

MARCH 2021

REPORT

of the Newfoundland and Labrador Oil
and Gas Industry Recovery Task Force

to the **NL OIL & GAS INDUSTRY
DEVELOPMENT COUNCIL**



Oil&Gas
INDUSTRY

RECOVERY TASK FORCE

March 12, 2021

Honourable Andrew Parsons, QC
Minister of Industry, Energy and Technology
Chair, Newfoundland and Labrador Oil and Gas Industry Development Council

Dear Minister:

We are pleased to present you with the report and recommendations of the Newfoundland and Labrador Oil and Gas Industry Recovery Task Force.

This report reflects the deliberations of a volunteer group of many dedicated individuals across Newfoundland and Labrador's offshore oil and gas industry who worked tirelessly over the past 90 days. Our discussions covered virtually every aspect of Newfoundland and Labrador's oil and gas value chain and we are very grateful for the enthusiastic response and participation of the stakeholders. The Task Force deliberations were frequent, spirited and always resolute in our belief that Newfoundland and Labrador's oil and gas industry is and must continue to be a significant contributor to the economic and social well-being of our province and Canada.

In addition to the Task Force members, we benefited from the many meetings and conversations with external stakeholders. What we heard was a profound passion and belief in Newfoundland and Labrador's oil and gas industry at times overshadowed by a deep concern that systemic issues continue to erode investor confidence beyond today's slump in oil prices and COVID-19. It is not a certainty that Newfoundland and Labrador will realize the full potential of its oil and gas resources, even though our dire fiscal situation and the global shift to a low carbon future, provide the right conditions to maximize the economic recovery of our oil and gas resources in a responsible and sustainable manner in support of net-zero by 2050.

We are grateful for the hard work of our colleagues on the Task Force including, staff from the Department of Industry, Energy and Technology and the Office of Public Engagement.

The work of the Task Force is done. It is now up to the Government of Newfoundland and Labrador, through the Oil and Gas Industry Development Council, to take our work forward pursuant to the accountability and implementation framework outlined in this report. Time is of the essence.

Sincerely,



Bill Fanning & Karen Winsor, co-chairs



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1. EXECUTIVE SUMMARY OF RECOMMENDATIONS

The Oil and Gas Industry Recovery Task Force (Task Force) was announced on September 25, 2020 in response to the impact of COVID-19 on the oil and gas sector and resulting downturn in the industry. Reporting through the existing Oil and Gas Industry Development Council (Council), the Task Force was given 90 days to identify immediate actions to sustain the Newfoundland and Labrador (NL) oil and gas industry in the short term and drive its long term recovery. Also, within the first 30 days, the Task Force was mandated to provide suggestions to the Government of Newfoundland and Labrador (GovNL) for how best to utilize the Newfoundland and Labrador Offshore Oil and Gas Recovery Assistance Fund (OGRAF), the \$320 million in federal funding contribution to help the NL oil and gas sector, including a provincial funding delivery model.

After 3 months, 63 stakeholder meetings, several best practice discussions with competing jurisdictions, consultations with the Council and lengthy internal deliberations, the Task Force produced 52 recommendations.

The recommendations can be summarized under 10 main headings and key messages:

Safeguard, protect, encourage and promote the development of Newfoundland and Labrador’s offshore oil and gas resources

It is of paramount importance that GovNL takes immediate measures to safeguard, protect and encourage the development of the Province’s low carbon petroleum resources. Further, both GovNL and the Federal Government must signal to the world that the continued responsible and sustainable development of NL’s petroleum resources is within Canada’s national interest in support of net-zero Greenhouse Gas (GHG) emissions by 2050. Furthermore, GovNL must implement the recommendations of this Task Force that specifically relate to oil and gas policy, plans, delivery models, organizational structures and accountability, for the sole purpose of promoting the development of, and to maximize, the economic recovery of NL’s offshore petroleum resources.

Fast-track deployment of the Newfoundland and Labrador Offshore Oil and Gas Recovery Assistance Fund into the local economy

On a year-over-year comparison between 2019 and 2020, over 2,500 direct local jobs have been lost in NL’s oil and gas sector. Getting people back to work to sustain the local oil and gas industry in the short-term is the most pressing near-term priority. The Task Force recommendations and associated actions for getting people back to work include: the restart of drilling; an accelerated return to normal production operations; maintaining the certifications of unemployed oil and gas workers; ensuring current exploration work commitments are realized; screening of shallow-water tiebacks for development potential; studies tied to jurisdiction-wide development plans and provincial-wide strategic infrastructure; supply chain competitiveness; energy transition; digitalization; and, new low carbon, low staffing developments.

At the time of the writing of this report, \$254.5 million of the OGRAF has been committed and/or earmarked for activities tied to existing offshore installations, pending resolution of specific minimum conditions. The Task Force recommended the OGRAF be divided into two streams: \$288 million dollars for eligible operator proposals tied to existing installations in the NL Offshore Area (Stream 1 Funding) and \$32 million dollars for commercial and non-commercial businesses involved in NL’s offshore oil and gas sector, excluding operators and explorers (Stream 2 Funding). It is crucial this federal funding is fully dispersed into the local economy to avoid any further erosion of the industry’s highly skilled workforce. To this end, the Task Force has recommended to GovNL that Stream 1 funding decisions shall be finalized as early as possible, and no later than March 31, 2021 and these projects completed by December 31, 2022. Additionally, Stream 2 funding decisions shall be decided and committed on an urgent basis and no later than June 1, 2021, and these projects completed by December 31, 2022. Time is of the essence.

Maximize economic recovery of NL’s oil and gas resources in support of net-zero emissions by 2050

In competing jurisdictions like Norway and the United Kingdom (UK), governments have either reset, reasserted, or created new institutions through informed public policy and legislation to maximize economic recovery of their oil and gas resources. These organizations are now moving to align this objective in support of the jurisdiction’s carbon-emission goals, promoting both the industry as a path to achieving those goals, and the necessary changes within the industry.

It is of great urgency that NL’s offshore oil and gas sector goes through a similar process to ensure we realize the full potential of our resources. NL’s offshore joint management regime includes several different entities and organizational structures at both the federal and provincial levels of government; as a result ownership, accountability, and responsibility for resource development and stewardship is diluted and unclear. It is critical



that responsibility and ownership for the economic development of NL’s oil and gas resources is prioritized. A clearly stated strategy, policy direction, and leadership, through a designated organizational structure appropriately resourced with a clear accountability framework is needed. To this end, the Task Force recommends:

- GovNL set a clear policy directive that recognizes the importance of maximizing economic recovery of NL’s oil and gas resources for Newfoundlanders and Labradorians including, support of net-zero emissions by 2050.
- GovNL create a NL Oil and Gas Authority, similar to the UK’s Oil and Gas Authority and Norway’s Petroleum Directorate, with the mandate to maximize the economic benefits from the development of the oil and gas resources within, and promote cooperative development of, all resources offshore NL. This Authority shall also have a mandate to develop a long-term energy transition plan that supports a climate neutral economy through low carbon resource development and leverages NL’s vast renewable resources.
- The Governments of Canada and Newfoundland and Labrador affirm the principle of joint management as set out in the Canada-Newfoundland and Labrador Atlantic Accord Implementation Act (the Accord Act), and specify the constraints to the unilateral incursion of federal policy and legislation, as exemplified by recent environmental assessment and fisheries matters, into the joint management of the NL offshore industry.

Accelerate exploration and ensure current work commitments are realized

The simplification of current exploration approvals and the environmental assessment process is required, including a commitment to an impact assessment timeline that ensures current work commitments are not lost. While the recently completed Regional Environmental Assessment (RA) process creates the prospect for a 90-day approval period, preparatory activities significantly extend the overall timeframe and ongoing legal challenges undermine the reliability of the process and approvals received. The RA process should be augmented further. A review of the whole process including a comparison with benchmarks from other jurisdictions needs to be undertaken, followed by the implementation of any actions required to match those international benchmarks.

A more collaborative mindset is required in NL's offshore industry to make exploration more attractive. In the late 1990's, operators and explorers collaborated on jurisdiction-wide exploration drilling programs that included rig sharing, logistics support, and onshore project management and administration. These collaboration models must be revisited to deliver synergies that contribute to reducing total cost of ownership and improving the region's global competitiveness without compromising safety and reliability. The Task Force recommends GovNL and the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) work with operators and explorers to develop a more efficient rig intake simplification process and to facilitate arrangements for rig sharing between operators. The Task Force recognizes and approves of GovNL's recently announced Offshore Exploration Incentive (OEI) that allows all future bid deposit forfeitures to be reinvested in support of growth and continued exploration of our offshore petroleum industry.

Other Task Force recommendations to incentivize exploration include: extensions to Period 1 of the license periods to reflect delays included by the environmental impact assessment process under the current Canadian Environmental Assessment Act (CEEA) and COVID-19; update of land tenure provisions; allowance for writing off the costs of unsuccessful wells against royalty payments; locking down environmental assessment periods; and, the resolution of legal challenges.

Accelerate development by modernizing the regulatory regime, amending the land tenure system, and enabling jurisdiction-wide collaboration

Currently, potential development scenarios are less economic than they could be due to fiscal and regulatory issues including:

- development approval uncertainties and long timelines;
- delayed implementation of the Frontier and Offshore Regulatory Renewal Initiative (FORRI);
- environmental approval uncertainty;
- benefits agreement uncertainty; and
- ineligibility for the Atlantic Investment Tax Credit (AITC).

The Task Force recommends GovNL and the Federal Government commit to:

- The modernization of the offshore regulatory regime through immediate implementation of the planned FORRI and Atlantic Occupational Health and Safety (OHS) regulations under the Accord Act.
- Request and approve the C-NLOPB to pro-actively engage industry to seek alignment on risk assessment and management and the application of international standards.
- Finalize and implement the planned amendments to the "land tenure" system under the Accord Act.
- Increase timeliness, inclusiveness, and transparency in offshore project benefits agreements negotiation process.
- Support and encourage a more collaborative engagement of labour throughout the development and production cycle of offshore projects.
- Federal government to reinstate the AITC as it was originally intended to improve productivity and increase employment in Atlantic Canada. Reinstatement will significantly improve the business case for the next potential offshore development and help close the competitiveness gap between offshore NL and other competing jurisdictions. GovNL to continue work with the Federal government to achieve this goal.

A more collaborative approach is required between GovNL, the Federal Government, the C-NLOPB, operators and explorers, the local supply chain, and labour for offshore NL-wide development plans that promote principles of standardization, simplification and industrialization while focusing on improving the overall cost competitiveness of the region. These groups must work together to prepare for the new FORRI and OHS regulations, and to ensure staff are trained and competent in performing their duties in a goal-based regime. To this end, the Task Force recommends that a lean improvement initiative between C-NLOPB and industry is undertaken that specifically targets industry/regulator practices that expand training and improve communication and collaboration.

It is recommended GovNL work directly with project proponents of new developments to maximize the opportunity for these developments to move forward. This could include investigating pre-development activities that could be brought forward providing immediate local employment in engineering, procurement, project management, skills training, research, and innovation.

Create a digital offshore that improves global competitiveness, promotes innovation and industrial leadership, and enhances local Supply Chain capability and export potential

Field developments going forward will be required to harness technology, digitalization, and carbon efficient solutions to ensure safe operations and competitiveness in a global market. GovNL, the federal government, and the C-NLOPB must develop measures to educate the industry, identify and assess risk, to promote best practices and to provide a risk-based framework to capture the potential that digitalization and technology offer as an enabler to safer and more efficient field development and operations in the future.

The Task Force recommends regulatory processes be reviewed to ensure they are, to the greatest extent possible, streamlined and modernized to allow for the development of a digital offshore without any compromise to safety and reliability. It expects the outstanding FORRI regulations will be a step in this direction.



GovNL, industry and labour must align on future resource planning for educational and training programs designed to avail of new opportunities and job creation in the digitalization of NL's oil and gas industry. This would also include supporting and funding studies to determine the technologies and innovations, infrastructure, work force capacity, and the skills and competencies required to support a digital offshore. Additionally, providing access to offshore assets to local entrepreneurs will enable proof of concept testing of new technology. This is similar to measures carried out in Norway that allow the local supply chain and broader local technology ecosystem to get a reference project to help support global sales.

Evaluate tiebacks using a zero-royalty basis as a screening tool to identify potentially viable prospects and put mechanisms in place to utilize existing basin infrastructure for development

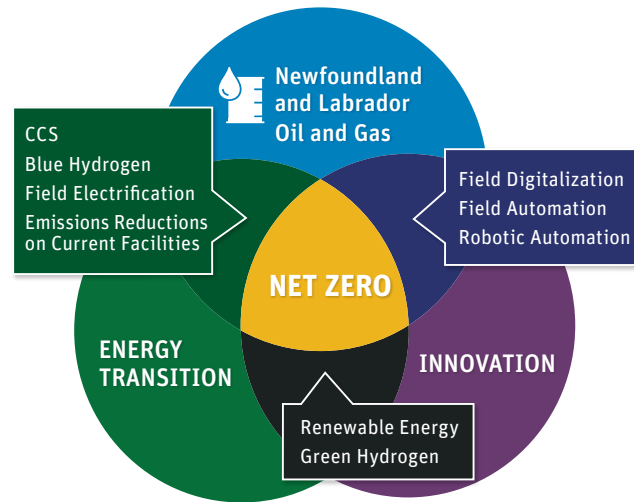
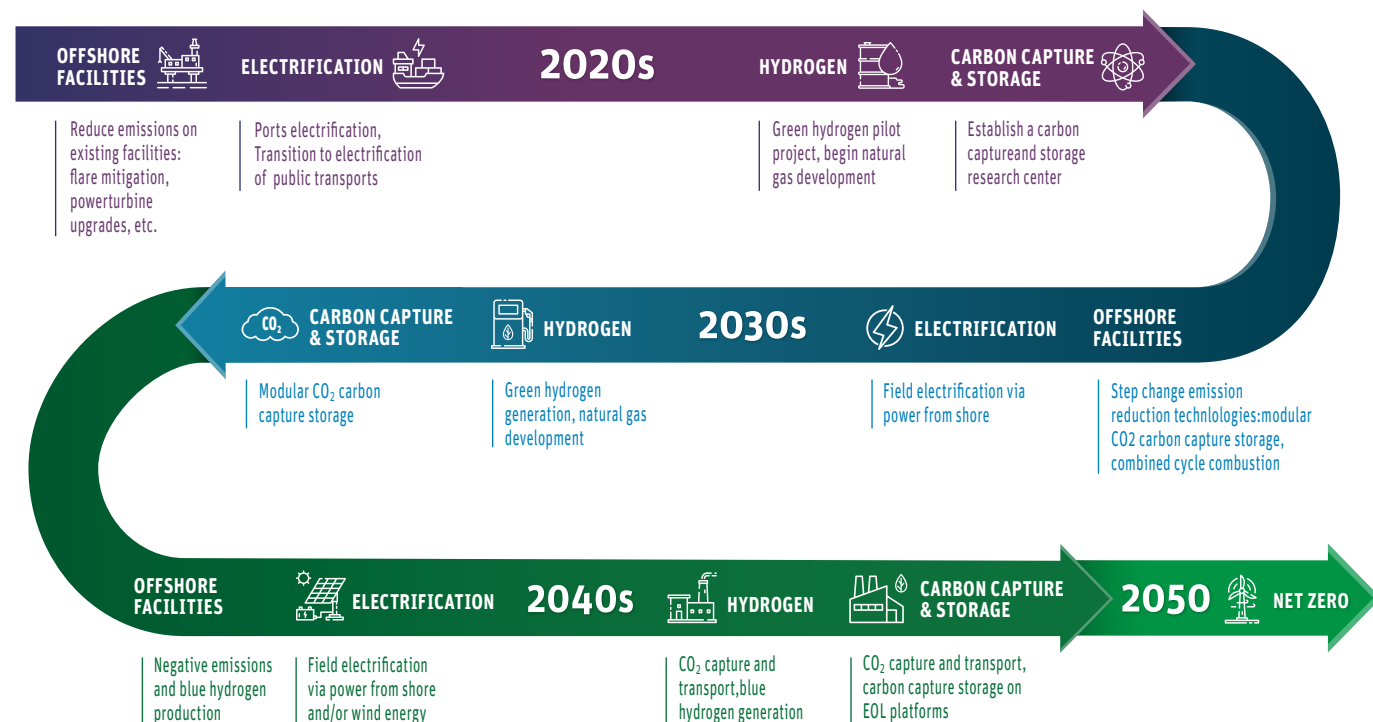
There are undeveloped fields under Significant Discovery Licenses (SDL) on the Grand Banks which may provide medium-term development opportunities. The Task Force recommends that the Oil and Gas Corporation of Newfoundland and Labrador (Oilco) or the proposed new NL Oil and Gas Authority, evaluate potential tieback developments using a zero-royalty basis as a screening tool to assess viability of the potential. For any potential developments which are deemed economical, engage in negotiations with the SDL holder and host asset owner to advance the development, considering possible modified royalty arrangements.

Additionally, GovNL should incentivize the drilling of appraisal wells, which may prove up SDL resources and put in place a dispute resolution procedure, so if the owners of a tieback can't reach an agreement with the host facility there is a mechanism for resolving the dispute.

Create an energy transition roadmap of low carbon oil and gas developments with pragmatic and scalable pathways to renewables.

