



Leading Collaborative
Energy Research

oera.ca

ANNUAL REPORT 2019-2020





CHAIR'S REPORT

Wayne St-Amour

Ph.D.
Principal
Nova Scotia Community College
COGS & Annapolis Valley Campus

Even though it's been several years since its completion, OERA might still be best known for leading the Play Fairway Analysis project. It was a substantial undertaking that ultimately attracted more than \$1 billion in offshore exploration commitments to Nova Scotia.

But times are changing, and our scope has broadened far beyond the offshore.

Over the past year, we've strategically expanded OERA's mandate to encompass the full spectrum of energy research – everything from onshore and offshore petroleum to clean tech and renewable energy.

As a result, in recent months, OERA's dedicated team has engaged in range of initiatives designed to help Nova Scotia move toward a more sustainable energy future.

For example, OERA is assessing geothermal resources in Nova Scotia to evaluate the economic case for exploration and development and determine the potential for electricity generation and heat production.

Another key project involves advancing the use of genomics to reduce the risk and cost of offshore oil exploration.

The organization is also coordinating an important study to advance regional understanding of the role hydrogen could play in Atlantic Canada's energy transition.

As well, through the recently-initiated Pathway Program, the OERA team is focused on demonstrating reliable environmental monitoring in high-flow environments – reducing regulatory uncertainty related to tidal energy development.

This ongoing work is generating the unbiased information and insight needed to plan our province's sustainable energy path forward. Together with global researchers, we're solving challenging problems, answering vital questions and contributing to technical advances.

As an independent non-profit organization, OERA serves as an impartial knowledge and capacity builder. It's a critically important role and one that our stakeholders will increasingly rely upon as we continue to move toward net zero by 2050.

EXECUTIVE DIRECTOR'S MESSAGE

Alisdair McLean

P. Eng.
Executive Director
Offshore Energy Research Association
Halifax, NS

FY2019-2020 was year of a transition at OERA.

While we continued our long-standing work in offshore geoscience and tidal energy, we also started working on energy topics consistent with our broader mandate to resolve knowledge gaps in both offshore and onshore energy fields.

We completed year two of our four-year, \$12 million Offshore Growth Strategy (OGS) that will help improve our understanding of Nova Scotia's offshore geoscience.

Work that began in FY2018-19 and continued into FY2019-20 included the GAPP projects, which use genome typing and other microbiological approaches to assess the presence and type of oil-metabolizing bacteria as a hydrocarbon exploration tool.

OERA recognized that the most pressing issue holding back the tidal energy industry in Nova Scotia is lack of confidence in environmental effects monitoring (EEM), leading to a lack of regulatory certainty. As a result, 80 percent of OERA's current tidal energy project portfolio is now focused on EEM research. Good progress was made in Grand Passage on



the Pathway Program, a \$3 million, two-year collaborative project that will validate technology for monitoring fish and tidal turbine interactions.

The first projects that we initiated within our expanded mandate include an evaluation of the potential for geothermal energy projects in Nova Scotia, an evaluation of the role that hydrogen could play in the future energy mix of the region and an evaluation of what ancillary services independent power producers could provide to Nova Scotia Power to add value to the renewable energy they sell.

We look forward to contributing to the discussion about energy transition and clean growth in Nova Scotia and Atlantic Canada in the months ahead.

ABOUT OERA

OERA is an independent non-profit organization that serves as an impartial knowledge and capacity builder.

Our team enables expert energy research with input from academia, industry, government, regulators and others. Our scope encompasses all energy-related research, including onshore and offshore petroleum, clean-tech and renewable energy. We also support economic growth in our province by exploring and assessing clean-tech opportunities.

Since OERA was created in 2006, we have directed more than \$40M of public and private sector investment into cutting edge baseline and applied research. We've also leveraged this investment to generate an additional \$21M in spinoff funding.

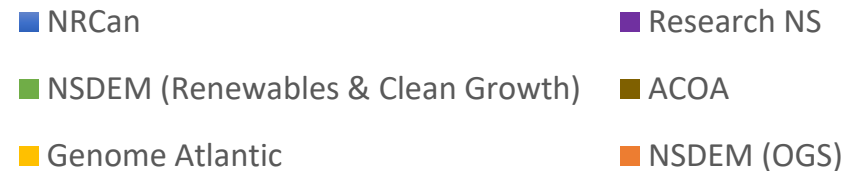
Our programs contribute to risk reduction and support investment decisions related to Nova Scotia's offshore and onshore energy resources. Our activities drive innovation and:

- are fully aligned with Nova Scotia's strategies for R&D advancement,
- address energy sector gaps in the drive to achieving net zero emissions,
- build research capacity locally, and
- maximize value through collaboration with national research and innovation initiatives and organizations.

