Keeping you in the loop on OERA's active RFPs and upcoming webinars, as well as noteworthy energy news happening close to home and around the world.

Funding Opportunities

We're currently inviting proposals for the following:

RFP - An assessment of geothermal resources in onshore Nova Scotia Part 1: Setting the stage, demonstrating value, and identifying next steps

- **Deadline: Friday May 1, 2020; 5:00 pm (Atlantic Time)**

OERA, on behalf of the Nova Scotia Department Energy & Mines and Department of Agriculture, is seeking proposals for a study to compile available geological, geothermal, geophysical and hydrogeological information, provide a preliminary opinion on the potential for geothermal development in Nova Scotia, and recommend next steps to further de-risk targeted areas. This project will also describe the economic case for potential geothermal resource exploration and development in the province. This work supports the Province's broad energy policy objectives related to climate change, inclusive economic development and the sustainable development of Nova Scotia's energy resources. For full information on the

Request for Proposals and how to apply, please CLICK HERE.

Please note, OERA may, at its sole discretion, reject any and all, or parts of any and all, proposals; postpone or cancel at any time this RFP process; waive any minor irregularities in the RFP or the responses received as a result of this RFP

OERA Online Exchange

This new online event offers an opportunity to gather for a facilitated discussion featuring energy thought leaders.

Dr. Brad Hayes
President, Petrel Robertson Consulting Ltd.
Adjunct Professor - Earth and Atmospheric Sciences, University of Alberta
Director, Canadian Society for Unconventional Resources

OERA
ONLINE
EXCHANGE

How will COVID-19 change our energy future: A perspective on what's next for oil & gas

Wednesday, May 6
3-4PM AST

Register online via Zoom at
oera.ca/outreach

Register Today

Register here for online exchange

Miss the live sessions?
Get caught up on the great conversation from our first two Exchanges by tuning in to the recordings below.

How will COVID-19 change our energy future? Perspectives on challenges and opportunities for renewables

Featuring special guest:

- Julia Attwood, Head of Advanced Materials, Bloomberg NEF.

Listen Here

How will COVID-19 change our energy future: A perspective on GHG emissions and climate change

Featuring special guests:

- Scott Skinner, Clean Foundation President & CEO
- Kate Sherren, Professor and Academic Program Coordinator with Dalhousie University's School for Resource and Environmental Studies.

Listen Here

In the News

We’ve gathered up a few of the news items we found most interesting in recent weeks.

- The world's oceans could recover from human threat by 2050, says new study; Paper published in journal Nature was co-authored by 2 Dalhousie University researchers
- Sable decommissioning plan could be stalled by COVID-19
- Air pollution eases in 4 Canadian cities as pandemic measures keep people home
- Clean energy shed 106,000 U.S. jobs in March, erasing a year of gains
- Tiny Islands, Big Energy: How Orkney, Scotland Is Fighting Climate Change

Note that subscriptions may be required to access some publications.

OERA Webinar Series

Our webinar series highlights recent and ongoing petroleum and renewable energy research. Everyone is welcome to attend our live webinars. Here's what's coming up next:

Development of Acoustic Doppler Aquatic Animal Monitoring (ADAAM) for application to marine life movement in high-energy tidal channels

May 21, 2020 1:00pm – 2:00pm ADT
Greg Trowse, Luna Ocean Consulting Ltd.; Dr. Len Zedel, Memorial University

Acoustic Doppler Current Profilers (ADCPs) are a standard tool used for measuring ocean currents. Acoustic pulses are transmitted from up to 5 beams (each with a different orientation) and the Doppler shift of the backscatter return is used to calculate the current flow velocities. Each beam can also be used as a separate 'fish-finder,' however the signals from fish are typically treated as noise. Research to date has shown these rejected noise signals contain valuable biological data. This project will test and validate the use of ADCPs as a new tool to detect and monitor fish. The OERA webinar series is hosted in Zoom.

Register here for webinar

Past webinars available online

You can also check out our library of past webinars. Watch any of them here, on demand anytime. In case you missed it, a recording of **"Lower Jurassic Source Rocks in Relation to the North Atlantic"** featuring Dr. Andrew Bishop of Oasis Geochem LLC is available here.