NL's offshore oil and gas industry has a vital role to play in fostering NL's energy transition. Primary among the challenges is growing the offshore oil and gas industry while reducing upstream GHG emissions. While the GHG emissions per barrel in the NL offshore are lower than the world average, there is risk that this will increase without additional developments and investments in clean technology. NL can become a leader in clean technology through low carbon oil and gas, renewable energy resource development, and by growing a technologically focused workforce. A key success factor will be a highly collaborative framework (refer to illustration opposite) where **maximizing the economic recovery of NL's low carbon oil and gas resources** continues to be a major economic driver, **enabling the energy transition** through growth in renewables and **continued innovation**. The Task Force recognizes ongoing industry association alliances and government partnerships to advance specific aspects of the energy transition including electrification and offshore wind.

FIGURE 1. Energy Transition Roadmap



The Task Force fully supports these partnerships and recommends a more holistic approach to low carbon oil and gas developments and transition to renewables starting with the establishment of the NL Oil and Gas Authority and modernization of the offshore regulatory regime. Other specific Task Force – Energy Transition recommendations, are included in section 4.2, R27-29.

Figure 1 below depicts the Task Force's aspirational **Energy Transition Roadmap**. Although it has not been fully studied it should be viewed as a starting point in detailing out the various strategies and pathways to net-zero by 2050.

The Task Force also recommends that the federal government consider a successor to the Emissions Reduction Fund (ERF) post-2022 to continue to fund emission reductions on existing facilities.

Fast-track awarding of Stream 2 OGRA funding projects that create immediate employment opportunities for the local supply chain and align local capability and capacity that is globally competitive with future needs

The most immediate and impactful way to get local people back to work is through direct funding into the local oil and gas supply chain. The Task Force encourages both levels of government, the C-NLOPB, operators, and joint interest partners to find ways to return

to normal operations and drilling as quickly as possible. The Task Force also recommends the Supply Chain subcommittee of the Council be re-established with the needed capacity to complete its "Enhance Local Supply Chain" work, and in particular, to determine the cost competitiveness of NL suppliers of goods and services. This requires a clear strategy that is: consistent with the Accord, addresses international supply pricing, and considers the future needs of the industry. Furthermore, the Task Force recommends that GovNL fund measures to ensure regulatory-industry mandated certifications are maintained for displaced local residents/workers.

URGENT CALL TO ACTION

For each of the 52 recommendations, the Task Force has included its best estimate of timing for implementation of each action as well as identifying the responsible entity; and in the latter case, this is a combination of the Task Force's understanding of the current state of accountability and responsibility as well as who is in the best position to immediately influence and carry out the Task Force recommendations.

A lean implementation oversight committee comprising a small representative contingent of the Task Force, the Council, the C-NLOPB, GovNL, the federal government, and other industry associations, is recommended to be established no later than 60 days following the date of the Task Force final report submission. The implementation oversight committee shall meet regularly to ensure the Task Force recommendations are implemented or actioned and that a sense of urgency is maintained until the NL Oil and Gas Authority is established and operational.

Finally, it must be restated that the most significant and immediate call to action is for the **GovNL to take immediate actions to safeguard, protect and encourage development of NL's low carbon petroleum resources. Further, that both the federal and provincial governments signal to the world that the continued responsible and sustainable development of NL's petroleum resources is within Canada's national interest and directly supports net-zero GHG emissions by 2050.**

Section 4 of this report includes a detailed discussion of the Task Force main recommendations.

2. INTRODUCTION

2.1 The Task Force was announced on September 25, 2020 in response to the impact of COVID -19 on the oil and gas sector and the resulting downturn in the industry. This was followed by the announcement of Task Force members on October 15, 2020, with the first meeting of the Task Force occurring on October 20, 2020.

Reporting through the Council, the Task Force work focused on:

1. The identification of immediate actions required to sustain the NL offshore industry and submit recommendations to the Council within 90 days of the first meeting of the Task Force; and,
2. Provide recommendations for eligibility parameters and prioritization criteria for provincial delivery of OGRAF, the \$320 million in oil and gas support funding from the Federal Government within 30 days of the first meeting of the Task Force.

2.2 Task Force Mandate, Structure, & Process

Task Force Mandate

The mandate of the Task Force was to develop recommendations to the Council for immediate actions led by government and/or industry that will sustain the offshore industry in the short-term and drive the recovery of the NL oil and gas sector over the long term.

The Task Force was to develop recommendations to the Council and the Province related to the delivery of OGRAF on: 1) the eligibility parameters for the Provincial delivery of the funding program; and 2) prioritization criteria for eligible proposals.

Objectives

The objectives of the Task Force included:

- Recommendations for key immediate actions required by government and/or industry to help stabilize and grow the NL oil and gas sector.
- Identification of timelines and key accountabilities for recommended actions.
- Collaboration with key government and industry stakeholders to identify the necessary actions to drive the recovery of the NL oil and gas sector.
- Recommendations for eligibility parameters and prioritization criteria for Provincial delivery of OGRAF.

Deliverables

The Task Force was mandated to produce:

- Recommendations for eligibility parameters and prioritization criteria for Provincial delivery of OGRAF. The recommendations to focus on the creation of direct and indirect employment, the generation of environmental benefits, and maximize the value for all Newfoundlanders and Labradorians.
- A Final Report to be submitted to Council which details recommended actions, timelines, and associated accountability for implementation. The Final Report will include immediate actions required, as well as an accountability framework, to foster effective implementation of recommendations by appropriate government and/or industry stakeholders.

Structure

Task force members, working on a volunteer basis, were selected following nominations from the Council, the Newfoundland and Labrador Oil and Gas Industries Association (Noia), the Canadian Association of Petroleum Producers (CAPP), Labour, the Newfoundland and Labrador Environmental Industry Association (NEIA), and TechNL. A diverse set of criteria was used that allowed for the selection of individuals with the appropriate skills and experiences necessary to contribute to driving the recovery of the NL oil and gas industry. The co-chairs of the Task Force, who were both sitting members of the Council, were invited to participate in the Task Force at the request of the Premier's Office and Minister of Industry, Energy, and Technology (IET) and accepted their roles on a volunteer basis.

The task force was structured under four workstreams:

1. Policy and Regulation;
2. Exploration and Development;
3. Energy Transition; and
4. Supply Chain

Process

The overall methodology and work process the Task Force used to guide its work is shown in Figure 2 to the following page. Also, included in Figure 3, is a schematic of the overall OGRAF parameters developed by the Task Force and submitted to GovNL within the required 30 days timeframe. While the selection of Task Force Workstreams members was ongoing, the Task Force co-chair, a labour representative, and selected members of the Industry Council, formed a temporary funding subgroup to kick-start the funding program work. The subgroup completed its work within two weeks and passed the work on to the Task Force to continue.

The overall funding framework, including eligibility parameters and prioritization criteria, was formally submitted to GovNL via the Council on November 18, 2020. Following completion of the 30-day deliverable, the Task Force continued its work on its second deliverable – identifying immediate actions to sustain the industry in the short-term and drive the long-term recovery of the province's offshore oil and gas industry.

FIGURE 2. Task Force Methodology & Work Process

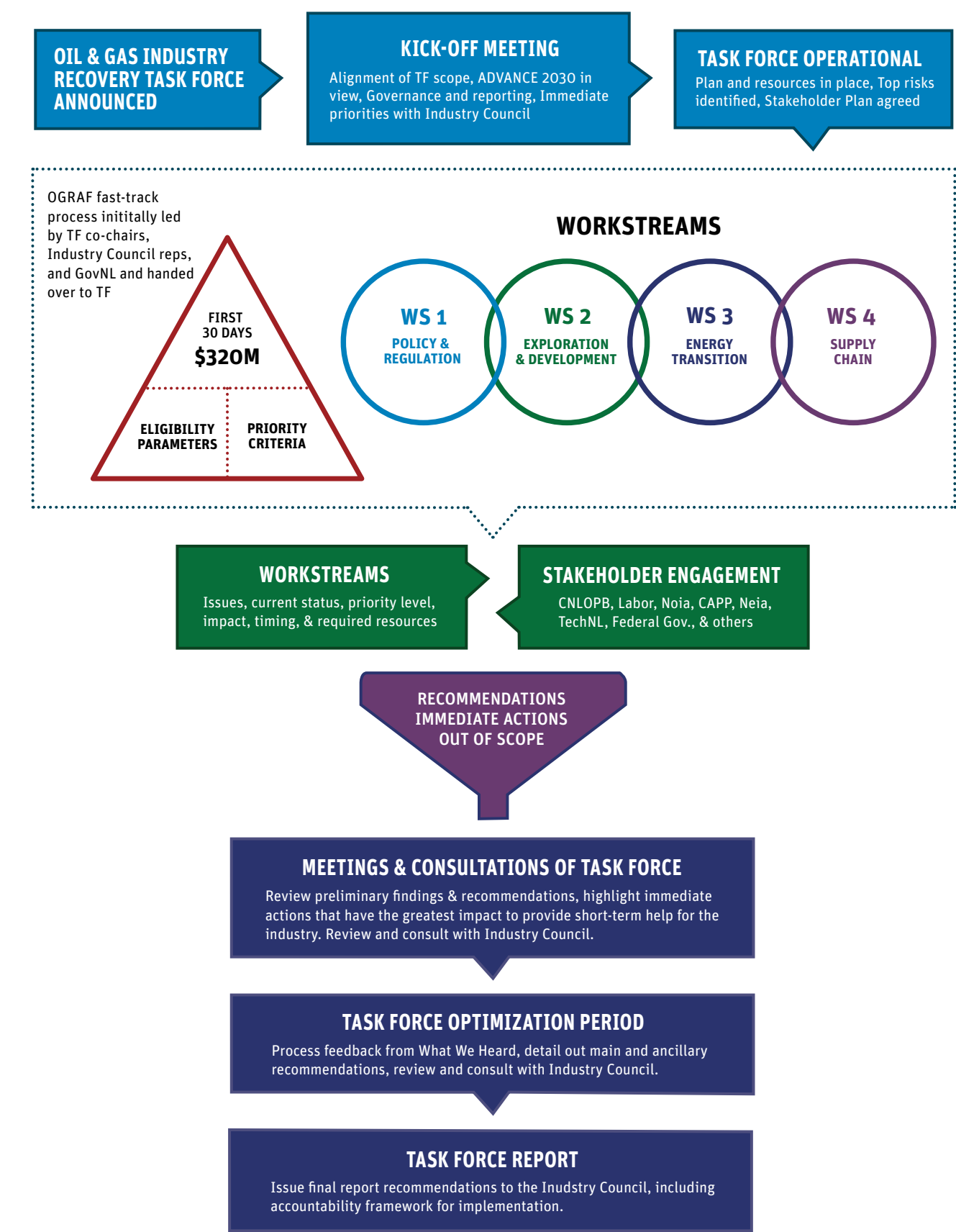
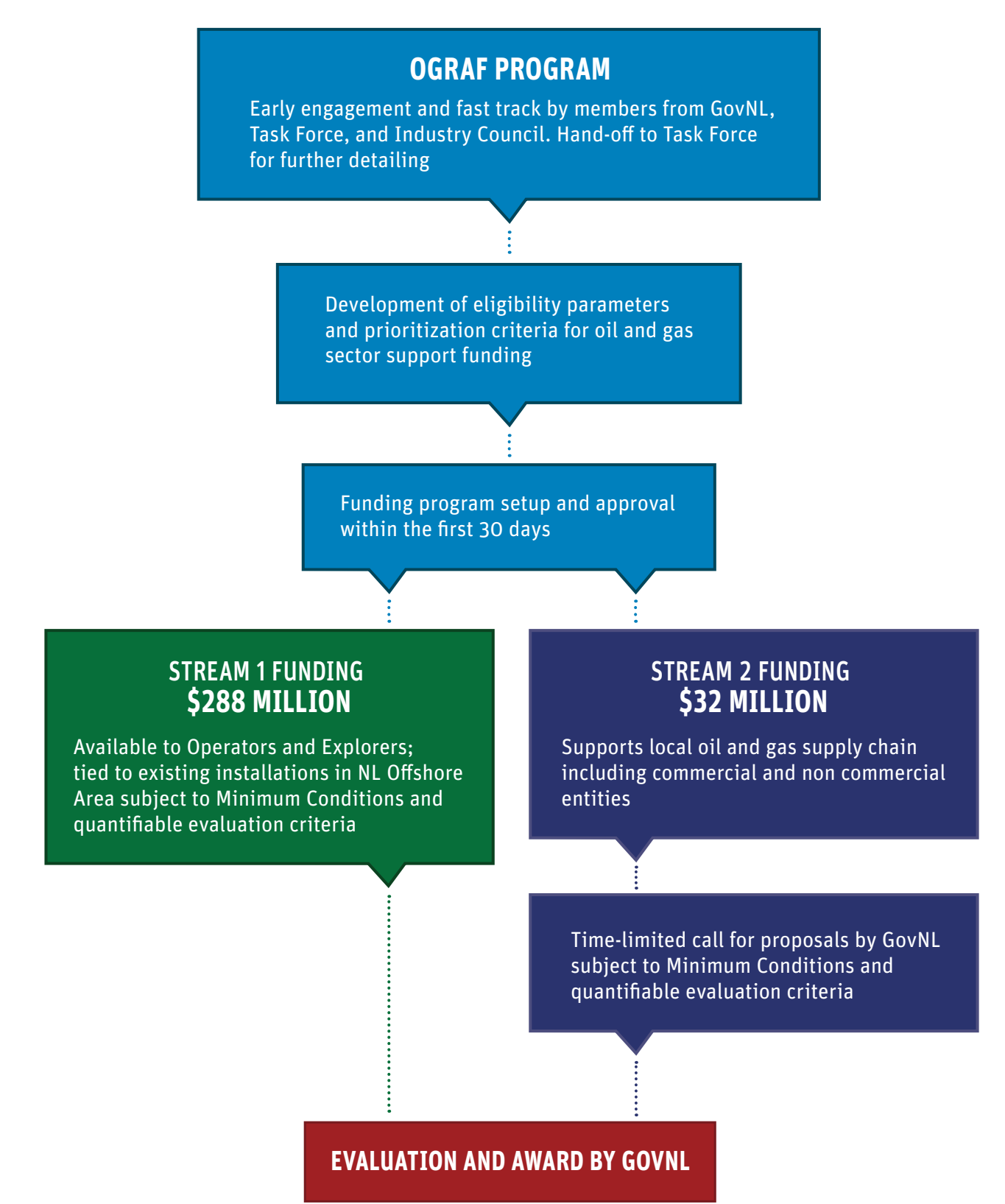


FIGURE 3. Task Force OGRAF Framework





Business Environment

Global Oil Demand Situation

This last year was an unprecedented year in modern history. The global effects of COVID-19 have been far reaching in every aspect of our society with staggering mortality rates, social upheaval, and depressed economic activity. This has included a direct hit to the oil and gas sector which was already suffering the effects on demand brought on by the Russia and Saudi Arabia oil price war. In April of 2020, oil prices collapsed and storage capacity was at an all time low. The pandemic, coupled with a dramatic decrease in oil demand, has created much uncertainty around the longer-term impact on global economies and the future of the oil and gas sector.

Forecasts for demand vary from the view that we have passed peak oil to more than a decade of growth remaining. As detailed in the table below, the World Oil Outlook (WOO) 2020 extended their view to 2045, having studied the expected shift of economic and energy demand growth to developing countries ⁽¹⁾. The WOO’s assessment is clear that oil continues to dominate with the largest energy share providing a stable foundation for addressing global energy needs including population growth. The WOO’s outlook for oil demand is further validated by the International Energy Agency’s Sustainable Development Scenario, where global oil demand continues to be a significant part of the energy mix noting between 65-70

million barrels per day through 2040, and natural gas demand for the same period increasing by 30 per cent, all owing to increased consumption in South and East Asia ⁽²⁾. Furthermore, in this same timeframe, a surge in clean energy policies and investment delivers on the United Nations 2015 Paris Agreement’s GHG emissions targets. Sustainable investment is vital to support the technological innovations and capacity development that will address growing energy needs.

In summary, there is a consensus among the energy forecasting community that the demand for crude oil will continue to be an integral part of the energy mix for the next 25 to 30 years and beyond. As the chart below shows this demand ranges from 65-100 Million Barrels of Oil per Day (MMBOPD) driven by increased energy demand in developing countries as these countries aim to achieve a higher standard of living, as well as a projected increase in the world population (2 billion people by 2050). As existing oil reservoirs decline, there will be a consistent need to develop new oil resources over this period to sustain and support the energy demand. Globally, offshore deep-water project sanctioning commitments are forecast to increase by 25 per cent in 2022 to \$57 billion US dollars and 71 per cent in 2023 to \$78 billion US dollars compared to an average of \$45.6 billion US dollars between 2017 and 2019.

NL’s offshore high quality low carbon oil is an ideal resource to support this demand.

Total primary energy demand by fule type, 2019–2045

	LEVELS <i>mboe/d</i>						GROWTH <i>mboe/d</i>	GROWTH <i>% p.a.</i>	SHARE <i>%</i>	
	2019	2025	2030	2035	2040	2045	2019–2045	2019–2045	2019	2045
Oil	91.0	94.4	97.7	99.3	99.7	99.5	8.5	0.3	31.5	27.5
Coal	77.1	75.1	75.1	74.3	72.8	71.0	-6.1	-0.3	26.7	
Gas	66.9	69.8	76.2	82.2	87.3	91.2	24.3	1.2	23.1	25.3
Nuclear	14.4	16.1	17.5	19.1	20.8	22.1	7.7	1.7	5.0	6.1
Hydro	7.3	8.1	8.8	9.5	10.2	10.5	3.2	1.4	2.5	2.9
Biomass	26.4	28.9	31.0	32.9	34.6	35.5	9.1	1.2	9.1	9.8
Other renewables	6.0	10.6	15.5	20.8	26.8	31.4	25.4	6.6	2.1	8.7
TOTAL	289.1	303.0	321.9	338.1	352.3	361.3	72.1	0.9	100.0	100.0

Source: OPEC.

