincial investment of up to 100% of eligible program cost recovery. Provincial retained benefits will be negotiated based on the level of investment delivered.
2. Licensing of the exploration block under standard provincial terms covered in the Petroleum Resources Act.
3. Agreement that the Province will earn a share of profits from any production, to be negotiated with successful program applicants before drilling begins. For example, this could include the Province holding an equity stake or a royalty agreement.
4. Agreement that any unsuccessful drill holes are first offered to the Province, which may repurpose them for other uses, at no cost. Wells not transferred to provincial ownership must be decommissioned and abandoned in accordance with the Onshore Petroleum Drilling Regulations and following industry best practices. This will require Surface Access Agreements with private landowners and/or Crown Land Access Agreements with the Department of Natural Resources.
5. Agreement that this is a research and development program and an undertaking to work with Dalhousie University for an appropriate data access regime.

Dalhousie University will be engaged through a services agreement to administer the Subsurface Energy R&D Investment Program. Dalhousie will receive provincial funding to serve as the central coordinating body overseeing all operations, including:

1. Establishing a scientific oversight board with representation from academia, the public, Department of Energy, First Nations and industry with experience in energy development.
2. Establishing prequalification criteria for potential explorers and operators.

3. Issuing an open call for project submissions, evaluating applications and communicating with the public before research commences, based on an assessment of pre-developed environmental benchmarks to monitor and mitigate potential risks through the project lifecycle.
4. Managing stakeholder engagement to ensure transparent communication and collaboration with Nova Scotians, industry partners and academic institutions, fostering trust and informed decision-making.
5. Helping proponents navigate regulatory processes to attain the necessary permits and licenses.
6. Providing regular project updates to the Minister or designate, including program expenditures and measurable benchmarks to evaluate success and impact. This will include:
    a. status of prospective locations,
    b. daily drilling reports and regular updates on status of wells, reflecting the program's operational progress,
    c. capacity to execute its exploration goals, and
    d. any discoveries as a direct indicator of resource potential and commercial viability.
7. Producing a final report no later than December 31, 2026, with published research to follow.

The **Department of Energy** regulates onshore exploration, development and production, as well as abandonment and reclamation, ensuring activities are conducted in a safe, efficient and orderly manner under the Petroleum Resources Act and regulations.

Public Good and Community Benefits

This body of research focused on enhancing the understanding of Nova Scotia's subsurface geology is essential for identifying viable hydrocarbon subsurface natural resources potential and informing safe drilling and completion practices in Nova Scotia. Enhanced geological understanding, new data and technology trials position Nova Scotia for future energy and resource development projects, reducing risk in subsequent developments.

Since the provincial financial contribution includes conditions, the Province can hold equity in successful drilling ventures or earn a share of profits of production in a number of ways, such as royalties. Nova Scotians should receive economic benefits and each project will produce a return in both jobs created and new source government revenue.

Any provincial revenue earned will be partially, but disproportionately, reinvested in the surrounding local municipalities based on proximity.

If hydrocarbons are not found or production is not possible using today's technology, wells may be repurposed for geothermal energy or carbon capture utilization and storage research, creating long-term value and sustainability benefits. If there is a need to decommission and abandon wells, project proponents shall follow industry best practices and provincial regulations.

Commitment to Safety and Transparency

While Nova Scotia paused onshore exploration for a decade, other regions advanced technology and safety standards. This program allows Nova Scotia to test best practices in our geology, attract experienced operators and investment and establish a safe and responsible energy sector. Operators must comply with existing safety procedures. If there is a need to decommission and abandon wells, project proponents shall follow industry best practices and provincial regulations.

Contact

Please direct all questions about the Subsurface Energy R&D Investment Program to Dalhousie University.