By bridging the gap between research and industry, OERA is helping tackle some of the biggest challenges that the energy industry faces today.

REVENUE

\$2,185,410.00



STRATEGIC PROGRESS

At OERA, we are in a unique position to leverage the regional energy economy by working with government, academia, industry and others to drive applied research and development progress.

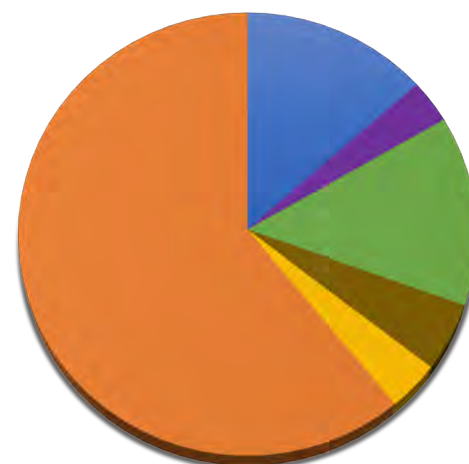
The 2019-20 fiscal year focused on OERA's strategic transition initiatives, building on the expansion of our mandate to encompass both offshore and onshore research and development.

The past fiscal year represents a transition period, as research and funding programs were revised following strategic planning sessions and resources were refocused to better achieve the new mandate of the organization.

More research is needed to understand which carbon mitigation technologies are suitable to help Nova Scotia successfully transition to a low-carbon future. There is economic potential on a global scale for new ideas that will remove barriers to a carbon-neutral economy.

The post-pandemic environment creates an ideal opportunity to focus on initiatives that support reinvigorating the economy and acting on climate change to help reach to net zero by 2050.

Moving forward, we will continue to lead broad spectrum energy R&D in new research areas, to maximize benefits for Nova Scotians and to support the energy sector as a whole.



76
Petroleum
Geoscience
Projects

\$29.7M



\$22.1M Leverage
\$

112
Marine
Renewables
Projects

\$10.3M

79
Industry
Collaborations

ACHIEVEMENTS
TO DATE

21
Academic
Collaborations

396 HQPs

14
OERA
Programs

Engaged With Over
150 Organizations



13 YEARS
IMPACT

590
Proposals
Received &
Reviewed

9
Marine Sound
Projects

\$2.1M

Held
27
Webinars

197
R&D
Research
Projects

OERA MANDATE

It's our mandate to foster research and development related to petroleum and renewable energy resources and their interaction with the natural and social environment and the dissemination of that knowledge. This includes research work that:

- assesses the potential impacts of petroleum exploration, development and production on the natural and social environment;
- assesses the potential impacts of renewable energy technologies on the natural and social environment;
- builds geoscience knowledge about Nova Scotia's oil and gas potential; and
- promotes technical innovations to reduce barriers to development of energy resources.

Where consistent with what's above, we also encourage building research capability in Nova Scotia.



ENERGY RESEARCH & NOVA SCOTIA'S HYDROCARBON POTENTIAL

Sandy MacMullin

Independent
Board Director & Secretary
Halifax, NS

Since its creation in 2006, OERA has been – and continues to be – an invaluable supporter of work in offshore Nova Scotia. I am proud to say that I have been part of a team of professionals who have worked with OERA over the years to better understand Nova Scotia's hydrocarbon potential. OERA continues to support this necessary and important work.

Why do we continue to research Nova Scotia's oil and gas potential when legitimate climate change concerns are top of mind?

In short, fossil fuels are critical for many global manufacturing processes. Although we continue to seek fuel alternatives, it must be possible to implement them at a scale that will enable us to meet emission targets. We are likely to continue to need fossil fuels for some time as we wean ourselves off our dependence on them.

We are at the beginning of a sustainable energy transition with growing demand globally for increased use of cleaner-burning natural gas. Specifically, liquified natural gas (LNG) is seen by objective and globally-recognized energy experts as a transition fuel and it is replacing much of the coal and oil combustion occurring in the world today.

How does this relate to the need for ongoing research on Nova Scotia's hydrocarbon potential?

In 2006-2007, the Government of Nova Scotia commissioned a series of analyses by experienced external professionals to assess what could be done to reduce risks associated with investing in hydrocarbon potential. The overwhelming conclusion was that the largest risk in offshore Nova Scotia was its relatively unknown geology, but that it was possible to do something about that.