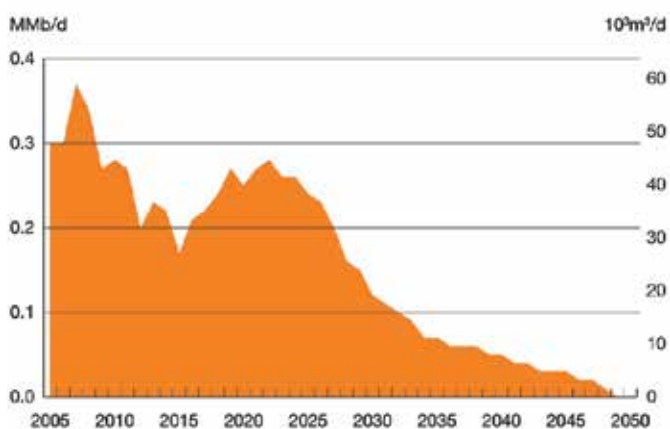
Newfoundland and Labrador

A 2019 study by the provincial Department of Finance found from 2010 to 2017, total economic benefits from the offshore petroleum industry accounted for nearly 30 per cent of Gross Domestic Product (GDP), 13 per cent of provincial labour compensation, and 10 per cent of provincial employment.

This province's offshore oil is already one of the lowest carbon intensive extractive crudes and emits significantly less GHG emissions than other oil-producing jurisdictions. Supporting offshore NL is a way to ensure that some of the lowest emission production can continue to be part of the global energy mix. For the period 1997 to 2019, NL has produced approximately 26 per cent of Canada's conventional light crude oil and approximately 8 per cent of Canada's total crude oil. Supply from alternative energy sources has not progressed at an adequate rate to satisfy the current and near future energy demand and it will require decades for the alternative energy sector to mature. The consensus forecast models identify oil demand primarily required for transportation fuels as alternative energy sources take a larger share of the power generation market. The province has committed to net-zero emissions by 2050 and the local oil and gas sector will contribute strongly to this country being sustainable and economically robust.

The graph to the right from Canada's Energy Regulator 2020 Energy Future Report predicts a steep and steady decline in NL's oil production to completion in 2050⁽³⁾. An alignment of provincial and federal priorities will be needed to change this outlook. It is important to the survival and success of NL's offshore oil and gas industry to alter this projection. This can be achieved through improved joint management and increased development and production allowing the province's oil and gas industry to contribute to the global energy demand. It is not in Canada's or the world's best interest to limit low carbon oil production from Canada and encourage high carbon oil development in other parts of the world to meet the energy demand.

Newfoundland Offshore Oil Production Increases in the Near Term and then Steadily Declines to 2050 in the Evolving Scenario



The current low oil price exacerbated by COVID-19 driven demand reduction has had a devastating impact on the province's oil and gas sector. The industry is now experiencing indefinite deferrals of new scheduled projects, an abeyance in current offshore activities, decreased investment, and an absence of exploratory activity. Some of the direct impacts include:

- Abeyance of Hibernia drilling;
- Cancellation of the Hibernia West subsea development;
- Suspension of the West White Rose CGS construction & first oil;
- Review undertaken by Cenovus (previously Husky) Energy's Atlantic Operations;
- Deferred decision on Terra Nova asset life extension;
- Departure of drill rigs West Aquarius & Transocean Barents from NL;
- Postponement of BP and BHP exploration drilling programs until 2023;
- Postponement of the Bay du Nord project; and,
- Temporary closure of North Atlantic Refining & postponement of upgrades.

While immediate challenges facing the industry have been widely reported, the adverse impacts on small and medium enterprises, which are the backbone of the local oil and gas industry, are equally distressing. It is estimated the total value of cancellations, deferrals and suspensions will create a loss of approximately \$6.2 billion of oil and gas industry expenditures that will not occur through to 2023, and a loss of \$61 billion to the provincial GDP to 2038.

Additionally, a reduction in employment in the next ten years will equate to a loss of 90,000 person-years of employment, resulting in significantly lower provincial consumer spending in retail, restaurants, real estate, and other services, and a loss in tax revenues for GovNL.

While these recent difficult decisions taken by operators and explorers have been detrimental, it cannot overshadow the significant contributions the oil and gas sector has made to the provincial economy including:

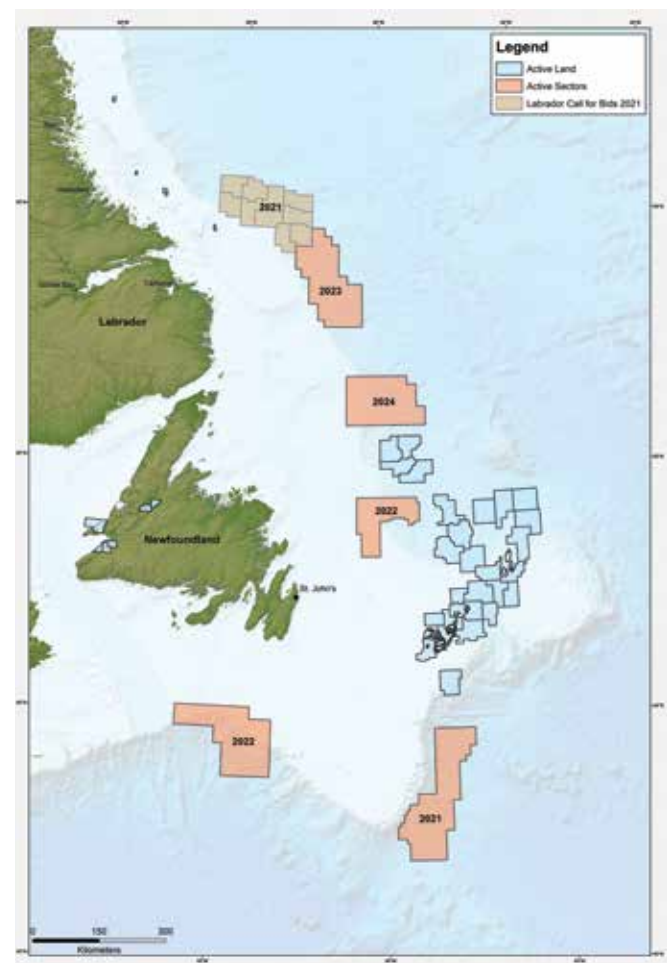
1. As of December 31, 2019, 6,791 people (6055 within the province) directly employed by NL oil and gas reporting projects;
2. Cumulative from 1997 to 2019, more than \$22 billion in royalties paid to GovNL;
3. Cumulative from 1997 to 2019, accounted for approximately 41 per cent of the value of total NL exports;
4. Cumulative from 1997 to 2019, accounted for approximately \$62.7 billion in business expenditures; and,
5. Since 2004, accounted for nearly \$600 million spent on research and development.

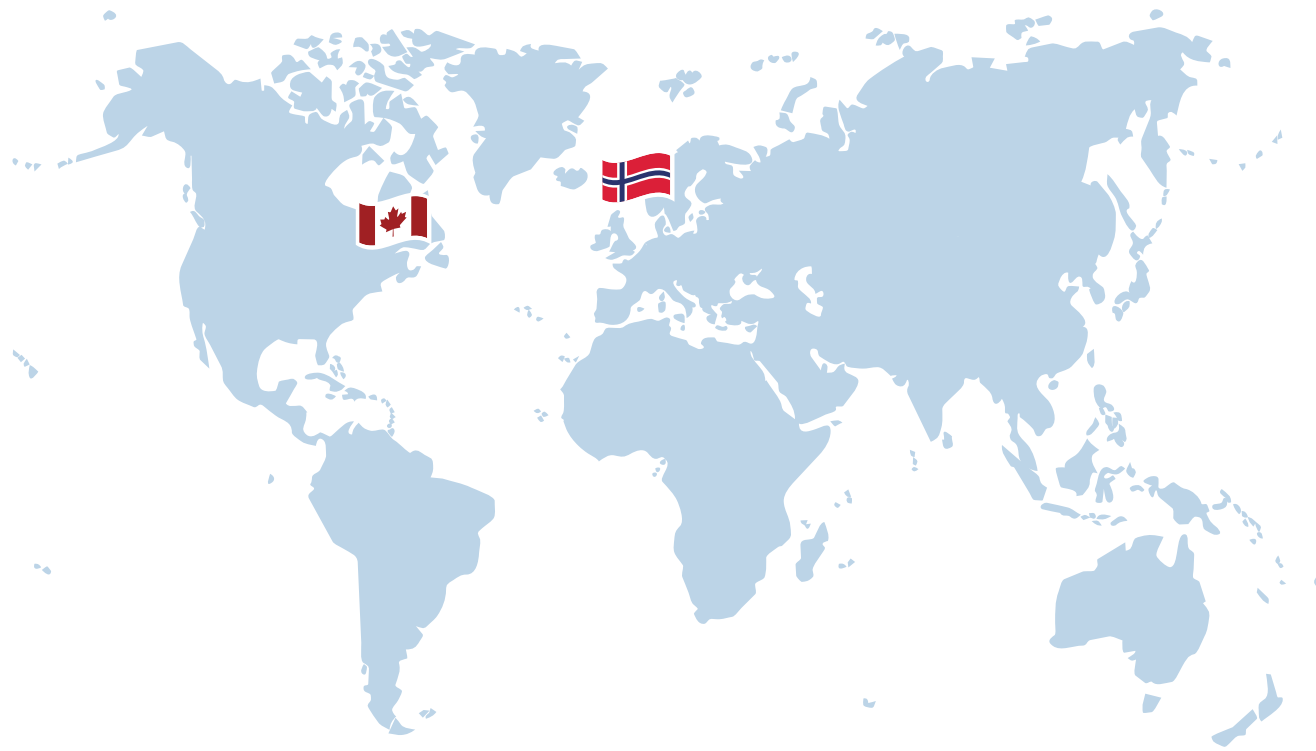
Relative to other offshore jurisdictions, such as the UK and Norway, NL remains a relatively unexplored region within the oil and gas industry. Less than 7 per cent of the province's 1.5 million km² of offshore area is under license. In recent years, the province has invested \$190 million in the collection of offshore seismic data that has revealed significant prospectivity. This has resulted in historic interest from oil and gas operators and explorers with over \$4 billion in exploration work commitments since 2016.

However, NL is a higher cost environment for oil and gas exploration and development due to:

- a harsh offshore environment;
- the distance of opportunities from shore;
- the stop and start nature of the industry;
- high mobilization costs for people, materials, and equipment;
- a complex regulatory environment;
- a long duration from discovery to first oil;
- an uncompetitive tax regime; and,
- limited sharing of information and resources among operators.

NL Offshore Licenses





Jurisdictional comparison: Canada and Norway

Canada

As referenced in other sections of this report, the federal government provided GovNL with \$320 million in oil and gas support funding. While this investment is being used to boost employment in the local oil and gas sector, the province's partner in the management of its' oil and gas resources, the federal government, has not introduced any federal tax incentives to provide additional support to NL's offshore the oil and gas industry.

The following federal programs were used in the past to incentivize NL's oil and gas industry:

- The National Energy Program introduced the Petroleum Incentive Program (PIP) in 1980 which covered as much as 80 per cent of operators drilling expenses. PIP, which ended in 1987, contributed to the discovery of all but one current oil and gas project offshore NL.
- The federal AITC tax credit of 10 per cent provided a regional credit supporting capital investment in the Atlantic Canada offshore area. The AITC was phased out for oil and gas companies over the period of 2012 through to 2016.

The most recent incentive program is GovNL's OEI program targeting the reimbursement of direct exploration well costs. The program parameters include:

- Well 1 is not eligible for reimbursement;
- Well 2 is eligible for cost reimbursement up to a maximum of \$30M CAD; and,
- Well 3 is eligible cost reimbursement up to a maximum of \$50M CAD. ⁽⁴⁾

There is also perceived uncertainty in the Canadian oil and gas regulatory framework that leads to provisions for increased cost. Environmental assessments have taken over 900 days to complete. While the new RA is expected to rectify this issue through a 90-day approval process, the RA has not yet been tested to confirm timeframe and decisions resulting from the RA are also at the discretion of the federal minister. The global average for an environmental assessment approval is approximately 3-6 months with Norway taking just 79 days to complete. Additionally, an unclear timeline for the completion of FORRI and OHS regulation reviews adds to uncertainty. Similar regulatory uncertainty does not exist in Norway.

Norway

The Norwegian tax system has been consistent and stable for many decades. Responding to the 2020 oil price collapse, Norway's Parliament acted quickly to offer temporary incentives to boost exploration and development and to save jobs. The details of Norway's incentive program introduced in June 2020 include:

Tax Incentives:

- Corporate tax: 22 per cent, 6 year depreciation.
- Special tax: 56 per cent, 1 year depreciation and 10 per cent uplift over 1 year.

Qualifying investment:

- All investment made in 2020 and 2021.
- Development plans submitted before end of 2021 and approved in 2022.
- All capital expenditures up to first oil production.
- Tax loss refunds up to 2021. ⁽⁵⁾

Norway's tax incentive is forecast to generate a US\$6 billion dollar increase in the investment outlook through to 2025, making Norwegian projects approximately US\$10/barrel more attractive than the global average. The full effect of the incentive package is still unclear, however, as of December 2020, offshore oil and gas development activity in Norway was quite robust. There were 18 on-going developments on the Norwegian Continental Shelf consisting of stand-alone, redevelopments, subsea, and one unstaffed platform. Also, there are approximately 95 discoveries that could be considered for development.

As NL and Norway are competing jurisdictions, Norway's immediate response to last year's oil price decline and COVID-19, through fiscal incentives, has widened the competitiveness gap to offshore NL's disadvantage.

The Bottom Line

- Opportunities for exploration and development in offshore NL are not competitive with opportunities in other oil and gas jurisdictions.
- Other jurisdictions, such as the UK sector of the North Sea and Norway, have lower exploration and development costs due to established resources and infrastructure.
- Other jurisdictions have responded to the downturn in the industry with more timely incentives and tax breaks, encouraging investment.
- The current fiscal, regulatory and approval structures in NL deter investment.

Many of our industry's challenges are above ground, and as such, can be dramatically improved through greater collaboration between both levels of government and realigning the intent of the 1985 Atlantic Accord.

It is an economic and social imperative that Newfoundland and Labrador overcome these challenges to close the competitiveness gap and realize the full potential of its offshore oil and gas industry in a responsible and sustainable manner.

Sources:

1. World Oil Outlook 2020 - <https://woo.opec.org/index.php>
2. International Energy Agency World Energy Outlook 2020 - <https://www.iea.org/reports/world-energy-outlook-2020/outlook-for-energy-demand#abstract>
3. <https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2020/index.html>
4. www.gov.nl.ca/iet/funding/offshore-exploration-incentive/
5. Wood Mackenzie "Norway tax change: an in-depth view" August 2020

3. WHAT WE HEARD

Between October 26, 2020 and January 8, 2021, the Task Force actively sought input from industry, government agencies, industry organizations, competing jurisdictions and other internal stakeholders to engage in discussion on how best to support the recovery and sustainability of Newfoundland and Labrador's oil and gas industry. A complete list of meetings and submissions is included in **Appendix B**.

Consultation sessions took place in the form of virtual meetings and some in-person meetings. All in-person meetings adhered to government COVID-19 protocols including minimizing the number of participants, social distancing, and wearing of face masks. As shown in illustration 2 to the right, the Task Force held 63 stakeholder meetings and received 13 submissions. Some stakeholder groups were consulted on more than one occasion. The written submissions and discussions reflected a diversity of perspectives and concerns in matters related to the current and the long-term viability of NL's offshore oil and gas industry. All comments and ideas were compiled and categorized into 5 key themes and issues (refer Figure 4 below) allowing for thorough analysis of the data, establishment of common threads and objective identification of priority actions. The wealth of ideas and suggestions gathered from dialogues and submissions is foundational to this report.

Figure 5 shows a fairly broad demographic encompassing the 63 stakeholder meetings including, but not limited to, business, education, financial and labour. The Task Force workstreams were all extremely busy – meeting, listening and inviting input and feedback on this important piece of work. The Task Force is grateful for everyone's keen participation and we hope that we have done justice to each and every one of these important interactions.

