

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING  
EAST OF NEWFOUNDLAND AND LABRADOR**  
**Technical Advisory Group (TAG) Session on *Climate Change***  
**September 17, 2019**  
**QUESTIONS AND ITEMS FOR DISCUSSION**  
**PARTICIPANT INPUT FORM**

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**1) Are there any particular information sources or analysis (such as climate change projections) that you think should be accessed and used in the RA?**

**Paris Climate Commitments and Stranded Assets**

There is a general consensus that all the world's known fossil fuel reserves cannot be burned as the level of potential carbon emissions exceeds any reasonable carbon budgets under the 2 degree Celsius (C) warming scenario.<sup>12</sup> The International Energy Agency's World Energy Outlook stated that "*No more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2 °C goal, unless carbon capture and storage (CCS) technology is widely deployed.*"<sup>3</sup> In 2015, the Bank of England warned that policies designed to limit carbon emissions could mean some fossil fuels become "stranded assets", with the Bank's governor adding that "the vast majority of reserves are unburnable if global temperature rises are to be limited to below 2 degrees C." Even the oil giant Shell conceded in 2013 "in a world where the 2 degree C limit is imposed and achieved, most of the future value generation of the companies involved will never be realized."<sup>4</sup>

The RA process will therefore need to consider whether the province of Newfoundland and Labrador can both meet its carbon reduction commitments AND expand offshore oil and gas production.<sup>5</sup> Newfoundland and Labrador's emissions target for 2030 is 6.9 million tonnes (megatonnes) of carbon dioxide. If the province triples oil production as it intends to do, this would mean that emissions from this sector alone in 2030 would account for an estimated 4.9 Mt of this target, or 71 per cent, making it virtually impossible for the province to reach its emissions reduction goals. As of 2016, the province's GHG emissions are 16 per cent higher than 1990, whereas its 2020 emissions reduction target is 10 per cent below 1990 levels, an impossible goal at this stage.

Meanwhile, the Intergovernmental Panel on Climate Change (IPCC) has released another dire new report, this time on the state of the oceans and cryosphere, which represents about 70 per cent of all fresh water on Earth, where the oceans represent 96.5 per cent of all water everywhere.<sup>6</sup> Overlapping with the UN Climate Change Summit in New York, the IPCC report confirms that profound and devastating changes will occur to essentially all water on Earth, in one way or another, thereby impacting all marine life as well as humans who depend on it for our survival. Changes to the world's oceans, glaciers and permafrost are set to unleash disaster including drought, floods, hunger and destruction unless dramatic action is taken against human caused climate change. This needs to be considered when

<sup>1</sup> Carbon Tracker 2013. 'Unburnable Carbon 2013: Wasted Capital and Stranded Assets.' <http://carbontracker.live.kiln.digital/Unburnable-Carbon-2-Web-Version.pdf>

<sup>2</sup> McGlade, C. and Ekins, P. 2015. 'The geographical distribution of fossil fuels unused when limiting global warming to 2° C'. 517 Nature 187. <https://www.nature.com/articles/nature14016>

<sup>3</sup> International Energy Agency. 2012. World Energy Outlook 2012. <http://www.iea.org/publications/freepublications/publication/English.pdf>

<sup>4</sup> Shell Climate Change. May 3, 2013. 'The Carbon Bubble Reality Check.' Blog post by David Hone, Chief Climate Change Advisor for Shell. <https://blogs.shell.com/2013/05/03/bubble/>

<sup>5</sup> Newfoundland and Labrador. 2019. *The Way Forward: On Climate Change in Newfoundland and Labrador*. [https://www.exec.gov.nl.ca/exec/occ/publications/The\\_Way\\_Forward\\_Climate\\_Change.pdf](https://www.exec.gov.nl.ca/exec/occ/publications/The_Way_Forward_Climate_Change.pdf)

<sup>6</sup> Intergovernmental Panel on Climate Change. 2019. Special Report on the Ocean and Cryosphere in a Changing Climate. <https://www.ipcc.ch/report/srocc/>

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making decisions about the extent to which new developments should proceed in the Newfoundland and Labrador offshore.

- 2) Are there any specific environmental phenomena or changes resulting from climate change that you feel are already having (or will likely have) an effect on the environmental conditions of the Study Area that should be a focus of the RA? In particular, any with implications for the potential environmental effects of future exploratory drilling activities in the Study Area?**

The effects of climate change could be felt on biotic features, changing species distributions and abundance, have community level changes such as food web and ecological linkages, and change habitat availability. This means that where important ecological attributes are right now might change in a changing climate. One example is the movement of North Atlantic right whales into the Gulf of St. Lawrence and the disastrous consequences it has had on population numbers of this critically endangered species over the past three years. While the cause of this movement is yet unclear, similar changes in species ranges over short time periods could occur in this area as well, which can have implications for where important species are located, needed mitigation measures, etc. Species are expected to shift northward, which could in turn have an impact on fisheries and where fisheries are able to occur.

- 3) Are there any particular environmental components and conditions that will likely change over the course of an exploratory drilling program and which therefore require consideration in its initial and on-going planning and implementation? To what degree can such changes likely be anticipated and addressed in initial planning and design, or is an “adaptive management” approach required?**

Based on the changing conditions and the rate at which things are changing, the RA will need to be reviewed frequently as we are already seeing changes to the environment happening quickly. Timelines for review might have to be on a yearly basis in order to stay relevant with environmental information.