Consequently, in the 2008-2009 period, with provincial funding and technical support, OERA carried out the \$15 million offshore Nova Scotia Play Fairway Analysis (PFA). This work went through a rigorous peer review process to ensure the scientific integrity of the effort and the results. The PFA ultimately resulted in hundreds of millions of dollars in new seismic data and three new offshore deepwater exploration wells.

In recent years, the Government of Nova Scotia has worked with OERA to identify, sample and analyze natural gas and liquids seeps in the offshore. Seeps – if demonstrated through geochemical and seismic analysis to be coming from a deep underground source – are generally an indication that a working petroleum system is nearby.

What has been learned from the PFA, recent well drilling results and new seismic and deepwater sampling for hydrocarbon seeps?

We are now reasonably certain that hydrocarbons are being generated in much of our offshore deepwater. We appear to have areas where the hydrocarbons are mainly natural gas (Sable Island area and the deepwater region toward the northeast), but also some areas where liquids-rich (i.e. also containing propane, butane, pentanes and heavier hydrocarbon molecules) natural gas likely exists. If found in sufficient quantities, a large natural gas deposit could reasonably be a candidate for an LNG development, coupled with liquids development. The research work being performed now is helping to refine the best spots (fairways) in which to look for liquids-rich natural gas.

Why does OERA's work matter?

Throughout my experience in working with OERA over the years and in my current role serving on the Board of Directors. OERA has consistently commissioned peer-reviewed applied research meant to increase knowledge of Nova Scotia's energy opportunities. This research has typically been for the offshore, but now also includes the onshore. Whether related to tidal power, wind energy, oil and gas, geothermal, solar, energy storage or the budding hydrogen economy, OERA encourages innovative and unbiased research and ensures that focused, unbiased, collaborative and peer-reviewed analysis is made available free of charge, for the benefit of investors, researchers, policy developers and the public in general. As good decisions are best preceded by objective analyses, OERA continues to serve a valuable function.

OERA PETROLEUM GEOSCIENCE HIGHLIGHTS

- OGS provides total funding of \$11.785M, of which \$2.195M has been spent
- Ten OGS projects were initiated or were ongoing in FY2019-20, totaling over \$1.1M in funding commitments
- GAPP1 completed; GAPP2 was initiated- Microbial Genomics for De-Risking Offshore Oil and Gas Exploration in NS
- Expected expenditures for 2020-2021 \$2.8M

PETROLEUM GEOSCIENCE

In March 2018, OERA and the Nova Scotia Department of Energy and Mines (NSDEM) signed the Offshore Growth Strategy (OGS) Contribution Agreement, which provided funding to undertake geoscience research projects, optimize benefits to Nova Scotia from offshore energy projects and attract investment in the province's offshore energy sector. This funding represents a renewed \$11.785 million provincial commitment to the offshore energy sector. The OGS builds on previous geoscience work by taking advantage of new private sector data that has been collected over the past four years, through collecting and analyzing additional data to address remaining knowledge gaps.

Ten OGS projects were initiated in fiscal 2019-20, totaling over \$1.1M in funding commitments. Most of these projects are now complete or will end soon after COVID-19 restrictions are eased in FY2020-21.

Much of the initial work undertaken in partnership with Morocco's National Office of Hydrocarbons and Mines (ONHYM) and the CNSOPB under the Nova Scotia – Morocco Conjugate Margin Reconstruction Program was completed over the past year. The project combined seismic and well data from both continental margins to map offshore geology, identify oil-prone source rocks common to both margins, and model hydrocarbon generation, expulsion and entrapment. The outcome of this work includes a detailed hydrocarbon prospectivity atlas based on the reconstruction of four deep geological transects connecting Nova Scotia with Morocco. New collaborative projects are currently being discussed with ONHYM.

Funds were also allocated to investigate the geochemistry of BP's recent Aspy deep water well, as well as the geochemistry of oils found in small quantities in Nova Scotia's shallow offshore. Additional core sampling and analysis will determine the age and character of the source rock and will identify if the source rock that created these hydrocarbons is from a single or multiple source(s). The OGS also funded a broader study that compiled, reviewed and assessed geochemical data from offshore wells in Nova Scotia, Newfoundland, Ireland, Spain, Portugal and Morocco, along with samples from onshore outcrops around the north and central Atlantic, in order to define the characteristics of a potential lower Jurassic age ("Lias") hydrocarbon source rock in Nova Scotia.

In FY2019-20 the effects of COVID-19 restrictions were minimal on OGS project completion; to date, only the core sampling component of two geochemistry projects has been delayed. As restrictions are lifted these projects will be completed.