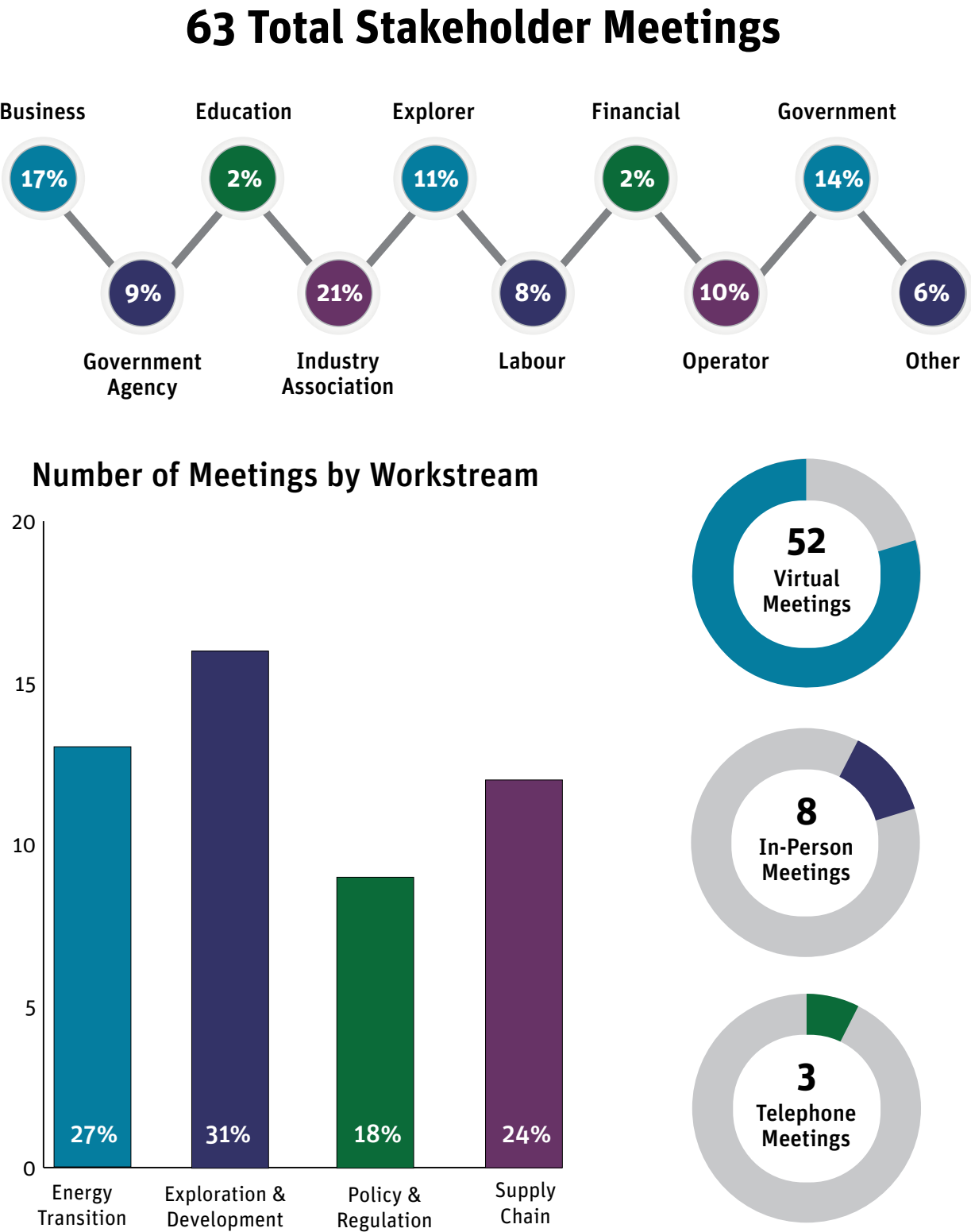
ILLUSTRATION 2. What We Heard: Meetings and Submissions



FIGURE 4. What We Heard



FIGURE 5. Stakeholder Meetings



4. RECOMMENDATIONS

4.1 Federal Funding Eligibility Parameters and Prioritization Criteria

On November 18, 2020, within the first 30 days of the Task Force work, a funding framework for OGRAF was submitted to GovNL and the Council. The framework included: guiding principles of transparency, speed and agility; targeted areas of investment; and, eligibility parameters and prioritization criteria.

In recognition of the immediate priority established by GovNL to get people back to work to sustain the industry in the short term and drive the long-term recovery, the Task Force recommended OGRAF be divided into two streams:

- Stream 1: \$288 million dollars for eligible operator proposals tied to existing installations in the NL Offshore Area; and,
- Stream 2: \$32 million dollars for the local oil and gas sector excluding operators and explorers.

Common to both funding streams was the establishment of minimum conditions, targeted areas of investment, eligible activities, and prioritization criteria to guide GovNL in their proposal review, evaluation and selection process. Refer to Figure 6 on the following page.

Minimum conditions included:

- early commitment periods and project completion dates;
- direct and indirect NL employment impact;
- technical and financial feasibility;
- socio-economic benefits;
- targeted areas of investment: maintenance of existing installations (life extensions, maintain and/or accelerate a return to steady-state production operations);
- increase production in the offshore NL; and,
- accelerate new production.

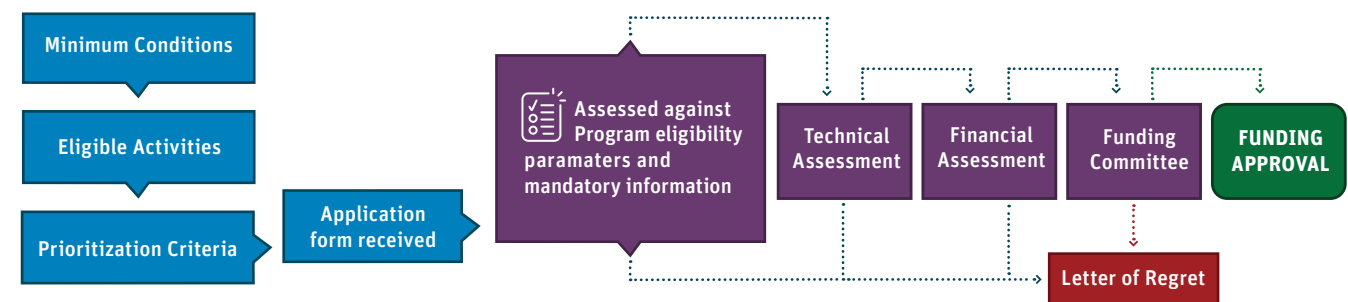
Eligibility parameters and eligible activities included:

- activities that support direct and indirect employment in NL or offshore NL;
- activities that generate environmental benefits or co-benefits, e.g. reduction in GHG emissions;
- activities related to existing installations or infrastructure linked to an existing installation; and,
- research, development, and deployment related to improving the environmental performance of existing installations.

Ineligible expenditures as set out in the funding agreement between the government of Canada and the government of Newfoundland and Labrador include:

- the program may not incur expenditures supporting offshore petroleum exploration activities; and,
- the program may also not incur expenditures supporting, whether directly or indirectly, equity or debt investments in offshore petroleum projects.

FIGURE 6. Funding Contribution Provincial Delivery Framework



Prioritization and assessment criteria include:

- Applicant Funding Contribution Amount:
 - level of contribution from applicant.
- Employment Benefits and/or Impacts:
 - number of person-hours created;
 - timeline for implementation;
 - local Supply Chain market penetration (ripple effect); and,
 - diversity impacts.
- Environmental Benefits & Sustainability:
 - reduced GHG emissions through operational efficiencies;
 - reduced GHG emissions through emission reduction technologies; and,
 - mitigates oil production decline and sustains production operations through 2025.

As a supplemental recommendation to the November 18, 2020 Task Force funding framework, the Task Force also recommended the adjustment of the funding Stream allocations at the discretion of GovNL, pending all eligible projects satisfy the minimum conditions set out in the funding framework. This would ensure the full distribution of \$320 million into the local economy and prevent administrative delays.

4.2 Recommendations

A fundamental pre-requisite to the specific Task Force recommendations in this report is the requirement for GovNL to explicitly recognize, safeguard, protect and encourage development of NL's low carbon petroleum resources in support of net-zero GHG emissions by 2050.

To this end, the main recommendations of the Task Force presented in this section 4.2 are designed to support and enable this goal. Appendix C also includes a list of supporting Ancillary Recommendations. Both the main recommendations and the ancillary recommendations represent the totality of the Task Force report recommendations.

Fast-track deployment of the Newfoundland and Labrador Offshore Oil and Gas Recovery Assistance Fund into the local economy

The skills required to operate, maintain, support and service the offshore assets are acquired based on experience in the industry in conjunction with education and training. Activities to retain these skills in the province in order for NL residents to participate in the industry over the long term, are a priority. In addition, we need to preserve the capacity and participation of companies in the industry otherwise they may have no other choice but to "re-tool" and move away from supporting the industry resulting in a loss of local ability and local critical mass required for the future. The Task Force recommends:

- R1. GovNL to fund activities that utilize the skills of the offshore work force. Ensure the funded activities result in increased reliability and safety of the assets that prolongs their operating life.**



R2. Existing projects' go-forward economics need to be assessed and, if positive, a near term-funding arrangement put in place that shares risk and reward. GovNL needs to assess the incremental economic benefit of these projects versus the cost to provide incentives to proceed.

R3. Specifically, GovNL and industry should identify the high potential tie-backs, identify the technical analysis required to design, then fund the work. Focus on a "standardized approach" to components i.e. design one, build many.

During this downturn, the oil and gas industry could utilize the idled engineering and project management talent to resolve technical and economic issues to get a Flemish Pass development underway safely and economically. The Task Force recommends:

R4. GovNL and industry continue to progress the feasibility work to establish the economic viability of the project, and to optimize the project solution. It is recommended to support the study work, with a focus on the work which can be completed in NL.

Maximize economic recovery of NL's oil and gas resources in support of net-zero emissions by 2050

Ownership of the development of NL's oil and gas resources and the division of responsibilities among GovNL, Oilco, and the C-NLOPB is not clear. Multiple stakeholders highlighted the lack of ownership, clear leadership, and consistency.



There is a need for a more active advocacy role for the NL offshore to promote development and with a broader perspective for the maximization of economic development and economic recovery across all projects and potential projects including established infrastructure. Further, there is no organizational structure or entity that has full responsibility of maximizing the economic recovery of the NL's offshore oil and gas resources. The Task Force recommends:

R5. (a) GovNL create an agency, either as a new entity or utilizing Oilco, to have a role similar to the UK's Oil and Gas Authority, with the mandate to maximize the economic benefits from development of the oil and gas resources within the NL offshore area, including the promotion of cooperative development of all resources across offshore NL.

(b) The C-NLOPB give consideration to including conditions in SDLs requiring inter-operator discussions and collaboration with respect to maximization of economic recovery and support net-zero by 2050.

R6. GovNL issue a public document specifying accountabilities and responsibilities for oil and gas exploration and development.

The Accord Act commitment of a joint management regime is being eroded by unilateral federal government actions. Changes to the environmental assessment and federal fisheries policies represent unilateral federal incursion/authority contrary to the joint management concept. The Task Force recommends:

R7. The federal government and GovNL affirm the principle of joint management as set out in the Accord, and specify the constraints to the unilateral incursion of federal policy and legislation, as exemplified by recent changes to environmental assessment and fisheries matters, into the joint management of the NL offshore industry.



Establishing and evaluating concepts for the development of discoveries offshore NL could help new entrants evaluate the area and be a foundation for development. Presently, there is no jurisdiction-wide development plan for the frontier offshore area. The Task Force recommends:

R8. GovNL, through Oilco or the NL Oil and Gas Authority, to develop jurisdiction-wide development schemes, one for deep-water and one for shallow, to provide a foundation for developers and explorers. These development concepts should include options for green power supply from the shore and field of the future elements, such as remote operation. Funding for this should be sourced in Stream 2 of the OGRAF.

A significant source of GHG emissions originates from transportation to and from offshore facilities and transportation of crude from producing facilities. The Task Force recommends:

R9. Opportunities exist to reduce transportation emissions through logistical coordination among operators and increased digitalization of facilities reducing the level of offshore staffing. Emission reductions related to crude transport could be accomplished by considering fuel switching on shuttle tankers. NL Oil and Gas Authority should include progressing these initiatives in its mandate.

Opportunities to reduce emissions on existing installations were identified predominately by efficiency upgrades and flare gas reductions. As it is not currently economically viable to implement these upgrades, continued government funding will be required to reduce these emissions. The Task force recommends:

R10. A post-2022 emission reduction fund (ERF) should be established by the federal government.

A carbon offsets framework needs to be in place to enable net-zero goals. The Task Force recommends:

R11. The provincial Department of Climate Change in consultation with other stakeholders including the C-NLOPB, IET and Oilco, develop an offset plan prior to 2022 when the performance standard system tops out.

Accelerate exploration and ensure current work commitments are realized

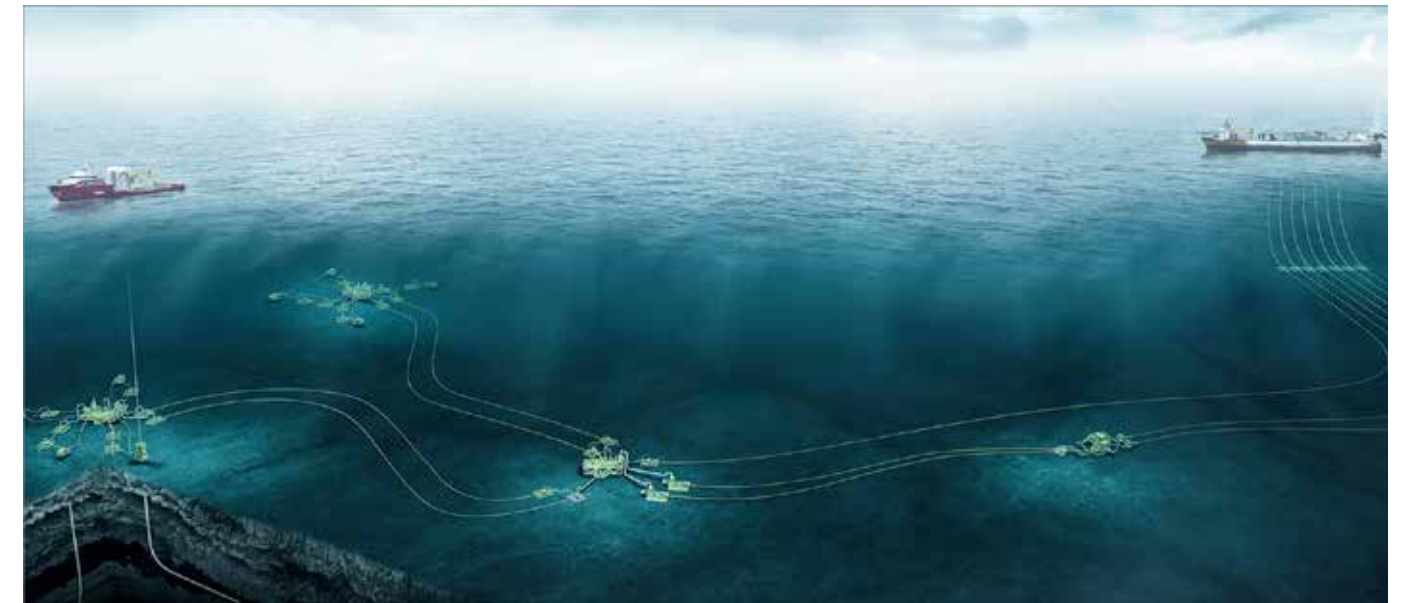
Notwithstanding very good prospectivity, exploration in offshore NL is less attractive than in other parts of the world. The overall cost of drilling wells in offshore NL can be significantly more than the actual cost of the well. The Task Force recommends:

R12. GovNL to modify its royalty regime to permit offshore NL-wide exploration expenses to be deductible in a project's royalty calculations, in whole or in part.



A provincial Offshore Exploration Incentive (OEI) package has been announced; however it only has limited application. The timing within the OEI may not allow wells to be planned and drilled by the deadline. Additional challenges including rig intake and a 90-day approval period must also be realized. The Task Force recommends:

R13. Based on stakeholder feedback, GovNL to revise its Offshore Exploration Incentive package to expand its application.



The length of time for rig intake in NL adds cost and uncertainty. CAPP has suggested improvements, however, a new roadmap is yet to be issued. Easing the transfer of rigs from equally as safe jurisdictions to NL is an opportunity. The Task Force recommends:

R14. C-NLOPB improve the rig intake and management process by:

- issuing a roadmap showing the information required and the approvals to be granted to allow a rig to start work in offshore NL 90 days after the start of the application process;
- implementing a generic Operations Authorization (OA) for a rig to be transferred more easily into the NL offshore area thereby enabling rig sharing opportunities and more efficient timelines and processes;
- developing a process so that for an incoming rig from another jurisdiction, the C-NLOPB can accept recognized certification by an established Certifying Authority rather than requiring recertification to Canadian standards to the greatest extent possible;
- implementing a digital information management system for information sharing and greater collaboration and efficiency.

Rig sharing among a group of operators for exploration or development could reduce timelines and costs. The Task Force recommends:

R15. Establish a Joint Government-Industry-Regulator working group to encourage rig sharing, using previous successes as an example, such as the 1990's Jeanne d'Arc Basin Operators Drilling Program, and consider how to enable an OA attached to a rig to make rig sharing easier. (Noting that s.138 of Accord Act does not specifically prohibit a rig owner from holding the OA).

A 90-day approval period arising from the RA process has been communicated, however, the necessary preparatory activities significantly extend the overall duration and the legal challenges make approvals uncertain. The Task Force recommends:

R16. The recently completed RA process to be augmented further to include a review of the whole process and a comparison with benchmarks from other competing jurisdictions and actions taken to match those international benchmarks.

There may be resource opportunities adjacent to existing fields which are not being explored or evaluated. The Task Force recommends:

R17. GovNL consider incentivizing the drilling of exploration wells on blocks adjacent to existing assets.