Subsurface Energy R&D Investment Program

TECHNICAL BRIEFING FOR MEDIA

GRAHAM GAGNON, VP RESEARCH & INNOVATION (ACTING), DALHOUSIE UNIVERSITY

KIM DOANE, EXECUTIVE DIRECTOR, ENERGY RESOURCE DEVELOPMENT, DEPARTMENT OF ENERGY

DECEMBER 22, 2025

DALHOUSIE UNIVERSITY

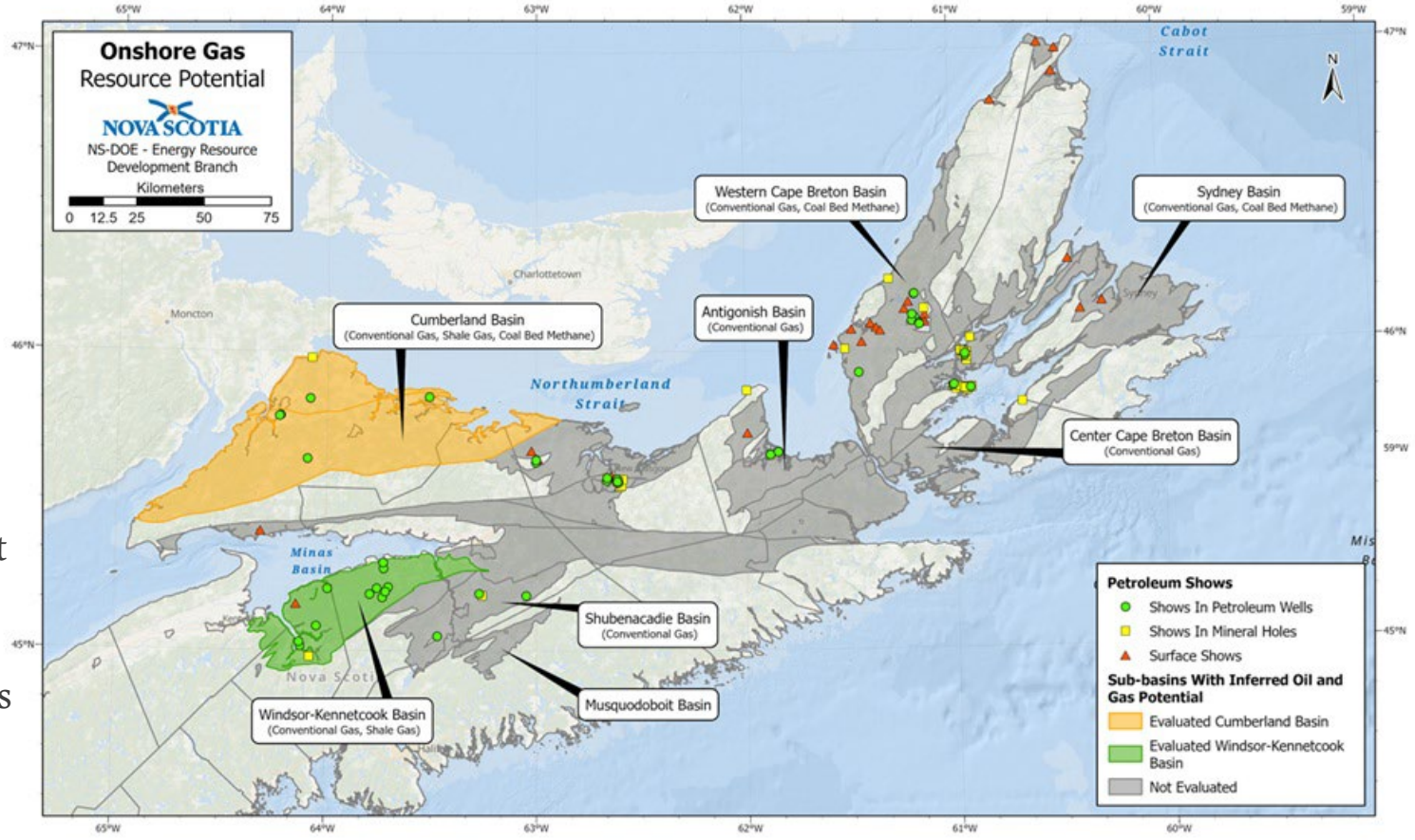
NOVA SCOTIA'S CURRENT CONTEXT

- Health, education and other public services are becoming more expensive to deliver.
- Cost of living continues to pressure Nova Scotia families.
- Nova Scotia is looking to grow its GDP.
- Population growth has slowed—we are competing for talent and investment globally.
- Global climate change requires cleaner, more sustainable energy sources.
- Nova Scotia is not energy secure—dependent on imported energy from or through the USA and other countries where environmental and safety standards are weaker.
- Nova Scotia is at the end of the pipeline—pay higher prices because the gas travels a greater distance.