Watch Here

OERA Intern Interview

We're proud supporters of post-secondary education in Nova Scotia, regularly providing hands-on employment opportunities to students in our province. As **Dalhousie University Industrial Engineering student Meghan Flood** prepares to end her work term with us, we wanted to take a moment to thank her for her hard work over the past few months. Her time with us included some unexpected twists, as we implemented a work-from-home policy in response to the pandemic and learned more about hosting meetings on Zoom and Microsoft Teams than we could ever have anticipated. She dealt with all of the change with ease. We asked Meghan a few questions about her internship. Read on to see what she had to say.

Why did you apply for an internship at OERA?
I applied for an internship at OERA because of my interest in the energy sector and specifically the renewable energy sector. The idea of working on a tidal energy project was very attractive to me, along with working for an NGO that fosters sustainable energy in Nova Scotia.

What projects were you involved in during your internship?
I was able to assist with a range of projects throughout my internship. The main ones included working on the project management team of the Pathway Program, developing an inventory of clean growth research in Nova Scotia and re-engineering the OERA database and project management framework.

What have you enjoyed most about your internship with OERA?
I have had a wonderful experience working at OERA aided by the welcoming group of co-workers I worked alongside. Every employee there was interested in ensuring I got the most out of my internship while making a lasting impact on the organization. I also enjoyed learning about the energy sector in Nova Scotia and meeting with some of the many innovative organizations in our province.

Any words of advice for the future OERA interns?
OERA is a wonderful place to get real work experience while finishing your degree. You will be treated like any other employee, so make sure you speak up and input where you can. Everyone there is interested in helping you grow, and you will do just that!

Researcher Spotlight: Dr. Marc Skinner, Stantec Consulting Ltd.

In the turbid and tumultuous Bay of Fundy, traditional sonar and fisheries methods aren't always able to capture the diversity and richness of species or to detect species at risk. Led by Dr. Marc Skinner, Stantec, Marine Ecology Technical Leader (Canada), the Innovative Solutions for De-risking Species Detections in Tidal Energy Environmental Effects Monitoring Programs project

provided the opportunity to test the effectiveness of eDNA-based approaches for possible future use in environmental effects monitoring for in-stream tidal energy developments.

In recent experiments conducted at Dalhousie University's Aquatron facility, the project found that new environmental DNA (eDNA) technology can rapidly identify and determine quantities of different fish species in high-flow marine conditions. "The goal of this project was to look at eDNA for species detection for species at risk in the Bay of Fundy in areas where tidal development is being planned," said Dr. Skinner. "The eDNA project came together to answer questions around getting better information about species at risk relative to tidal power developments in the Bay of Fundy."

Dr. Skinner says the research work was done in three phases, "First, we designed the tools used to detect the fish and then trialed them in a controlled setting to make sure they worked. Second, we looked at how certain we could be that fish we detected were there recently, as opposed to last month or last year. Third, we worked to determine if you get more eDNA signal when there are more fish." Each phase was successful, with investigators determining it is possible to use eDNA technology to detect fish and finding that eDNA signal lasts in the water column for around 24 hours, meaning any fish detected is from today or yesterday – not from last month or last year. They also found that the amount of eDNA detected in the water increases with the amount of fish, meaning it's possible to detect the approximate quantity of fish present in an area.

Dr. Skinner says the future is promising for eDNA technology. "The potential for eDNA and genomics in the ocean space is unlimited. For species detection and quantifications like we're now using for species at risk, to biodiversity assessments, tracking pathogens, invasive species, ocean exploration for prospecting oil and gas seeps, asset integrity, infrastructure development – the ideas are just limitless."

Also supporting this project are Dr. Robert Hanner, Biodiversity Institute of Ontario (BIO), University of Guelph, and Genome Canada.

Who we are

At OERA, our focus is on ensuring a sustainable energy future for Nova Scotia. To help achieve that, we facilitate research into renewable energy technologies, cleantech initiatives and geo-science. We help meet energy sector research needs by facilitating collaborative, made-to-order teams of experts.

Contact us to find out more.

Comments?

We'd appreciate hearing from you at update@oera.ca.