An onerous requirement for a 95 per cent water cut on producing wells delays well abandonment, drilling, and bringing new wells on line. Additionally, applying water injection to lower water cut wells reduces the carbon emission intensity of produced oil. The C-NLOPB has accepted 90 per cent or lower water cut abandonment on a well by well basis. A general guideline approval is required to allow well planning and abandonment to be based on technical and economic factors not just ultimate recovery. This approach has the potential to shorten the Hibernia drill pause, allowing for up staffing and increased production/royalties. The Task Force recommends:

R18. For fields that are slot constrained, the C-NLOPB to modify its approach on water cut to consider the overall net benefit to the field inclusive of both incremental oil recovery and GHG emissions and to take a longer term view to allow drilling to restart.

Accelerate new development by modernizing the regulatory regime, amending the land tenure system, and enabling jurisdiction wide collaboration

The existing Accord regulatory provisions are outdated and lead to unnecessary delays and inefficiencies for offshore developers. The existing OHS regulations are transitional only and require replacement. The FORRI and OHS regulatory processes need to be concluded on an urgent basis and change management plans implemented including, personnel training and competency programs for staff working and interpreting regulation in a goal-based regime.



The timing issues related to the extended environmental impact assessment review process, and the timing of the rig intake process, combined with the limited drilling activity windows, has created timing pressures for the fixed 9-year Exploration License even before the delays associated with the COVID-19 pandemic. These pressures are exacerbated by the Period 1/Period 2 structure within that nine years created by the Exploration Licenses term set by the C-NLOPB. Due to COVID-19, some explorers may have difficulty in satisfying their work commitments within the specified periods. The Task Force recommends:

R19. The federal government and GovNL commit to:

- (1) The stabilization of the offshore regulatory regime through implementation of the planned FORRI and OHS regulations under the Accord Act;
- and
- (2) Request and approve the C-NLOPB to:
 - (i) For existing Exploration Licenses under CEEA only, and adversely impacted by COVID-19, extend period 1 to nine (9) years without penalty, and
 - (ii) Pro-actively engage industry to seek alignment on risk assessment and management, and the application of international standards.

The Land Tenure System needs to be updated. A package has been under preparation for a number of years. This Task Force has not reviewed the current proposed clauses, but the content and need for amendment does not appear to be controversial among the federal government, GovNL, and the C-NLOPB. The delay in releasing the package creates uncertainty and may lead to cancellation or deferral of 2023 and subsequent drilling programs as this is a contributor to above-ground risk. The Task Force recommends:

R20. The federal government and GovNL commit to finalize and implement the planned amendments to the “land tenure” system and other changes specified in the 2019 Agreement.

Oil and gas companies operating in NL are unable to benefit from the tax advantages that would have been available under the AITC program. As a result offshore NL is less attractive as an investment location compared to other oil and gas jurisdictions. The United Nations Convention on the Law of the Sea (UNCLOS) “world royalty” application is also a risk due to uncertainty as there is currently no resolution as to how the UNCLOS royalty payment requirement will be satisfied following an oil and gas development outside 200 nautical miles. The Task Force recommends:

R21. The federal government and GovNL take the following steps to improve the attractiveness of offshore projects:

- a) Federal government to reinstate the AITC as it was originally intended to improve productivity and increase employment in Atlantic Canada. GovNL to continue to work with the federal government to achieve this goal, and
- b) Clarify how operators developing fields in the NL offshore area will be protected from the application of UNCLOS Article 82 royalty payments to relevant NL offshore oil and gas projects.



GovNL needs to increase the transparency of its equity, royalty and Newfoundland Benefits negotiation processes for offshore development projects. Uncertain benefits requirements add to costs and timelines for operators and explorers when prospects are being evaluated. The Task Force recommends:

R22. GovNL take the following steps to enhance local engagement in, and benefits from, the NL offshore oil and gas industry:

- a) Increase inclusiveness and transparency in offshore project benefits agreements negotiation process;
- b) Support and encourage a more collaborative engagement of labour throughout the development and production cycle of offshore projects;
- c) Work with labour and industry to develop best practices and guidance to provide work on future and existing offshore projects in NL and potentially with international customers to ensure a steady stream of labour required activity; and,
- d) Clarify and clearly communicate benefits expectations.



Create a digital offshore that improves global competitiveness, promotes innovation and industrial leadership, and enhances local supply chain capability and export potential

Multiple stakeholders noted a need for common data sharing. There is an opportunity to utilize digital data to produce industry-wide metrics and analysis. This will enable identification of positive and negative trends and areas of focus in our offshore, regionally and even internationally. Specifically, when seismic data has been requested, the C-NLOPB has sometimes only made available paper (or pdf) copies of every tenth seismic line. The implementation of FORRI (see R19) will also aid in enabling innovation. The Task Force recommends:

R23. The C-NLOPB to study how to standardize the form of data to enable sharing. The adoption of the Open Subsurface Data Universe should be considered. The C-NLOPB to maximize the sharing of regulated data.

Evaluate tiebacks using a zero royalty basis as a screening tool to identify potentially viable prospects and put mechanisms in place to utilize existing offshore infrastructure for development

Existing discovered resources with related SDLs in the Jeanne d'Arc Basin, which could potentially be developed as tiebacks, are not proceeding as they may be perceived as uneconomic. A number of Jeanne d'Arc Basin tiebacks have been developed successfully. Given their shorter development cycle, these subsea tiebacks could help provide near-term development opportunities. The Task Force recommends:

R24. Evaluate potential tieback developments using a zero royalty basis as a screening tool to assess viability of potential. For any potential developments which are economic on this basis, engage in negotiations with the SDL and Host Asset Owner to advance development, considering possible modified royalty arrangements.

Consider incentivizing the drilling of appraisal wells, which may prove up SDL resources.

Put in place a dispute resolution procedure, so if the owners of a tieback SDL cannot reach an agreement with the host facility, there is a mechanism for resolving the dispute (access to infrastructure).



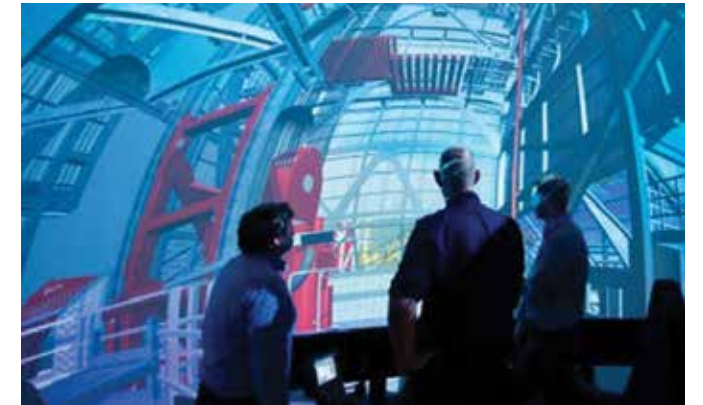
Logistics assets, such as helicopters and supply vessels, are a significant component of the offshore operating costs and the overall cost competitiveness of the NL Offshore area. There are opportunities to more effectively share these resources among operators to lower offshore operating costs. The Task Force recommends:

R25. The new NL Oil and Gas Authority to encourage and incentivize cooperation and asset sharing to reduce offshore operating expenses (OpEx).

Field developments in the future will be required to harness technology, digitalization, and carbon efficient solutions to ensure safe operations and competitiveness in a global market. The Task Force recommends:

R26. Establish a joint C-NLOPB/operator/worker representative/Certifying Authority working committee (similar in nature to the Helicopter Operations Safety Committee), with purpose to educate, identify and assess risk, promote best practice, and provide a risk based framework on how to capture the potential that digitalization and technology offers as an enabler to safer and more efficient future field development and operations.

Create an energy transition roadmap of low carbon oil and gas developments with pragmatic and scalable pathways to renewables.



A highly collaborative framework is needed where maximizing the economic recovery of NL's low carbon oil and gas resources continues to be a major economic driver enabling the energy transition through growth in renewables and continued innovation, and to advance specific aspects of the energy transition including, electrification and offshore wind. The Task Force recommends:

R27. GovNL and industry cooperate for the establishment and funding of a designated energy transition organizational capability with four centers of excellence for different focus areas including a carbon capture and storage (CCS) center, a hydrogen center, a renewable energy center, and a center for digitalization.

Production efficiency optimization, gas turbine emissions reductions, and flaring reduction and recovery, are three areas that are significant contributors to offshore GHG emissions. There isn't a strong collaborative ecosystem offshore NL for advancing emission reduction technologies in these areas. The Task Force recommends:

R28. GovNL to create a collaboration similar to Canada's Clean Resource Innovation Network (CRIN) to pursue the advancement of emission reductions in the oil and gas sector and foster networking among offshore contractors and operators in clean technology.



NL has significant green hydrogen potential with an abundance of renewable power with no clear plan to monetize this resource. The federal government's recently released Hydrogen Strategy (December 2020), represents an opportunity for NL to play an important role in helping Canada realize the opportunities for hydrogen. The Task Force recommends:

R29. GovNL to develop a NL hydrogen strategy taking account of recently released hydrogen strategies within Atlantic Canada and nationally.

Natural gas is widely regarded as a transition fuel and its production is required to develop blue/grey hydrogen industry. The potential for offshore gas development should be investigated and incentivized. A working group studying natural gas developments established by IET and Oilco are reviewing the potential for monetizing gas developments. The Task Force recommends:

R30. An attractive royalty regime should be implemented by GovNL to encourage natural gas development. Recommend that a publically available study be undertaken detailing all relevant economic indicators and gas development scenarios being fostered by Oilco and/or IET.

Fast-track awarding of Stream 2 Funding projects that create immediate employment opportunities for the local Supply Chain and align local capability and capacity that is globally competitive with future needs

There is a need for GovNL to leverage the various government funds, [i.e. training funds, Labour Market Development Agreement (LMDA), etc.] and a portion of the OGRAF Stream 2 funding to: a) fund offshore workers to keep offshore training certificates current, and b) assist workers to add to their existing training by preparing for the Field of the Future. The Task Force recommends:

R31. GovNL to explore the availability of training funds (LMDA, etc.) to support keeping offshore certifications current. Assess how relevant training funds could be leveraged to assist workers in adding to their existing training in preparation for the Field of the Future.



Future offshore fields will be developed using the significant advances in digital technology, remote sensing, and adaptive software. The Task Force recommends:

R32. GovNL should fund work to develop a “Field of the Future” benchmark development scenario and then fund work to develop the innovation required to close current gaps in knowledge, technology and skills, and funding related to research and development activities. This will allow NL based companies to develop solutions and sell this knowledge to the world.

4.3 Accountability Framework for Implementation

A key deliverable of the Task Force Final Report included, “an Accountability Framework to foster effective implementation of recommendations by appropriate Government and/or industry stakeholders.”

In satisfaction of the foregoing and understanding this to be a public document, within the first 45 days of the submission of the report, it is recommended that a targeted series of Task Force Report face-to-face and/or virtual presentations take place with GovNL to ensure understanding of the main recommendations, invite feedback, and build ownership for implementation and successful outcomes.

It is also recommended that a formal business development and communications plan be developed to tell NL's oil and gas story in a way that economists, bankers, investors, environmentalists, our youth, our seniors, and the general public can understand **i.e.**

answer the question: why NL's offshore oil and gas industry is more relevant than ever in a low carbon and sustainable future.

To allow for continuity and a fast-start for implementation of the recommendations, the Task Force recommends its continuance for a period of time albeit, scaled down in size and limited in scope, to an implementation oversight mandate.

In this implementation period, there would need to be additional representation from other industry stakeholder groups including the federal government and the C-NLOPB. The Implementation Oversight Committee would report through the Council and would consist mainly of volunteers; however, it would be led by a full-time senior industry person(s) and support staff in order to be efficient and effective.

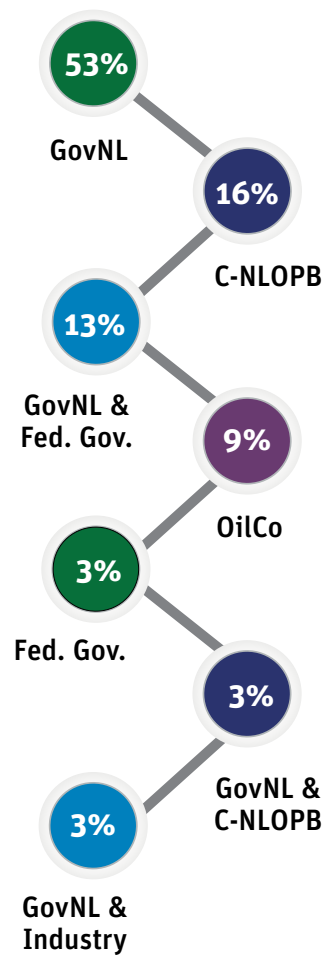
The Implementation Oversight Committee shall meet on a regular basis (at least 8 times in a calendar year) until all recommendations have been implemented and/or until the NL Oil and Gas Authority is operational.

Figure 8 on the following page provides a summary of the 52 recommendations pertaining to time and responsibility. As was stated earlier in this report, the Task Force has included its best estimate of timing for implementation of each action as well as ownership of each action, and in the latter case, this is a combination of the Task Force's understanding of the current state of accountability and responsibility as well as who is in the best position to immediately influence and act upon the Task Force recommendations.

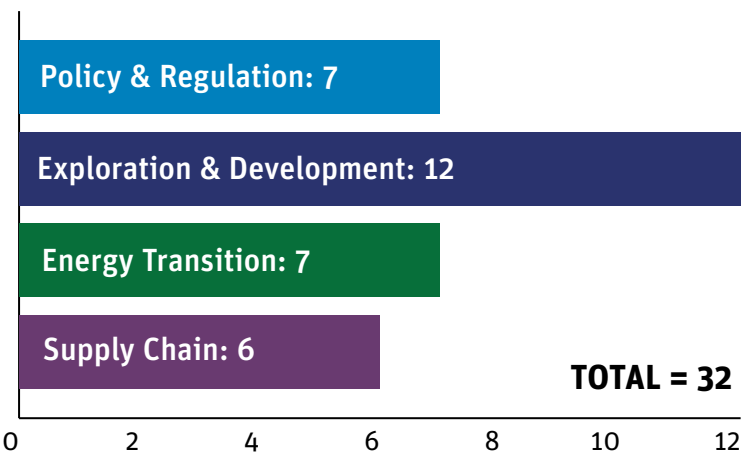
Please refer to Appendix C for the complete list of recommendations including timing and responsibility.

FIGURE 8. Summary of Main Recommendations by timing and responsibility

Who is Responsible?



Main Recommendations by Workstream

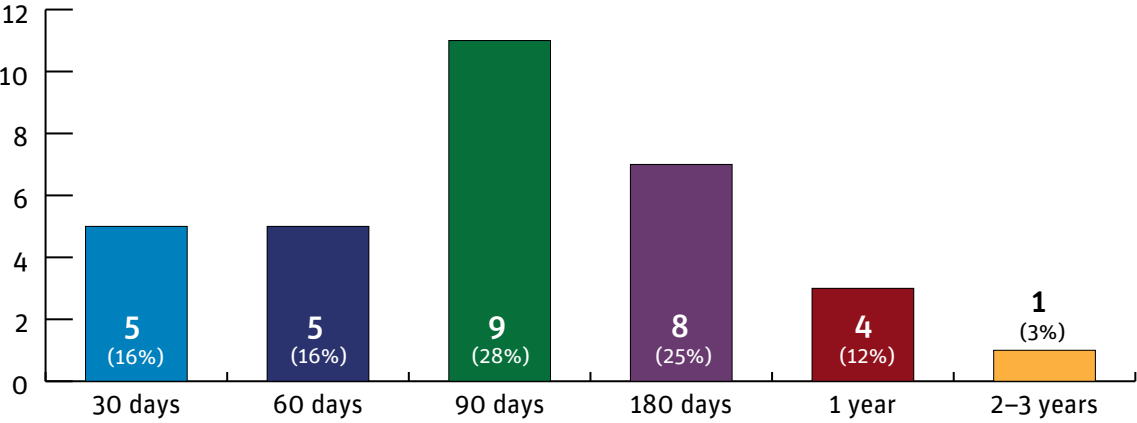


53% list GovNL as the sole responsible entity

60% have a timeframe of 3 months or less

85% have a timeframe of 6 months or less

Main Recommendations by Timeframe



5. CONCLUSIONS

The past 90 days has gone by very quickly. The Task Force is grateful and inspired by the tremendous interest, cooperation, and participation of the many stakeholder groups, associations, and individuals, locally, nationally and internationally, that engaged with us and gave freely of their time, advice and insights.

What the Task Force heard from stakeholders, what we researched, and what we debated internally and concluded, is that the responsible development of NL’s oil and gas resources for the economic and social well-being of Newfoundlanders and Labradorians is foundational to NL’s future success and prosperity. NL’s offshore oil and gas industry is as relevant today even as the world transitions to a low carbon future. In the majority of climate forecast 2 degrees Celsius temperature reduction scenarios, oil and gas will continue to be an important part of the energy mix through 2050. These facts are irrefutable. It is also clear that countries and societies who are accelerating the energy transition are doing so through a disciplined and measured approach, informed public policy, and harnessing the skills, technologies, and innovations of the oil and gas industry.

It is also true that operators and explorers around the world are re-evaluating their resource and investment portfolios with a shift toward a low carbon future and renewables. To this end, NL has what the world needs more than ever: light crude oil, natural gas, hydro-electricity, wind, and minerals – an enviable natural resource mix that is unencumbered by geography with a long history of entrepreneurship, resilience, determination, and innovation. Due to its low carbon development content, the hydrocarbon energy available offshore NL will enable the transition to other energy sources at less world environmental cost than hydrocarbons from other sources.