Photo Credit: Journeyman Film Company

MARINE RENEWABLES

OERA continues to deliver important research results that have contributed to the growth and development of Nova Scotia's offshore energy resources. OERA's Marine Renewables Energy (MRE) research agenda has evolved over the last decade as the tidal energy sector advances through progressive stages of development. The transition has taken OERA research from its early days of baseline data collection to today, where its research agenda for tidal energy is almost exclusively technology development. The overarching goal is to bring technology innovation to the sector that will resolve pressing challenges and issues confronting the sector. At the same time OERA is starting work to understand what research is required to foster an offshore wind energy industry in Nova Scotia.

OERA recognized that the most pressing issue holding back the tidal energy industry in Nova Scotia is lack of regulatory certainty. There is not today a suite of monitoring tools that have been accepted by regulators as "field proven" for the conditions in the Bay of Fundy. As such, the OERA has developed and led a new initiative – the Pathway Program, a collaborative environmental effects monitoring (EEM) research program that will reduce regulatory uncertainty and compliance costs. Eighty percent of OERA's current tidal energy project portfolio is focused on EEM research, compared with 42% last year and less again in previous years.

Marine operations, travel and use of laboratories have all been disrupted by the pandemic. It's not clear when research will be able to resume, or how the "new normal" will affect cost and schedule of research. OERA is managing the situation with its researchers and funders. Communication will be key to success. Despite the challenge, OERA will focus its MRE resources on three main initiatives in the next year: a) EEM technology for tidal energy; b) understanding the enabling conditions for offshore wind in Nova Scotia; and c) business development for OERA's research management skills.



OERA Board Director

2020 has been a year like no other – one that has challenged the viability of projects, interrupted supply chains and made engagement in international trade, export and business development very difficult. On the other hand, the challenges faced by a global pandemic in combination with the downward trend in the price of oil, has changed the future landscape for the energy sector and is opening the door to new opportunities. Emerging renewable energy sectors, like marine renewable energy, could play an important role in Canada's economic recovery. As governments assess how to stimulate the economy, create jobs, and move forward, it is an optimal time to focus on unique advantages and build back better through strategic investments and initiatives that support the dual objectives of stimulating the economy and acting on climate change.

Marine renewable energy represents the next generation of renewable energy technologies and can provide significant amounts of clean electricity while creating jobs, especially in rural coastal areas that have seen downturns in offshore oil and gas, fishing, tourism, etc. as a result of the pandemic. Global development of tides, waves, rivers, and offshore wind also offers substantial international trade opportunities for Canadian suppliers that have relevant skills and experience.

MARINE RENEWABLES INDUSTRY UPDATE

Elisa Obermann

Executive Director
Marine Renewables Canada
Halifax, NS

As one example, ports, shipyards, and fabricators in Atlantic Canada have already obtained new business from both domestic tidal energy projects and international offshore wind developments with projects requiring infrastructure to build, maintain and store devices and equipment.

In Canada, there is already a strong foundation of experience in marine renewable energy built through years of research, testing, and enabling initiatives. Even amidst the global pandemic, industry is persevering and pursuing the next steps in project development. Projects in the Bay of Fundy are progressing towards deployments at the Fundy Ocean Research Center for Energy (FORCE) with DP Energy developing its 9 MW Uisce Tapa project, Sustainable Marine Energy (SME) reaching agreement for the first phase of the 9 MW Pempa'q In-stream Tidal Energy Project, and BigMoon Power recently being awarded the vacant berth. In addition to these larger projects, there a number of smaller developments underway in other areas of the Bay of Fundy, with SME, Jupiter Hydro, and BigMoon Power all having received permits over the last two years.

Harnessing power from tides, rivers, and waves is also being pursued as a solution for remote communities and other marine industries such as aquaculture – both of which require innovative solutions for reliable clean power.

Although it has yet to take hold in Canada, the potential of offshore wind is also gaining momentum – a new frontier that presents many similarities and synergies with the offshore oil and gas sector.

There is now an opportunity, maybe like never before, to build on this foundation and deliver clean electricity, jobs, and innovative solutions. However, like all emerging clean technologies, there are still a number of challenges to tackle. The industry must be able to answer the remaining questions around environmental effects and establish true commercial markets – whether that be providing electricity to the grid or displacing diesel in Canada's remote communities. Ultimately,

technologies will need to demonstrate the technical robustness to operate in some of the most energetic energy resources in the world. R&D and project demonstrations over the coming months and years will be critical in meeting these challenges, but it will also require close collaboration and communication amongst industry, government, and the research community to ensure that priorities are set and that the strategy for advancing the industry maximizes the potential to build Canada's research and supply chain expertise.