Dalhousie brings research excellence and expertise to support Nova Scotia's pursuit of secure, cleaner energy solutions.

NOVA SCOTIA HAS PROMISING ONSHORE GAS POTENTIAL

- Nova Scotia's Onshore Petroleum Atlas (2017) estimates a potential seven (7) trillion cubic feet of recoverable natural gas.
- Areas already assessed:
  - Cumberland Basin – most of Cumberland County, small part of Pictou County (orange)
  - Windsor-Kennetcook Basin – all of Hants County, small parts of Colchester and Kings counties (green)



OPPORTUNITY TO EXPLORE AND DEVELOP OUR OWN ENERGY RESOURCE, SAFELY

- Nova Scotia has the potential to produce cleaner-burning, closer-to-home energy that can be regulated to the highest standards.
- Safe, sustainable development can grow GDP and create high-paying local jobs:
  - Oil and Gas sector jobs pay 1.7 times more than the Canadian average within goods-producing industries (Source: Stats Canada)
  - Stats Canada estimates every direct oil and gas job creates two indirect jobs in the supply chain and three more where oil and gas workers spend their money.
- The Province can earn royalties and tax revenues to invest in public services:
  - Past offshore projects generated $3.7 billion in royalties and created over 1,000 jobs.

SUBSURFACE ENERGY R&D INVESTMENT PROGRAM

Program Highlights

- Add to our knowledge base about our resource potential and geology, as well as regulatory system, best practices and technologies in the Nova Scotia environment.
- $30-million program to support research, providing funding for projects that explore or develop underground reserves of natural gas and collecting that data.
- Dalhousie University will serve as the administrative lead, managing a request for proposals, public consultation and research.
- Companies can apply to explore or develop – or both.
- The Province will negotiate agreements with successful proponents, determine the amount of provincial investment, and manage its usual regulatory process (Petroleum Resources Act and Regulation).
- Since the provincial financial contribution includes conditions, the Province can hold equity in successful drilling ventures or earn a share of profits of production in a number of ways, such as royalties. Nova Scotians should receive economic benefits and each project will produce a return in both jobs created and new source government revenue. Any provincial revenue earned will be partially, but disproportionately, reinvested in the surrounding local municipalities based on proximity.

PROGRAM LEVERAGES DALHOUSIE'S RESEARCH EXPERTISE

Dalhousie University will:

- Establish an oversight board with representation from academia, the public, Department of Energy, First Nations and industry with experience in energy development.
- Set qualification criteria for companies, issue an open call for project submissions, and evaluate applications.
- Lead communication with the public before research starts and manage ongoing stakeholder engagement.
- Lead research to gather more data and knowledge about this activity specific to Nova Scotia's geology and community readiness.
- Submit a final report to the Province in December 2026.
- Share data with the public and industry by publishing research paper(s) on safe, effective development of Nova Scotia's onshore natural gas.

PROVINCIAL ROLE

- Serve on oversight committee led by Dalhousie University.
- Negotiate agreements with successful companies in the call for proposals, including investment and financial benefits for the province and people.
- Manage regulatory process for onshore oil and gas activities:
  - Drilling approvals and authorizations from Department of Energy
  - Possible approvals from Department of Environment and Climate Change
  - Occupational health and safety requirements
- Non-prospective wells could be decommissioned or assessed for potential geothermal energy and carbon capture/storage research and development.
- Receive research learnings to inform public policy.