Our window of opportunity is time-limited. An immediate call to action is required to rise above the rhetoric and set a clear path for the future development of NL’s oil and gas resources. That NL, as the principal beneficiary of the oil and gas resources that lie off its shores, shall be realized through the establishment of a NL Oil and Gas Authority whose mission is to maximize the economic recovery of our oil and gas resources in support of net-zero by 2050 and beyond. It is paramount that GovNL takes immediate measures to safeguard, protect, promote, and encourage development of NL’s low carbon petroleum resources. Further, it must be made clear that our oil and gas industry’s future is within Canada’s national interest and directly supports net-zero GHG emissions by 2050.

Of the 52 Task Force recommendations, there is a crisis of agreement that: we have to get people back to work; exploration must continue; existing fiscal programs for new developments must be realized to ensure we remain globally competitive; and, our regulatory practices, approval, and decision-making processes must be relevant, faster, more agile, and in line with international standards, benchmarks, and best practices. Some of the recommendations that are offered in this report, if acted upon now, will be transformative and place NL’s offshore oil and gas industry on a path toward a brighter future.

Building upon *ADVANCE 2030*, we look to the GovNL working with the oil and gas industry to move quickly to implement all the Task Force recommendations in a bold and decisive manner. GovNL to establish a collaborative framework that creates greater ownership and accountability for NL’s oil and gas industry success and improves the overall competitiveness and attractiveness of the NL Offshore.

APPENDICES



APPENDIX A – TASK FORCE TERMS OF REFERENCE

Oil and Gas Industry Recovery Task Force Terms of Reference

Purpose

The oil and gas industry has played a pivotal role in the growth and development of Newfoundland and Labrador’s economy. According to a 2019 study prepared by the provincial Department of Finance, from 2010 to 2017, total (direct, indirect and induced) economic benefits related to the offshore petroleum industry in Newfoundland and Labrador accounted for nearly 30 per cent of GDP, 13 per cent of labour compensation, and 10 per cent of employment.

The Oil and Gas Industry Development Council (Council) was established in 2016 and brought together key stakeholders to work collaboratively on developing a vision for the oil and gas sector. On February 19, 2018, the province released The Way Forward – on oil and gas, entitled “Advance 2030: A Plan for Growth in the Newfoundland and Labrador Oil and Gas Industry” (Advance 2030) which aims to position the province globally as a preferred location for oil and gas development. The Council has played a key role in developing and implementing Advance 2030.

The recent global collapse of oil prices coupled with the COVID-19 pandemic has dealt a powerful blow to the Newfoundland and Labrador oil and gas sector, with the impacts being felt throughout the industry, from large multinational operators to small suppliers. Thousands of people have faced job losses as operators and contractors reduce costs in response. Moreover, due to low prices and trade uncertainty, oil producers around the world are reducing their investments and scaling back their production activities which will have serious impacts on the province’s economic recovery. The downturn in the industry caused by foreign overproduction and a dramatic drop in demand due to the global pandemic, could see an estimated loss of \$61 billion to the provincial GDP between now and 2038.

In May 2020, the Premier of Newfoundland and Labrador committed the province to net-zero emissions by 2050. Newfoundland and Labrador offshore oil is one of the least carbon intensive extractive crudes in the world and emits significantly less greenhouse gas emissions than other oil-producing jurisdictions. As economies begin to reopen and global demand for petroleum products returns, we need to ensure that Newfoundland and Labrador remains a global energy leader, demonstrating that this demand can be met in a socially and environmentally sustainable manner. Provincial offshore oil and gas sector stakeholders must act now to implement the necessary actions to sustain the offshore industry in the short-term; reposition the industry for recovery for the long term; and support the transition to renewables and the commitment to net-zero emissions.

On September 25, 2020 the Government of Canada announced a \$320 million contribution to the province to support the Newfoundland and Labrador oil and gas sector. The funding will be utilized to fund measures and initiatives that support the creation or maintenance or direct and indirect employment and generate environmental benefits or co-benefits.

As such, the Council established an Oil and Gas Industry Recovery Task Force (Task Force) to recommend actions to drive the economic recovery of the Newfoundland and Labrador oil and gas sector and provide input on the development of principles and priorities to guide the utilization of the oil and gas funding. Given the urgency of the situation, the Task Force will be expected to deliver a final report to the Council within 90 days; however, it may issue interim reports or individual recommendations on pressing issues prior to the release of the final report.

Mandate

The mandate of the Task Force is to develop recommendations to Council for immediate actions led by government and/or industry that will sustain the offshore industry in the short-term and drive the recovery of the Newfoundland and Labrador oil and gas sector over the long term.

The Task Force will also develop recommendations to the Council and the province related to the \$320 million in federal funding on 1) the eligibility parameters for the provincial delivery of the funding program; and, 2) prioritization criteria for eligible proposals.

Objectives

The objectives of the Task Force include:

- Recommendations for key immediate actions required by government and/or industry to help stabilize and grow the Newfoundland and Labrador oil and gas sector;
- Identification of timelines and key accountabilities for recommended actions;
- Collaboration with key government and industry stakeholders to identify the necessary actions to drive the recovery of the Newfoundland and Labrador oil and gas sector; and,
- Recommendations for eligibility parameters and prioritization criteria for provincial delivery of oil and gas sector support funding.

Membership

Task Force membership, including the number of members, will be determined by the Minister of Industry Energy and Technology, in consultation with Council. It will be co-chaired by two current Council members:

1. Bill Fanning, President and Canada Country Manager, Kvaerner; and
2. Karen Winsor, Board Chair, Noia.

The remaining members will be made of up representatives from both government and industry with a diverse mix of skills and experience that can contribute to positioning the Newfoundland and Labrador oil and gas industry for recovery. The Task Force will consult with and solicit input from targeted stakeholders as required. Administrative support for the Council will be provided by the Department of Industry, Energy and Technology with support from the Office of Public Engagement.

Timelines

Given the urgency of the situation, the Task Force will be required to work quickly and diligently to develop recommendations for immediate implementation. Once established, the Task Force will:

- Submit recommendations for eligibility parameters and prioritization criteria for provincial delivery of oil and gas sector support funding within 30 days.
- Submit its recommendations for immediate actions to Council within 90 days.

Deliverables

The Task Force will produce:

- Recommendations for eligibility parameters and prioritization criteria for provincial delivery of oil and gas sector support funding. The recommendations will focus on the creation of direct and indirect employment, the generation of environmental benefits, and maximize the value for all Newfoundlanders and Labradorians.
- A final report to be submitted to the Council which details recommended actions, timelines, and associated accountability for implementation. The final report will include immediate actions required, as well as an accountability framework to foster effective implementation of recommendations by appropriate government and/or industry stakeholders.

APPENDIX B – STAKEHOLDER MEETINGS

Oil and Gas Industry Recover Task Force Stakeholder Meetings and Submission

Meetings

Business	Atlantic Towing Cougar Helicopters DNV GL DOF Subsea Growler Energy Hatch Ltd. Maersk Supply Service PF Collins Secunda Marine Teekay Tankers Zen Energy
Education	Memorial University of Newfoundland
Explorers & Operators	BHP BP Chevron CNOOC Limited Equinor (2 meetings) Exxonmobil (2 meetings) Husky (2 meetings) Operators Group Suncor (2 meetings)
Financial	RBC Capital Markets Team
Government	Government of Newfoundland and Labrador, Department of Industry, Energy and Technology <ul style="list-style-type: none">• Regulatory Affairs Division• Economics and Benefits Division (2 meetings)• Electricity Markets and Alternative Energy Division• Petroleum Geoscience Division (2 meetings)• Royalties Division Department of Environment, Climate Change and Municipalities <ul style="list-style-type: none">• Climate Change Branch Natural Resources Canada

Government Agencies	Canada-Newfoundland & Labrador Offshore Petroleum Board (2 meetings) Oil and Gas Authority (OGA), United Kingdom Oil Corporation of Newfoundland and Labrador (2 meetings) Nalcor Energy, Marketing Division
Industry Associations	Canadian Association Of Petroleum Producers (2 meetings) Newfoundland & Labrador Environmental Industry Association (2 meetings) Newfoundland and Labrador Oil & Gas Industries Association (3 meetings) Petroleum Research Newfoundland and Labrador (2 meetings) TechNL (3 meetings) Canada’s Ocean Supercluster
Labour	Construction Labour Relations Association of NL Inc. TradesNL (2 meetings) Unifor (2 meetings)
Other	Bente Nyland, Past Director General of the Norwegian Petroleum Directorate John Abbott, Former BMO Capital Markets professional Bill Furlong, Former TD Securities vice-president Petroleum Industry Human Resources Committee

Submissions

Business	Aker Solutions Fugro
Government Agency	Canada-Newfoundland & Labrador Offshore Petroleum Board
Industry Association	Canadian Association of Petroleum Producers (2 submissions) Construction Labour Relations Association of NL Inc. Newfoundland & Labrador Environmental Industry Association (2 submissions) Newfoundland and Labrador Oil & Gas Industries Association TradesNL Unifor
Other	Private Citizen Department of Industry, Energy and Technology - Petroleum Geoscience Division, Government of Newfoundland and Labrador

APPENDIX C – RECOMMENDATIONS

Issue	Actions & Recommendations	Timeframe	Resp.
R1-3. The skills required to operate, maintain, support and service the offshore assets are acquired based on experience in the industry in conjunction with education and training. Activities to retain these skills in the province in order for NL residents to participate in the industry over the long term are a priority. In addition, we need to preserve the capacity and participation of companies in the industry otherwise, they may have no other choice but to “re-tool” and move away from supporting the industry resulting in a loss of local ability and local critical mass required for the future.	GovNL to fund activities that utilize the skills of the offshore work force. Ensure the funded activities result in increased reliability and safety of the assets that prolongs their operating life.	90 days	GovNL
	Existing projects’ go-forward economics need to be assessed and, if positive, a near term-funding arrangement put in place that shares risk and reward. GovNL needs to assess the incremental economic benefit of these projects versus the cost to provide incentives to proceed.	180 days	GovNL
	Specifically, GovNL and industry should identify the high potential tiebacks, identify the technical analysis required to design, then fund the work. Focus on a “standardized approach” to components i.e. design one build many.	30 days	GovNL
R4. During this downturn, the oil and gas industry could utilize the idled engineering and project management talent to resolve the project technical and economic issues to get a Flemish Pass development underway safely and economically.	GovNL and industry continue to progress the feasibility work to establish the economic viability of the project, and to optimize the project solution. It is recommended to support the study work, with a focus on the work which can be completed in NL.	90 days	GovNL
R5. There is a need for a more active advocacy role for the NL offshore, to promote development and with a broader perspective for the maximization of economic development and economic recovery across all projects and potential projects including established infrastructure. Further, there is no organizational structure/entity that has the full responsibility of maximizing the economic recovery of the oil and gas resources in offshore NL.	(a) GovNL create an agency, either as a new entity or using the OilCo, to have a role similar to the UK’s Oil and Gas Authority, with the mandate to maximize the economic benefits from development of the oil and gas resources within the NL offshore area, including the promotion of cooperative development of all resources across offshore NL. (b) The C-NLOPB give consideration to including conditions in SDLs requiring inter-operator discussions and collaboration with respect to maximization of economic recovery and support net-zero by 2050.	180 days	GovNL and C-NLOPB

Issue	Actions & Recommendations	Timeframe	Resp.
R6. Ownership of the development of NL’s oil and gas resources and the division of responsibilities among GovNL, OilCo and the C-NLOPB is not clear. Multiple stakeholders highlighted the lack of ownership, clear leadership and consistency.	GovNL issue a public document specifying accountabilities and responsibilities for oil and gas exploration and development.	30 days	GovNL
R7. The Accord Act commitment of a joint management regime is being eroded by unilateral federal government actions. Changes to the environmental assessment and federal fisheries policies represent unilateral federal incursion/ authority contrary to the joint management concept.	The federal government and GovNL affirm the principle of joint management as set out in the Accord, and specify the constraints to the unilateral incursion of federal policy and legislation, as exemplified by recent changes to environmental assessment and fisheries matters, into the joint management of the NL offshore industry.	1 year	GovNL and Federal Government
R8. Establishing and evaluating concepts for the development of discoveries offshore NL could help new entrants evaluate the area and be a foundation for development. Presently there is no jurisdiction wide development plan for the frontier offshore area.	GovNL, through Oilco or the NL Oil and Gas Authority, to develop jurisdiction wide development schemes, one for deep-water and one for shallow, to provide a foundation for developers and explorers. These development concepts should include options for green power supply from the shore and field of the future elements, such as remote operation. Funding for this should be sourced in Stream 2.	180 days	GovNL
R9. A significant source of GHG emissions originates from transportation to and from offshore facilities and transportation of crude from producing facilities.	Opportunities exist to reduce transportation emissions through logistical coordination amongst operators and increased digitalization of facilities reducing the level of offshore staffing. Emission reductions related to crude transport could be accomplished by considering fuel switching on shuttle tankers. NL Oil and Gas Authority should include progressing these initiatives in its mandate.	60 days	GovNL
R10. Opportunities to reduce emissions on existing installations were identified predominately by efficiency upgrades and flare gas reductions. As it is not currently economically viable to implement these upgrades, continued government funding will be required to reduce these emissions	A post-2022 ERF should be established by the federal government.	90 days	Federal Government

Issue	Actions & Recommendations	Timeframe	Resp.
R11. A carbon offsets framework needs to be in place to enable net-zero goals.	The Provincial Department of Climate Change in consultation with other stakeholders including the C-NLOPB, IET and OilCo develop an offset plan prior to 2022 when the performance standard system tops out.	1 year	GovNL and C-NLOPB
R12. Notwithstanding very good prospectivity, exploration in offshore NL is less attractive than in other parts of the world. The overall cost of drilling wells in offshore NL can be significantly more than the actual cost of the well.	GovNL modify its royalty regime to permit offshore NL-wide exploration expenses to be deductible in a project's royalty calculations, in whole or in part.	90 days	GovNL
R13. A provincial OEI package has been announced; however it only has limited application. The timing within the OEI may not allow wells to be planned and drilled by the deadline. Additional challenges including rig intake and a 90-day approval period must also be realized.	Based on stakeholder feedback, GovNL to revise its Offshore Exploration Incentive package to expand its application.	60 days	GovNL
R14. The length of time for rig intake in NL adds cost and uncertainty. CAPP has suggested improvements, however, a new roadmap is yet to be issued. Easing the transfer of rigs from equally as safe jurisdictions to NL is an opportunity	<p>C-NLOPB improve the rig intake and management process by:</p> <ul style="list-style-type: none"> issuing a roadmap showing the information required and the approvals to be granted to allow a rig to start work in offshore NL 90 days after the start of the application process. implementing a generic OA for a rig to be transferred more easily into the NL Offshore Area thereby enabling rig sharing opportunities and more efficient timelines and processes. developing a process so that for an incoming rig from another jurisdiction, the C-NLOPB can accept recognized certification by an established Certifying Authority rather than requiring recertification to Canadian standards to the greatest extent possible. implementing a digital information management system for information sharing and greater collaboration and efficiency. 	90 days	C-NLOPB

Issue	Actions & Recommendations	Timeframe	Resp.
R15. Rig sharing among a group of operators for exploration or development could reduce timelines and costs	Establish a Joint Government-Industry-Regulator working group to encourage rig sharing, using previous successes, such as the 1990's Jeanne d'Arc Basin Operators Drilling Program as an example, and consider how to enable an OA attached to a rig to make rig sharing easier. (Noting that s.138 of Accord Act does not specifically prohibit a rig owner from holding the OA.	180 days	GovNL
R16. A 90-day approval period arising from the RA process has been communicated, however, the necessary preparatory activities significantly extend the overall duration and the legal challenges make approvals uncertain.	The recently completed RA process to be augmented further to include a review of the whole process and a comparison with benchmarks from other competing jurisdictions and actions taken to match those international benchmarks.	90 days	OilCo
R17. There may be resource opportunities adjacent to existing fields which are not being explored or evaluated.	GovNL consider incentivizing the drilling of exploration wells on blocks adjacent to existing assets.	60 days	GovNL
R18. An onerous requirement for a 95 per cent water cut on producing wells, delays well abandonment, drilling and bringing new wells on line. Additionally, applying water injection to lower water cut wells reduces the carbon emission intensity of produced oil. The C-NLOPB has accepted 90 per cent or lower water cut abandonment on a well by well basis. A general guideline approval is required to allow well planning and abandonment to be based on technical and economic factors not just ultimate recovery. This approach has the potential to shorten the Hibernia drill pause, allowing up staffing and increased production/royalties.	For fields that are slot constrained, the C-NLOPB modify its approach on water cut to consider the overall net benefit to the field inclusive of both incremental oil recovery and GHG emissions and to take a longer term view to allow drilling to restart.	30 days	C-NLOPB