OERA MARINE RENEWABLES HIGHLIGHTS

- **New research funding = \$2.15M**
- **Cumulative cash value of active research projects = \$2.16M**
- **Cumulative leverage value for active and recently completed projects = \$4.1M**
- **Revenue sources mix: Federal 55%, NSDEM 22%, OERA 18%, Other 5%**
- **Active Projects = 15 EEM, 3 Clean Reduction Technology, 1 Other**
- **HQP participation during reporting period = 66**

OERA TEAM



Alisdair McLean
Executive Director



Nalani Perry
Operations Manager



Russell Dmytriw
Director of Research



Jennifer Pinks
Research Manager



Luiz Faria
Project Manager



Carey Ryan
Project Manager



Steve Himmelman
Financial Advisor



Ashley Moriarty
Financial/Administrative
Assistant

BOARD OF DIRECTORS

As of March 31, 2020

Wayne St-Amour
Chair & Director
Nova Scotia Community College

Chris Spencer
Treasurer & Director
Nova Scotia Department of Energy and Mines

Sandy MacMullin
Secretary & Director
Independent

Richard Isnor
Director
St. Francis Xavier University

Stephen Hartlen
Director
Dalhousie University

Robert MacKay
Director
RA Mentor Strategic Consulting

Elisa Obermann
Director
Marine Renewables Canada

Anna Redden
Director
Acadia University

Ray Ritcey
Director
Independent

Karen White
Director
NATIONAL Public Relations

Adam Sarty
Director
Saint Mary's University

Tanya Brann-Barrett
Director
Cape Breton University

Kim Doane
Director
Nova Scotia Department of Energy and Mines

OUTREACH & DISSEMINATION

27 webinars held in OERA
Webinar Series at March 31, 2020

**Top viewed webinars
of 2019-2020**

12 webinars held
in 2019-2020



3 Petroleum



7 Marine
Renewables



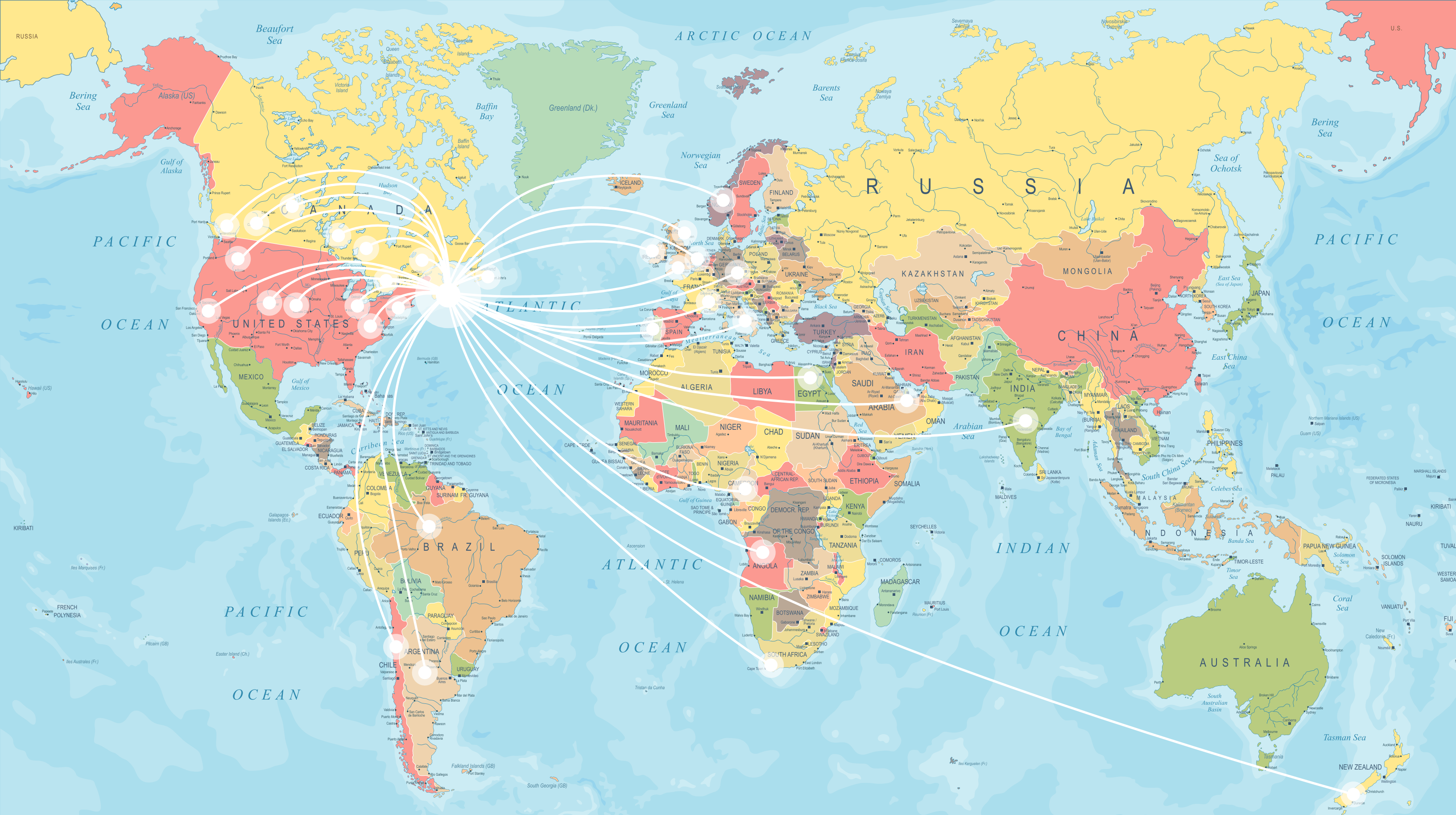
2 Industry
Education

#1 The Art of the Pitch
Karen White and Tara Wickwire, National

#2 Quantifying Fish-Turbine Interactions Using New
VEMCO Tagging Technology
Dr. Mike Stokesbury, Dr. Brian Sanderson,
Dr. Montana McLean, Liza Tsitrin, Acadia University

#3 Updates in The Pathway: A program towards regulatory
certainty for in-stream tidal energy projects
Luiz Faria, OERA; Dr. Dan Hasselman, FORCE

Reached
21 **191%**
Countries **increase**



GERA WEBINAR SERIES AUDIENCE

Financial Statements

Offshore Energy Research Association
of Nova Scotia

March 31, 2020

Offshore Energy Research Association of Nova Scotia

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Independent auditor's report

Grant Thornton LLP
Nova Centre, North Tower
Suite 1000, 1675 Grafton Street
Halifax, NS
B3J 0E9

T +1 902 421 1734
F +1 902 420 1068
www.GrantThornton.ca

To the Board of Directors of Offshore Energy Research Association of Nova Scotia

Opinion