- 4) Do you have any suggestions around how the RA should consider climate change in its content and outcomes, including in the eventual recommendations of the Committee?**

The background documents for the TAG session do not seem to mention the effects burning any oil drilled for as a result of the exploratory drilling and consequent production drilling (should it occur) have on the climate (upstream and downstream emissions). In order to accurately take into account the potential cumulative effects of exploratory drilling programs, an effort needs to be made to calculate if x number of exploratory wells become production wells then what would be the climate implications of both producing and then burning those fossil fuels. This needs to be taken into consideration for cumulative effects at the regional level, as this type of information is not adequately addressed in project specific environmental assessments.

It was mentioned that the recent exploratory drilling programs east of NL have been of 10 years or more in duration, which means that any production that comes from wells that result from any exploratory drilling program likely wouldn't begin until 2030 at the earliest. We need to keep in mind that these projects require billions in investment and are intended to produce oil for decades to be economically viable, yet by 2050, an 80 per cent reduction in carbon emissions is required under the Paris Agreement.

The RA must consider the carbon emissions impacts of tripling oil production off the coast of Newfoundland and Labrador by 2030. The Committee should state clearly that this would likely make it virtually impossible for the province to meet its carbon reduction goals and should recommend that oil production not proceed unless the

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government can explain how carbon reduction targets will be met. A climate test is required for all new drilling operations. With the climate crisis worsening, to willfully not abide by our international commitments is to court disaster. Why even set carbon reduction targets if we are not serious about meeting them?

The average oil platform (of the three currently operating off the coast of Newfoundland) produces over 500,000 tonnes of greenhouse gases according to Environment and Climate Change Canada's National Inventory Report.<sup>7</sup> This is roughly equivalent to putting 100,000 passenger vehicles on the road and it does not include downstream emissions when the extracted oil and gas is burned, which roughly doubles the total carbon footprint. This comes at a time when Newfoundland and Labrador, Canada, and the world is not on track to meet its Paris commitments and must decrease emissions substantially. Full production of currently operating oil and gas fields and coal mines across the world will already lead to a global temperature rise above 2 degrees Celsius. A 2015 study in Nature found that 68-80 per cent of *existing* reserves must stay in the ground.<sup>8</sup> Exploratory drilling off the coast of Newfoundland and Labrador will actually create *new* reserves.

The RA must make it explicitly clear that, primarily through the burning of fossil fuels, humans are responsible for planetary heating and climatic changes that we are witnessing on an unprecedented scale around the world. In the TAG background document, there is no reference in the introductory description of climate change either to humans or to fossil fuel extraction and burning (which is precisely the point of the exploratory drilling program being considered by the RA). The backgrounder is replete with tepid statements such as "climate change will likely have some influence on all aspects of the world's climate systems, these impacts vary regionally, and at the regional scale there is typically greater uncertainty around the nature, magnitude and timing of such changes."

These predictions, while true, do not even come close to conveying the urgency of the situation and the crisis that is likely to ensue if we don't act immediately to reduce carbon emissions. As noted, the new IPCC report on oceans and the cryosphere confirms that profound and devastating changes will occur to essentially all water on Earth, in one way or another, thereby impacting all marine life as well as humans who depend on it for our survival. Johan Rockström, director of the Potsdam Institute for Climate Impact Research, told The Guardian that in a 4°C-warmer world: "It's difficult to see how we could accommodate a billion people or even half of that..."<sup>9</sup> We are currently on track for at least 3-4 degrees of warming by the end of the century and a very recent study from the Institute Pierre Simon Laplace Climate Modelling Centre in Paris has predicted that the Earth could in fact warm by 6.5-7 degrees by 2100.<sup>10</sup>

**5) Do you have any other input or recommendations that you would like to provide to the Committee on this topic?**

<sup>7</sup> Environment and Climate Change Canada. *National Inventory Report: greenhouse gas sources and sinks in Canada*. Retrieved from: <http://www.publications.gc.ca/site/eng/9.506002/publication.html>

<sup>8</sup> McGlade, C. and Ekins, P. 2015. 'The geographical distribution of fossil fuels unused when limiting global warming to 2° C'. 517 Nature 187. <https://www.nature.com/articles/nature14016>

<sup>9</sup> <https://www.theguardian.com/environment/2019/may/18/climate-crisis-heat-is-on-global-heating-four-degrees-2100-change-way-we-live>

<sup>10</sup> <https://www.ctvnews.ca/sci-tech/earth-to-warm-more-quickly-new-climate-models-show-1.4596699>

***All comments received will be considered public and may be posted to the Canadian Impact Assessment Registry. For more information on the Canadian Impact Assessment Registry Terms of Use and Submission Policy, please consult <https://iaac-aeic.gc.ca/050/evaluations/introduction?culture=en-CA#innovation> . For more information on the Agency's privacy policies, consult the [Privacy Notice](#) on its website: <https://iaac-aeic.gc.ca/050/evaluations/Protection?culture=en-CA>***