Issue	Actions & Recommendations	Timeframe	Resp.
<p>R19. The existing Accord regulatory provisions are outdated and lead to unnecessary delays and inefficiencies for offshore developers. The existing OHS regulations are transitional only and require replacement. The FORRI and OHS regulatory processes need to be concluded on an urgent basis and change management plans implemented including, personnel training and competency programs for staff working and interpreting regulation in a goal-based regime.</p> <p>The timing issues related to the extended environmental impact assessment review process, and the timing of the rig intake process, combined with the limited drilling activity windows, has created timing pressures for the fixed 9 year Exploration License even before the delays associated with the COVID-19 pandemic. These pressures are exacerbated by the Period 1 / Period 2 structure within that 9 years created by the Exploration Licenses term set by the C-NLOPB. Due to COVID-19, some explorers may have difficulty in satisfying their work commitments within the specified periods.</p>	<p>The federal government and GovNL commit to:</p> <p>(1) The stabilization of the offshore regulatory regime through implementation of the planned FORRI and OHS regulations under the Accord Act; and</p> <p>(2) Request and approve the C-NLOPB to:</p> <p>(i) For existing Exploration Licenses under CEEA only, and adversely impacted by COVID-19, extend period 1 to 9 years without penalty, and</p> <p>(ii) Pro-actively engage industry to seek alignment on risk assessment and management, and the application of international standards.</p>	90 days	GovNL and Federal Government
<p>R20. The Land Tenure System needs to be updated. A package has been under preparation for a number of years. This Task Force has not reviewed the current proposed clauses, but the content and need for amendment does not appear to be controversial among the federal government, GovNL and the C-NLOPB. The delay in releasing the package creates uncertainty and may lead to cancellation or deferral of 2023 and subsequent drilling programs as this is a contributor to above-ground risk.</p>	<p>The federal government and GovNL commit to finalize and implement the planned amendments to the “land tenure” system and other changes specified in the 2019 Agreement.</p>	1 year	GovNL and Federal Government

Issue	Actions & Recommendations	Timeframe	Resp.
<p>R21. Oil and gas companies operating in NL are unable to benefit from the tax advantages that would have been available under the AITC program. As a result offshore NL is less attractive as an investment location compared to other oil and gas jurisdictions. The UNCLOS “world royalty” application is also a risk due to uncertainty as there is currently no resolution as to how UNCLOS royalty payment requirement will be satisfied following an oil and gas development outside 200 nautical miles.</p>	<p>The federal government and GovNL take the following steps to improve the attractiveness of offshore projects:</p> <p>a) Federal government to reinstate the AITC as it was originally intended to improve productivity and increase employment in Atlantic Canada. GovNL to continue work with Federal government to achieve this goal, and</p> <p>b) Clarify how operators developing fields in the NL offshore area will be protected from the application of UNCLOS Article 82 royalty payments to relevant NL offshore oil and gas projects.</p>	2-3 years	GovNL and Federal Government
<p>R22. GovNL needs to increase the transparency of its equity, royalty and Newfoundland Benefits negotiation processes for offshore development projects. Uncertain Benefits requirements add to costs and timelines for operators and or explorers when prospects are being evaluated.</p>	<p>GovNL take the following steps to enhance local engagement in, and benefits from, the NL offshore oil and gas industry:</p> <p>a) Increase inclusiveness and transparency in offshore project benefits agreements negotiation process.</p> <p>b) Support and encourage a more collaborative engagement of labour throughout the development and production cycle of offshore projects.</p> <p>c) Work with labour and industry to develop best practices and guidance to provide work on future and existing offshore projects in NL and potentially with international customers to ensure a steady stream of labour required activity.</p> <p>d) Clarify and clearly communicate benefits expectations.</p>	180 days	GovNL

Issue	Actions & Recommendations	Timeframe	Resp.
R23. Multiple stakeholders noted a need for common data sharing. There is an opportunity to utilize digital data to produce industry-wide metrics and analysis. This will enable identification of positive and negative trends and areas of focus in our offshore, regionally and even internationally. Specifically, when seismic data has been requested, the C-NLOPB has sometimes only made available paper (or pdf) copies of every tenth seismic line. The implementation of FORRI (see R19) will also aid in enabling innovation.	The C-NLOPB to study how to standardize the form of data to enable sharing. The adoption of the Open Subsurface Data Universe should be considered. The C-NLOPB to maximize the sharing of regulated data.	180 days	C-NLOPB
R24. Existing discovered resources with related SDLs in the Jeanne d'Arc Basin, which could potentially be developed as tiebacks, are not proceeding as they may be perceived as uneconomic. A number of Jeanne d'Arc Basin tiebacks have been developed successfully. Given their shorter development cycle, subsea tiebacks could help provide near-term development opportunities.	Evaluate potential tieback developments using a zero royalty basis as a screening tool to assess viability of potential. For any potential developments which are economic on this basis, engage in negotiations with the SDL and Host Asset Owner to advance development, considering possible modified royalty arrangements. Consider incentivizing the drilling of appraisal wells, which may prove up SDL resources. Put in place a dispute resolution procedure, so if the Owners of a tieback SDL can't reach an agreement with the host facility, there is a mechanism for resolving the dispute (Access to infrastructure).	60 days	GovNL
R25. Logistics assets, such as helicopters and supply vessels, are a significant component of the offshore operating cost and the overall cost competitiveness of the NL Offshore area. There are opportunities to more effectively share these resources among operators to lower offshore OpEx.	New NL Oil and Gas Authority to encourage and incentivize cooperation and asset sharing to reduce offshore operating costs.	90 days	GovNL

Issue	Actions & Recommendations	Timeframe	Resp.
R26. Field developments in the future will be required to harness technology, digitalization and carbon efficient solutions to ensure safe operations and competitiveness in a global market.	Establish a joint C-NLOPB/operator/worker representative/Certifying Authority working committee (similar in nature to the Helicopter Operations Safety Committee), with purpose to educate, identify and assess risk, promote best practice and provide a risk based framework on how to capture the potential that digitalization and technology offers as an enabler to safer and more efficient future field development, and operations. A jurisdictional scan of best practices should undertaken.	30 days	C-NLOPB
R27. A highly collaborative framework is needed where maximizing the economic recovery of NL's low carbon oil and gas resources continues to be a major economic driver enabling the energy transition through growth in renewables and continued innovation, and to advance specific aspects of the energy transition including, electrification and offshore wind.	GovNL and industry cooperate for the establishment and funding of a designated energy transition organizational capability with four centers of excellence for different focus areas including a CCS center, a hydrogen center, a renewable energy center, and a center for digitalization.	60 days	GovNL
R28. Production efficiency optimization, gas turbine emissions reductions and flaring reduction and recovery, are three areas that are significant contributors to offshore GHG emissions. There isn't a strong collaborative ecosystem offshore NL advancing emission reduction technologies in these areas.	GovNL to create a collaboration similar to Canada's Clean Resource Innovation Network (CRIN) to pursue the advancement of emission reductions in the oil and gas sector and foster networking among offshore contractors and operators in clean technology.	90 days	GovNL
R29. NL has significant green hydrogen potential with an abundance of renewable power with no clear plan to monetize this resource. The federal government's recently released Hydrogen Strategy (December 2020), represents an opportunity for NL to play an important role in helping Canada realize the opportunities for hydrogen.	GovNL to develop a NL hydrogen strategy taking account of recently released hydrogen strategies within Atlantic Canada and nationally.	90 days	GovNL

Issue	Actions & Recommendations	Timeframe	Resp.
R30. Natural gas is widely regarded as a transition fuel and its production is required to develop blue/grey hydrogen industry. The potential for offshore gas development should be investigated and incentivized. A working group studying natural gas developments has been set up with IET and Oilco studying the potential for monetizing gas developments.	An attractive royalty regime should be implemented by GovNL to encourage natural gas development. Recommend that a publicly available study be undertaken detailing all relevant economic indicators and gas development scenarios being fostered by Oilco and/or IET.	1-2 years	GovNL
R31. There is a need for GovNL to leverage the various government funds, (i.e. training funds, Labour Market Development Agreement (LMDA) etc.), and a portion of the Stream 2 funding to a) fund offshore workers to keep offshore training certificates current and b) to enable the transition of highly skilled technical workers from oil and gas into related industries.	GovNL to explore the availability of training funds (LMDA, etc.) to support keeping offshore certifications current. Assess how relevant training funds could be leveraged to assist workers in adding to their existing training in preparation for the Field of the Future.	30 days	GovNL
R32. Future offshore fields will be developed using the significant advances in digital technology, remote sensing, and adaptive software.	GovNL should fund work to develop a “Field of the Future” benchmark development scenario and then fund work to develop the innovation required to close current gaps in knowledge, technology and skills, and funding related to research and development activities. This will allow NL based companies to develop solutions and sell this knowledge to the world.	180 days	GovNL
R33. There is currently no plan in place to deal with the regulatory aspects of the eventual decommissioning and abandonment of offshore production facilities.	<p>Short term: The C-NLOPB needs to make a decision to develop this plan and assign resources to complete same in a timely manner.</p> <p>Medium term: Recruit appropriate personnel with relevant expertise, presumably through the Board’s contacts with other regulators through the International Regulators’ Forum. The Canada-Nova Scotia Offshore Petroleum Board could also be a good source of expertise, as they have recently dealt with the decommissioning and abandonment of both their offshore projects, Sable and Deep Panuke.</p> <p>Long term: Develop the plan and model test it with a number of potential scenarios.</p>	1-2 years	C-NLOPB

Issue	Actions & Recommendations	Timeframe	Resp.
R34. The lack of Regional Assessments for some upcoming exploration blocks could complicate the approval process. It will be important to communicate to industry the path forward well in advance of the anticipated close of Call for Bids in offshore Labrador in November 2021. A similar situation will arise associated with the planned 2022 Call for Bids in Southern Newfoundland.	Federal Government and GovNL to advance work on Regional Assessment options for offshore Labrador, to ensure bidders on blocks in the anticipated 2021 and 2022 land sales don’t have a requirement to conduct a project-specific impact assessment, similar to the “off ramp” now in place in Eastern Newfoundland pursuant to the Eastern Newfoundland Regional Assessment Regulation.	90 days	GovNL and Federal Government
R35. There is uncertainty around the process and timing for environmental assessments for Seismic Acquisition which has been compounded by the passage of Bill C-69.	Oilco to conduct a study to lay out the ground work for and establish a road map for Seismic Acquisition Assessment timeline post-Bill C-69 approval, identifying opportunities for streamlining the process.	180 days	Oilco
R36. Other comparable jurisdictions are able to issue and renew exploration Operations Authorizations (OA) more speedily and with less effort than in Newfoundland.	Benchmark global practices and identify opportunities for improvement in the NL process. C-NLOPB to allow for combined scopes of work under a single Authorization. For example, if an operator receives an Authorization for a geophysical program in year one, then receives another Authorization for a drilling program, then the geophysical OA could remain open for the estimated time of the drilling program and in year three, the operator could add another geophysical program to that Authorization, rather than apply for a new one. This would save time for both the operator and regulator.	180 days	C-NLOPB
R37. The eligibility of drilling related expense is limited and not always clear.	<p>C-NLOPB to publish clear and less onerous eligibility guidelines, including the consideration of making all relevant exploration expenses eligible.</p> <p>It is recommended that the regulatory cost recovery model is reviewed, since the costs charged to explorers to gain approval are higher than in other jurisdictions.</p>	180 days	C-NLOPB
R38. There is a lack of visibility about when C-NLOPB will allow license consolidation in respect to work commitments	C-NLOPB to issue clear guidelines on consolidation in respect of work commitments.	180 days	C-NLOPB

Issue	Actions & Recommendations	Timeframe	Resp.
R39. The cost of search and rescue helicopter services, to support exploration programs, which is significant compared to other comparable jurisdictions.	Both governments to assess possible solutions to resolve ongoing cost challenges, in particular for new entrants.	180 days	GovNL and Federal Government
R40. Implementing an early, flexible, and less prescriptive approach to local Benefits agreements could mitigate uncertainty for investors while providing valuable benefits to local communities.	GovNL continue to negotiate benefit agreements in a timely manner, using a non-prescriptive, modern approach which contemplates the entire life cycle of the project.	180 days	GovNL
R41. The process for approval of Development Plan Amendments can be time consuming and deter development.	C-NLOPB to optimize and publish a roadmap for review and approval of Development Plan Amendments to reduce development uncertainty.	180 days	C-NLOPB
R42. The process for production phase OA issue and renewal is slower and more complicated than other competing jurisdictions.	C-NLOPB to simplify process and issue roadmaps for OA issuance and renewal with time commitments. C-NLOPB to make available to industry all relevant procedures, processes, and checklists.	180 days	C-NLOPB
R43. Import duties on foreign-built vessels add cost.	Federal Government to remove duty on foreign vessels when there are no suitable vessels available in Canada for specialized work.	180 days	Federal Government
R44. Implementation mechanisms are required to foster net-zero emissions through best practice emission reduction technologies on new facilities, for reducing emissions on existing oil production facilities, and for negative emission streams and carbon offsets.	Oilco to establish explicit emission reduction targets for new facilities within the context of pathway to net-zero required. Supporting plan to include an accountability plan and monitoring of compliance. Plan could consider emissions trading amongst new facilities.	1 year	OilCo
R45. Electrification of infrastructure meets Provincial objectives of GHG reduction, rate mitigation efforts, and generates employment. Government investment required.	A study to be done on NL's largest ports to identify best opportunities for electrification (e.g. cost-benefit power from shore for inshore/at shore activities including, MODU's recertification, FPSO's modifications/life extensions) including investment strategies. OilCo to study/evaluate NL ports electrification opportunities.	90 days	GovNL

Issue	Actions & Recommendations	Timeframe	Resp.
R46. Digitalization of the oil and gas Industry has the potential to reduce emissions, increase competitiveness, and create employment. An industry-wide collaborative framework is required to identify digitalization opportunities and prioritize activities.	TechNL's recently announced innovation center to include digitalization of oil and gas activities in its core mandate.	180 days	Local Association
R47. A renewable energy NL grid provides an attractive opportunity for energy consumers to reduce their carbon footprint	Competitive industrial electrical rates should be marketed internationally to potential consumers of low emission electricity (i.e. data centers, green hydrogen generators etc.). Investigate the feasibility of offshore oil and gas developments buying emissions credits from NL Hydro as part of net-zero. Commission a study to identify electrification options and commercial emission reduction frameworks. The GovNL, through IET and Nalcor Energy to collaborate to market electricity to potential customers.	1-2 years	GovNL
R48. Infrastructure bringing natural gas and/or hydrogen to shore and bringing CO ₂ and electricity offshore will be required to advance blue hydrogen, widespread CCS, and field electrification.	A study considering the feasibility of an energy/information highway should be considered by GovNL. The GovNL to consider using Stream 2 funds to do a feasibility study of an energy/information highway to the offshore.	1 year	GovNL
R49. The World Economic Forum has indicated that cities are often the leaders of the energy transition. In NL, one of the proposals shared with the task force is for a municipality to be the first consumer of hydrogen for fleet vehicles (Conception Bay South). Other municipalities should consider similar investments.	The City of St. John's is collecting input to shape the city's energy transition. Key among these should be utilizing alternative fuels for fleet vehicles. Municipalities should investigate funding models, programs and business models that could include working with potential hydrogen developers to build hydrogen fleet vehicles. This has the potential to start building demand for hydrogen that can be sourced from hydrocarbons (i.e. blue hydrogen) or from green hydrogen which could increase the availability of GHG offsets available to oil and gas operators in NL.	90 days	Local Association

Issue	Actions & Recommendations	Timeframe	Resp.
R50. Cost competitiveness of NL suppliers of good and services. Perceived or real?	The Task Force recommends that the Supply Chain subcommittee of the Council is re-established with the needed capacity to complete its work in particular, evaluate the cost competitiveness of NL suppliers of good and services The primary objective is for industrialization of the local supply chain with a clear strategy that is consistent with the Atlantic Accord and addresses international supply pricing.	1 year	Council
R51 Access to offshore assets to enable proof of concept testing of new technology. Similar to Norway, allows local technology to get a reference project to help support global sales.	Develop a process where local technology companies can access funding to do proof of concept work offshore that does not affect the safety or reliability of the offshore assets.	180 days	GovNL and Industry
R52. Increased cooperation on logistics support.	Offshore operators renewed focus and commitment to maximize synergies within the basins extending beyond logistics sharing. Establish an externally recognized industry benchmark OpEx per barrel reduction target and monitor for accountability and continuous improvement.	180 days	Industry

APPENDIX D – TASK FORCE BIOGRAPHIES

Co-Chair Biographies

Bill Fanning

Bill Fanning has over 30 years of international experience in the upstream energy industry. Mr. Fanning attended the University of Prince Edward Island and University of Calgary, has a degree in business management and attended Concordia University’s Executive Development Program.

From 1980 to 1999, Mr. Fanning held increasingly senior positions with Mobil Oil Canada Ltd. in Calgary, Halifax and later the Hibernia Management and Development Company Ltd. in St. John’s. From 1999 to 2009, Mr. Fanning was the President and CEO of Spectrol Group, a provider of Asset Integrity services to the upstream oil and gas industry. During that period, Mr. Fanning also co-founded Atlantic XL Inc., a technology services provider in telecommunications, process control and safety systems. Since 2012, Bill has led Kvaerner’s business interests in Canada.

Mr. Fanning was on the Newfoundland Oil and Gas Industries Association (Noia) Board of Directors from 2006 to 2008 and again from 2013 to 2016 and is a founding member of the Provincial Government’s Oil and Gas Industry Development Council. Mr. Fanning is the former board chair, Newfoundland and Labrador Centre for Health Information, past president, St. John’s Boys and Girls Club and is a founding member of the Newfoundland and Labrador CEO Safety Charter. He was twice named a top 50 CEO in Atlantic Canada and in 2018 was the recipient of Noia’s Outstanding Contribution Award.