We have audited the financial statements of Offshore Energy Research Association of Nova Scotia (the "Association"), which comprise the statement of financial position as at March 31, 2020, the statements of operations, net assets and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of Offshore Energy Research Association of Nova Scotia as at March 31, 2020, and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the financial statements* section of our report. We are independent of the Association in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Association's ability to continue as a going concern, disclosing, as applicable, matters related to a going concern and using the going concern basis of accounting unless management either intends to liquidate the Association or to cease operations, or has no realistic alternative to do so.

Those charged with governance are responsible for overseeing the Association's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Association's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Association's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Association to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Halifax, Canada
September 21, 2020

Chartered Professional Accountants

Offshore Energy Research Association of Nova Scotia

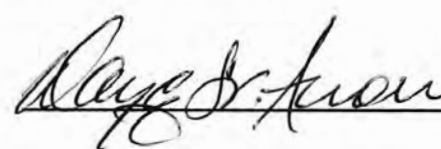

Statements of operations and net assets

Year ended March 31	2020	2019
Revenues		
Contributions (Note 3)	\$ 2,185,410	\$ 3,587,058
Interest income	<u>44,071</u>	<u>38,441</u>
	<u>2,229,481</u>	<u>3,625,499</u>
Cost of research		
Projects	2,410,035	3,189,561
Research management	<u>354,826</u>	<u>397,497</u>
	<u>2,764,861</u>	<u>3,587,058</u>
Excess of (expenditures over revenues) revenues over expenditures	<u>(535,380)</u>	<u>38,441</u>
Expenditures		
Advertising and promotion	39,110	17,121
Board and committee expenses	11,691	12,624
Business development	15,682	12,500
Information technology	25,298	38,661
Insurance	8,734	7,883
Interest and service charges	2,617	10,130
Office and miscellaneous	12,954	22,391
Professional fees – audit, accounting and legal	71,597	83,292
Rent – premises	43,200	33,120
Salaries and benefits	<u>192,579</u>	<u>202,761</u>
	<u>423,462</u>	<u>440,483</u>
Excess of expenditures over revenues before project recovery of expenditures	<u>(958,842)</u>	<u>(402,042)</u>
Administration and management fees	<u>439,445</u>	<u>94,321</u>
Excess of expenditures over revenues	<u>\$ (519,397)</u>	<u>\$ (307,721)</u>
Net assets, beginning of year	\$ 2,037,196	\$ 2,344,917
Excess of expenditures over revenues	<u>(519,397)</u>	<u>(307,721)</u>
Net assets, end of year	<u>\$ 1,517,799</u>	<u>\$ 2,037,196</u>

See accompanying notes to the financial statements.

Offshore Energy Research Association of Nova Scotia

Statement of financial position

March 31	2020	2019
Assets		
Current		
Cash and cash equivalents	\$ 563,568	\$ 547,960
Investments, at market value (Note 4)	11,272,598	9,345,602
Receivables	539,671	346,657
HST recoverable	50,646	17,368
Prepays	<u>66,441</u>	<u>52,174</u>
	<u>12,492,924</u>	<u>10,309,761</u>
Investments, at market value (Note 4)	-	3,970,859
	<u>\$ 12,492,924</u>	<u>\$ 14,280,620</u>
Liabilities		
Current		
Payables and accruals	\$ 504,533	\$ 857,931
Deferred revenue (Note 3)	<u>10,470,592</u>	<u>11,385,493</u>
	<u>10,975,125</u>	<u>12,243,424</u>
Net assets	<u>1,517,799</u>	<u>2,037,196</u>
	<u>\$ 12,492,924</u>	<u>\$ 14,280,620</u>
Commitment (Note 6)		
On behalf of the Board		
 Director		Director

See accompanying notes to the financial statements.

Offshore Energy Research Association of Nova Scotia Statement of cash flows

Year ended March 31	2020	2019
Increase (decrease) in cash and cash equivalents		
Operating		
Excess of expenditures over revenues	\$ (519,397)	\$ (307,721)
Change in non-cash operating working capital		
Receivables	(193,014)	11,827,610
HST recoverable	(33,278)	9,193
Prepays	(14,267)	(14,109)
Payables and accruals	(353,398)	493,296
Deferred revenue	(914,901)	(2,137,735)
	(2,028,255)	9,870,534
Investing		
Investment in marketable securities	2,043,863	(9,882,078)
Net increase (decrease) in cash and cash equivalents	15,608	(11,544)
Cash and cash equivalents, beginning of year	547,960	559,504
Cash and cash equivalents, end of year	\$ 563,568	\$ 547,960

See accompanying notes to the financial statements.

Offshore Energy Research Association of Nova Scotia Notes to the financial statements

March 31, 2020

1. Nature of operations

Offshore Energy Research Association of Nova Scotia ("OERA" or the "Association") was incorporated under the Canadian Business Corporations Act on March 22, 2006. It serves communities, corporations and governments requiring information through research into the impacts of offshore energy activity. It is exempt under the Income Tax Act as a non-profit organization.

2. Summary of significant accounting policies

These financial statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations ("ASNPO") and include the following significant accounting policies:

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and balances with banks.

Investments, at market value

Investments consist of investment savings account, mutual funds, and bonds. These are accounted for at fair value. Changes in fair value are recorded in the statement of operations.

Foreign currency translation

Monetary assets and liabilities are translated at rates in effect at the balance sheet date. Other assets and liabilities are translated at rates prevailing at the time of acquisition or issue. Revenues and expenses are translated at the daily exchange rate during the year. Translation gains or losses are recognized in the period in which they occur.

Revenue recognition

The Association follows the deferral method of accounting for contributions. Contributions from the Provincial Department of Energy and other government sources are allocated to projects as intended upon receipt and recognized as revenue in the year which related expenditures are incurred. Contributions receivable are recorded if the amount to be received can be reasonably estimated and collection is reasonably assured. Interest revenue is recorded on the accrual basis, once collectability is reasonably assured. Project revenue recovery of overhead is recognized once funding is received and the expenditures have been incurred.

Deferred revenue

Deferred revenue consists of that portion of contributions received but not yet earned.

Revenue received as grants or contributions and intended for specific project expenditures as envisioned when the grant was made are recorded as deferred revenue. Once an actual expenditure is incurred, an equal or appropriate amount of deferral is recognized as revenue in the year. Deferred revenue thereby consists of contributions received from government for specific purposes for which expenditure contracts may not yet be undertaken.

Use of estimates

Management reviews the carrying amounts of items in the financial statements at each balance sheet date to assess the need for revision or any possibility of impairment. Many items in the preparation of these financial statements require management's best estimate. Management determines these estimates based on assumptions that reflect the most probable set of economic conditions and planned courses of action. These estimates are reviewed periodically and adjustments are made to net income as appropriate in the year they become known. Items subject to significant management estimates include fair value of investments.