Karen Winsor

Karen Winsor has worked in oil and gas for most of her twenty-year career, focusing on strategic management, business operations, and quality and customer delivery. She is currently responsible for the continued success and growth of Atlantic XL here in Canada, and is a part of the management team of XL Global Group in Aberdeen, UK.

Ms. Winsor graduated with a Bachelor of Commerce from Memorial University, completed a business exchange program in Oslo’s Norwegian School of Management and most recently finished the Directors’ Education Program at the Institute of Corporate Directors. She currently chairs the Newfoundland and Labrador Oil and Gas Industries Association (Noia) Board of Directors, sits on the boards for Atlantic XL, Tampnet Canada, Bull Arm Fabrication and the Janeway Children’s Hospital Foundation, and is a member of the Provincial Government’s Oil and Gas Industry Development Council. Ms. Winsor has been recognized for her efforts in the industry as Noia’s 2014 first Rising Star, and profiled in Oil and Gas Magazine’s ‘Up and Coming.’

Policy and Regulatory Workstream Biographies

Max Ruelokke, Lead

Max Ruelokke, FEC, P. Eng., ICD.D, is a Newfoundland born and raised professional engineer who has been active in this province’s offshore oil and gas industry since 1980. He has significant experience in engineering design and construction related to project development, shipbuilding and offshore fabrication and offshore production facility EPCM support services. His senior appointments have included President and CEO of Marystown Shipyard Limited, Deputy Minister of the Department of Industry, Trade and Technology and Chairman and CEO of the Canada-Newfoundland and Labrador Offshore Petroleum Board. The latter two positions have provided him with a broad and deep background in policy and regulatory matters in the offshore industry. Max is presently an independent consultant to that industry.

Matthew Deveau

Matthew Deveau has 14 years of oil and gas experience, with roles including subsurface, surface and wellwork engineering and operations leadership. He has extensive experience interfacing with federal and state agencies on policy and regulatory matters in the United States (Colorado, Utah, Montana and North Dakota) and numerous positions in Atlantic Canada. His current role is as ExxonMobil Canada vice president, with responsibility for safety, security, health, environment and external affairs, including regulatory engagement and advocacy.

Darin T. King, Ph.D

Darin King is the Executive Director of Trades NL, Newfoundland and Labrador’s 16 Building Trades Unions and 18,000 members. Prior to this, he was a provincial MHA and cabinet minister in Newfoundland and Labrador, and served in numerous senior portfolios, including Government House Leader; Education; Justice; Human Resources; Business; Tourism; Fisheries and Aquaculture; Labour; and Housing. Before entering politics, he was the Chief Executive Officer of Eastern School District.

Dr. King has earned a PhD (Business), Master of Education, Bachelor of Education, Diploma in School Resource Services, Certificate in Labour Relations, has completed the Directors’ Education Program from the University of Toronto, and is a member of the Institute of Corporate Directors (ICD.D). He also sits as a trustee with Trades NL’s Member Family Assistance Program and is a Director of the NL Construction Safety Association board. Through his career, Darin has gained extensive expertise in human resources and labour relations, and has negotiated/administered large labour agreements on oil projects, including Hebron and West White Rose. He works tirelessly on behalf of his member-unions to promote and develop the skilled trades workforce, and to foster strong working relationships with government and industry.

Todd Stanley, Q.C.

Todd Stanley is a partner in the St. John’s office of Cox & Palmer. He joined Cox & Palmer as counsel after a career in the public service of the Government of Newfoundland and Labrador which culminated with his appointment and service as Deputy Minister and Deputy Attorney General with the Department of Justice and Public Safety. Mr. Stanley’s 16-year career with the Government of Newfoundland and Labrador included roles both as solicitor and in management. As solicitor, he acted as lead counsel for the province in a broad range of government’s activities, including serving as lead counsel on major offshore energy developments, mega-project participation and financing, the creation and governance of Crown corporations, as well as participation in the drafting of the legislative frameworks governing the development of the province’s offshore. Mr. Stanley was appointed Queen’s Counsel in 2016. He currently advises companies engaged in various aspects of the provincial energy industry.

Exploration and Development Workstream Biographies

Mark Williams, Lead

Mark Williams has 40 years of experience in the development and operation of large offshore oil fields. His experience ranges from early opportunity evaluation through commercial negotiations, engineering, procurement, construction, installation to operations. The first years of his career were spent in the North Sea and he moved to Canada in the mid-nineties. He has since contributed to the Hibernia, Terra Nova and Hebron Developments. He is familiar with the Newfoundland and Labrador regulatory and supply chain environments. Mr. Williams holds master degrees from Cambridge University and Imperial College London.

Kristopher Drodge

Capt. Kristopher Drodge is a strong advocate for the local oil and gas industry. Most recently the Master/Offshore Installation Manager for the Transocean Barents, Henry Goodrich and GSF Grand Banks, Capt. Drodge has an in-depth understanding of drilling contractor operations in harsh weather environments as experienced in offshore Newfoundland and Labrador. As part of various intake processes Capt. Drodge brings experience in regulatory and operational requirements including certification, licensing and training. The task force will benefit from Capt. Drodge’s recent and relevant experience leading drilling contractor offshore exploration programs in Newfoundland and Labrador. He will be able to contribute knowledge to important and long-standing industry issues such as rig intake, Certificate of Fitness requirements and cost competitiveness. Capt. Drodge is a graduate of the Marine Institute (Nautical Science) and Memorial University (Maritime Studies), is a recipient of Noia’s Rising Star award and is Chair of the Atlantic Canada Offshore Petroleum Training and Qualifications Committee (TQC). He resides in Torbay, Newfoundland and Labrador.

Jason Muise

Jason Muise is a strong advocate for the local oil and gas industry and understands the importance of building local capacity. As a seasoned leader and subject matter expert in complex subsea field developments, Mr. Muise has a keen understanding of the cost competitiveness drivers impacting field development solutions including, cost-adders for harsh weather developments. He understands the importance of applied technology that leads to safer, more efficient and reliable operations. He has a very good understanding of the local research and development ecosystem including, the importance of commercialization and opportunities for improvement. Mr. Muise is a professional engineer with an undergraduate degree from Memorial University and a master degree in structural engineering from the University of Toronto.

David Ralph

David Ralph has over two decades experience in the offshore oil and gas industry with a broad background from drilling, petroleum technology and offshore operations as well as experience in leading diverse teams through various improvement initiatives and assessment of new ways of working. He is currently the Operations Manager for Equinor’s operations offshore Newfoundland and Labrador, based in St. John’s. David has spent the past number of years in Norway with Equinor, working with the Operations Technology unit and within deep dive teams looking into next generation offshore asset management processes and techniques including, new technology, digitalization and remote operations. David is a Memorial University graduate and a registered Professional Engineer in Newfoundland and Labrador.

Energy Transition Workstream Biographies

Steve Emberley, Lead

Steve Emberley has over 20 years’ experience working as a geoscientist in various sectors of the oil and gas industry in Newfoundland and Labrador and Western Canada. He joined the Oil and Gas Corporation of Newfoundland and Labrador, formerly Nalcor Oil and Gas, in 2014 where he is Manager of Subsurface in the operations group overseeing subsurface aspects of the company’s equity stakes in Hebron, Hibernia and White Rose. Mr. Emberley is also responsible for exploring emerging technologies that can reduce GHG emissions in the province’s offshore, where he has been collaborating with Noia and NEIA. Mr. Emberley graduated with a B.Sc. (Hons.) in Earth Sciences from Memorial University focused on measuring atmospheric CO₂, and a M.Sc. in Geology from the University of Calgary focused on the geochemistry of CO₂ storage at an enhanced oil recovery site. He is a licensed Professional Geoscientist with Professional Engineers and Geoscientists of Newfoundland and Labrador.

Caron Hawco

Caron Hawco has over 25 years of experience in the petroleum industry and is the former chair of the Newfoundland and Labrador Oil and Gas Industry Association (Noia). She is a communications and international business development strategist, negotiator, facilitator. Experienced in the petroleum industry’s upstream, midstream and downstream sectors, Caron has provided strategic advice to corporate and industry leaders involved in Canada’s East Coast petroleum business, including petroleum operators, industry and trade associations, governments as well as international and local service and supply businesses. She also served as a leader with the Offshore Canada leadership team of Statoil (now Equinor).

Caron’s recent projects have focused on opening new markets, including Guyana and Norway, commercializing technologies, sustainability agreements, the diversification of the province’s oil and gas industry and its expansion and growth into the clean and ocean tech sectors. She is a gender diversity advocate and

currently serves on the Board of Directors of TechNL as well as the Canada-Guyana Chamber of Commerce. A graduate of Memorial University of Newfoundland and Labrador, Caron is an internationally accredited communicator, formerly awarded Newfoundland and Labrador’s Communications Professional of the Year, a Certified International Trade Professional and a Professional Project Manager.

Lesley James

Lesley James, PhD, P.Eng. is an associate professor and former Chevron chair in petroleum engineering in the Department of Process Engineering at Memorial University. Dr. James’ research focuses on sustainable oil production by increasing oil recovery rates through enhanced oil recovery and production optimization. Efficient and sustainable oil production comes from optimizing the integrated process and creating a circular economy by re-injecting natural gas and generated CO₂ – both greenhouse gases and useful solvents for oil recovery. Dr. James was awarded the 2018 Dean’s Award for Research Excellence along with awards for her volunteering efforts.

Dr. James is a professional engineer with PEGNL, a member, technical committee member, and past president of the Society of Core Analysts (SCA); committee member and faculty advisor for the Society of Petroleum Engineers (SPE); and members of the Canadian Society of Chemical Engineers (CSCHE) and European Association of Geoscientists and Engineers (EAGE).

Todd Mercer

Todd Mercer, P.Eng. is a senior developments engineer with Husky Energy based in St. John’s, NL. A graduate of Memorial University with 27 years of applied experience in the design, construction and operation of offshore and onshore oil and gas projects. Mr. Mercer has worked with various engineering companies and operators in North America, Europe, Middle East and Far East with projects that include both greenfield and brownfield developments. In addition to identifying new development opportunities, Mr. Mercer is currently engaged in Husky Energy’s greenhouse gas reduction opportunities. Mr. Mercer is a practicing professional engineering with the Professional Engineers and

Geoscientists of Newfoundland & Labrador (PEGNL), member of the American Society of Mechanical Engineers (ASME), and member of the National Association of Corrosion Engineers (NACE).

Tim O’Leary

Tim O’Leary has 30 years of experience primarily in the oil and gas sector. Tim worked for 10 years in construction prior to moving to oil and gas in 1998. He spent most of his career in Newfoundland and Labrador and held a number of senior local and international roles while based in St. John’s. He has extensive management and technical experience across the entire project life cycle including engineering, fabrication, construction and operations. Tim is recognized for building strong teams and seamless project execution.

Tim was born on the Southern Shore of Newfoundland and Labrador. He graduated with a Bachelor of Mechanical Engineering from Memorial University and completed the Mechanical Engineering Technology program at the Marine Institute. He has held a number of volunteer roles and been involved with a number of local organizations including School Council Chair – Outer Cove, Big Brothers Big Sisters, Jimmy Pratt Foundation, Kids Eat Smart, Janeway Telethon and Eastern Health.

Supply Chain Workstream Biographies

John Henley, Lead

John Henley graduated from the Massachusetts Institute of Technology (MIT) with a master of science in ocean engineering and ocean systems management. This followed his bachelor of engineering (mechanical) degree from Memorial University. Mr. Henley began his career with Mobil Oil Canada and gained positions with increasing seniority and responsibility throughout western Canada, Nova Scotia, Newfoundland and Labrador and the Gulf of Mexico. Mr. Henley is currently the vice president of project services with the Cahill Group. In addition to this supply experience, he has a wealth of operator experience through his employment with Mobil. Mr. Henley is a former chair of Noia and was a key player in Noia’s Redefining Oil. His areas of focus are supply, strategic planning and construction management.

Carolyn Barnes

Carolyn Barnes graduated from Memorial University’s mechanical engineering program and has worked in the oil and gas industry for over 15 years in a variety of roles including engineering, safety, security, health and environment and most recently, procurement. Ms. Barnes has worked in western Canada, eastern Canada and Australia. Her current role as the ExxonMobil Canada procurement manager oversees the acquisitions and supply chain teams and services both Hebron and Hibernia.

Geoff Cunningham

Geoff Cunningham graduated in 1983 from Memorial University of Newfoundland and Labrador with a Bachelor of Commerce. He has been in the oil and gas industry since 1987 where he started in the downstream in his capacity as Industrial Sales Manager (Newfoundland and Labrador) for Petro-Canada through Harvey’s Oil, Petro-Canada’s Newfoundland partner. In this role he was responsible for the marine fuels, lubricants and drilling fluid markets. In 1999 Geoff transferred to the parent company, A. Harvey & Co. Ltd. where he assumed responsibility for offshore operations. In 2017 Geoff assumed his current role as Vice President Operations for A. Harvey where in addition to the companies’ offshore operations he oversees Argentinia Freezers and Terminals, Harvey Autocarriers and A. Harvey’s bulk road salt divisions.

Geoff is a champion for the Newfoundland and Labrador Oil and Gas Industry serving eight years on the Noia Board of Directors where he held the office of Board Chair in 2009.

Jennifer Haley

Jennifer Haley has worked in the oil and gas industry for 18 years, with extensive experience and focus in the local supply chain sector. Throughout her career, Ms. Haley has formed valuable relationships with local and international suppliers in delivering successful projects in Newfoundland and Labrador. In her current role as Supply Chain Manager for Aker Solutions Canada, she is responsible for the supply chain activities for key clients Husky Energy, Suncor and ExxonMobil Canada Properties.

Ms. Haley graduated with a Bachelor of Business Administration Degree from Memorial University and completed a Masters Certificate in Project Management. Jennifer is currently on the Board of Directors for the Newfoundland and Labrador Oil and Gas Industries Association (Noia). Jennifer is also a member of the Noia/NEIA Cleantech Committee.

Dave Mercer
Dave Mercer is the current serving president of UNIFOR Local 2121 and very proudly represents over 700 workers in the oil and offshore industry of Newfoundland and Labrador. Throughout his career in the offshore, he has served the unionized membership in several capacities of union committees and executive positions. Dave has been in the oil and gas industry for over 23 years. He started his career with offshore in the supply chain management moving to Hibernia in June 1997, eventually moving to his current role in 2003 working on the Terra Nova FPSO. Dave works tirelessly to show his pride in the work he and the

membership of the union have done in furthering the oil and gas industry in Newfoundland and Labrador. The membership is well represented with Dave at the head of the local, and currently he is anticipating an accomplishment of support and assistance to the workers and their families using the federal package to get the workforce back in operation.

Photos courtesy of:

Aker Solutions Canada Inc.
Cahill Group
Cahill, Brian Ricks
Cougar Helicopters Inc.
Equinor Canada Ltd.
ExxonMobil Canada Properties
Fisheries and Marine Institute of Memorial University

Frontier Subsea
Harvey & Company
Memorial University of Newfoundland
Oil and Gas Corporation of Newfoundland and Labrador
St. John’s Port Authority
Talon Energy Services via Dru Kennedy Photography
Upstream Solutions

APPENDIX E – GLOSSARY OF TERMS & ACRONYMS

Acronyms:

AITC: Atlantic Investment Tax Credit
CAD: Canadian Dollars
CAPP: Canadian Association of Petroleum Producers
CCS: Carbon Capture and Storage
CEEA: Canadian Environmental Assessment Act
C-NLOPB: Canada-Newfoundland and Labrador Offshore Petroleum Board
CNOOC: China National Offshore Oil Corporation
Council: Oil and Gas Industry Development Council
CRIN: Canada’s Clean Resource Innovation Network
ERF: Emissions Reduction Fund
FORRI: Frontier and Offshore Regulatory Renewal Initiative
GDP: Gross Domestic Product
GHG: Greenhouse Gas
GovNL: Government of Newfoundland and Labrador
IET: Department of Industry, Energy, and Technology
LMDA: Labor Market Development Agreements
MMBOPD: Million Barrels of Oil per Day
NEIA: Newfoundland and Labrador Environmental Industry Association
NL: Newfoundland and Labrador
Noia: Newfoundland and Labrador Oil and Gas Industries Association
OA: Operations Authorization
OEI: Offshore Exploration Incentive
OGRAF: Newfoundland and Labrador Offshore Oil and Gas Recovery Assistance Fund
OHS: Occupational Health and Safety

Oilco: Oil and Gas Corporation of Newfoundland and Labrador
OpEx: Operating Expenses
PIP: Petroleum Incentive Program
RA: Regional Environmental Assessment
SDL: Significant Discovery License
Task Force: Oil and Gas Industry Recovery Task Force
UK: United Kingdom
UNCLOS: United Nations Convention on the Law of the Sea
WOO: World Oil Outlook

Glossary:

Accord Act: Canada-Newfoundland and Labrador Atlantic Accord Implementation Act
Discovery: the finding of oil or gas, often designated by a Significant Discovery License issued by the C-NLOPB
Existing Installations: facility already in place, for the production of oil or gas
Explorer: company exploring for oil or gas
Tie-back: the connection of an additional oil or gas discovery to an existing installation
Tier-1: one of the largest and most experienced contactors in that industry segment
Offshore Area: the sea area around Newfoundland and Labrador
Water Cut: The ratio of water produced compared to the volume of total liquids produced from an oil well