Offshore Energy Research Association of Nova Scotia

Notes to the financial statements

March 31, 2020

2. Summary of significant accounting policies (continued)

Allocation of expenditures

Expenditures for salaries and benefits and professional fees are allocated between research projects and operations expenses on an estimated basis depending on the nature of each specific project. Included in the cost of research is \$604,247 (2019 - \$408,747) of allocated salaries and benefits and professional fees.

Financial instruments

The Association considers any contract creating a financial asset, liability or equity instrument as a financial instrument, except in certain limited circumstances. The Association accounts for the following as financial instruments:

- cash and cash equivalents
- investments, at market value
- receivables
- payables and accruals

A financial asset or liability is recognized when the Association becomes party to contractual provisions of the instrument.

Unless otherwise noted, it is management’s opinion that the Association is not exposed to significant interest, currency or credit risks arising from these financial instruments. The fair values of these financial instruments approximate their carrying value, unless otherwise noted.

Initial measurement

The Association’s financial instruments are measured at fair value when issued or acquired. For financial instruments subsequently measured at cost or amortized cost, fair value is adjusted by the amount of the related financing fees and transaction costs. Transaction costs and financing fees relating to financial instruments that are measured subsequently at fair value are recognized in operations in the year in which they are incurred.

Subsequent measurement

At each reporting date, the Association measures its financial assets and liabilities at cost or amortized cost (less impairment in the case of financial assets), except for equities quoted in an active market, which must be measured at fair value. The financial instruments measured at amortized cost are cash and cash equivalents, investments, at market value, receivables and payables.

For financial assets measured at cost or amortized cost, the Association regularly assesses whether there are any indications of impairment. If there is an indication of impairment, and the Association determines that there is a significant adverse change in the expected timing or amount of future cash flows from the financial asset, it recognizes an impairment loss in the statement of operations. Any reversals of previously recognized impairment losses are recognized in operations in the year the reversal occurs.

Project recovery of operations expenses

Certain projects are eligible to receive a reimbursement of operations expenses at a predetermined rate. This contribution covers operations expenses and is billed directly to the project.

Offshore Energy Research Association of Nova Scotia

Notes to the financial statements

March 31, 2020

3. Deferred revenue

	<u>2019</u>				<u>2020</u>
	Deferred revenue	Funding	Investment activities	Recognized as revenue (contributions)	Deferred revenue
Research projects	\$ 323,141	\$ 496,632	\$ -	\$ 408,178	\$ 411,595
Offshore growth strategy	<u>11,062,352</u>	<u>-</u>	<u>155,450</u>	<u>1,158,805</u>	<u>10,058,997</u>
	<u>\$ 11,385,493</u>	<u>\$ 496,632</u>	<u>\$ 155,450</u>	<u>\$ 1,566,983</u>	<u>\$ 10,470,592</u>

During 2018, the Offshore growth strategy was established. This is a contribution agreement with the Nova Scotia Department of Energy, which is effective March 26, 2018 - March 31, 2022. The funds have been contributed to projects in the following fields: geoscience research, innovation/capacity building, knowledge transfer, and benefits optimization strategy.

4. Investments, at market value

	<u>2020</u>	<u>2019</u>
Current		
Cash and short term investments	\$ 145,428	\$ 2,069,686
Mutual funds	<u>7,118,122</u>	<u>3,333,052</u>
Bonds and debentures	<u>4,009,048</u>	<u>3,942,864</u>
	<u>\$ 11,272,598</u>	<u>9,345,602</u>
Long term		
Bonds and debentures	\$ -	\$ 3,970,859

5. Comparative figures

The financial statements have been reclassified, where applicable, to conform to the presentation used in the current year. The changes do not affect prior year earnings.

6. Commitment

The Association rents its premises under a lease which expires March 31, 2021. Estimated annual costs are \$54,300, including annual base rental and common area costs.

Offshore Energy Research Association of Nova Scotia

Notes to the financial statements

March 31, 2020

7. Impacts of COVID-19

Since December 31, 2019, the spread of COVID-19 has severely impacted many local economies around the globe. In many countries, including Canada, businesses were forced to cease or limit operations for long periods of time. Measures taken to contain the spread of the virus, including travel bans, quarantines, social distancing, and closures of non-essential services have triggered significant disruptions to businesses worldwide, resulting in an economic slowdown. Global stock markets have also experienced great volatility and a significant weakening. Governments and central banks have responded with monetary and fiscal interventions to stabilize economic conditions.

OERA has experienced delays on certain projects due to COVID-19 and continue to work with their proponents to ensure the additional safety requirements are met and new project timelines are in place. OERA does not expect COVID-19 to have significant long-lasting effects on its operations.