



CRIN

Clean Resource Innovation Network

| DIGITAL | OIL AND GAS | TECHNOLOGY COMPETITION

Competition Guide

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1 INTRODUCTION

1.1 CRIN

The **Clean Resource Innovation Network (“CRIN”)** is a pan-Canadian network focused on ensuring Canada’s energy resources can be sustainably developed and integrated into global energy systems. CRIN is a federally registered non-profit organization. CRIN, as a ‘network of networks’, connects a vast array of skills, knowledge and experience from oil and gas and other industries to technology developers, researchers, government, investors, academia, entrepreneurs, youth and many other sectors. By identifying industry challenges, we create a market pull to accelerate commercialization and widespread clean technology adoption with environmental, economic and public benefits for Canada.

1.2 CRIN TECHNOLOGY COMPETITIONS

In the March 2019 budget the Government of Canada announced \$100 million from its Strategic Innovation Fund (“SIF”) to develop an innovation ecosystem to accelerate the commercialization of new technologies for application in Canada’s oil and gas industry.

The funding will be provided to the **Clean Resource Innovation Network (“CRIN”)** over four years, with up to \$80 million invested in 2021 through three technology competitions seeking breakthrough innovations to address environmental and economic challenges in Canada’s oil and gas industry. These CRIN technology competitions launch between March and May 2021:

- **Digital Oil and Gas Technology Competition:** Up to \$5 million CAD available; maximum \$1 million CAD award per project. This is the Competition as described in and subject to the terms in this Guide.
- **Low Emission Fuels and Products Technology Competition:** Up to \$25 million CAD available; maximum \$10 million CAD award per project. See relevant [website](#) and [guide](#).
- **Reducing Environmental Footprint Technology Competition:** Up to \$50 million CAD available; maximum \$10 million CAD award per project. See relevant [website](#) and [guide](#).

CRIN has partnered with MaRS Discovery District (“**MaRS**” or the “**Competition Coordinator**”) to coordinate the administration of the *Digital Oil and Gas Technology Competition* (“**Competition**”) outlined in this document. The Competition is sponsored by CRIN. MaRS's role is limited to coordination of the Competition until a list of potential Competition winners is provided to CRIN and MaRS is not responsible for any other aspect of the Competition, including without limitation the awarding and subsequent distribution of CRIN funding. MaRS is not affiliated with or involved in any of the other CRIN competitions mentioned in this Guide.

The Competition is inviting submissions to be evaluated in a single-phase submission/evaluation process. All relevant information required by applicants for evaluation must be completed on the Submission Form.

Note: Applicants who have questions about the Competition process are invited to email CRINcompetition@marsdd.com

2 DIGITAL OIL AND GAS TECHNOLOGY COMPETITION

CRIN's focus is on ensuring Canada's hydrocarbon resources can be sustainably developed and integrated into the global energy systems. Canada's oil and gas industry plays an important role in today's economy and is faced with the urgent need to reduce its environmental impacts, including its greenhouse gas footprint. Innovation and technology play a critical role in achieving these outcomes.

Digital innovation can also improve the competitiveness of Canadian companies through improved safety, reduced operating costs, increased efficiency and development of new business models to stay competitive. According to an industry estimate¹, the global oil and gas sector currently spends \$15 billion annually on enterprise software (~\$12.8 billion), cloud computing (~\$1.2 billion) and advanced analytics (~\$1 billion) like predictive maintenance, computer vision, machine learning, etc.

By 2030, the projected spend on cloud computing is expected to go from \$1.2 billion to \$12.5 billion annually, and the projected spend on advanced analytics is expected to go from \$1 billion to \$3.2 billion annually.

Regardless of the specifics of the market size, industry experts agree that the environmental, economic, productivity and safety benefits available through digital innovation, along with evolving regulatory requirements, will continue driving oil and gas sector investment in digital innovation.

2.1 COMPETITION OBJECTIVES

All projects supported through this Competition must demonstrate a **clear and justified value proposition for economic, environmental, and public benefits for Canada**.

The objectives of this competition are to:

1. Identify breakthrough digital technology solutions that address environmental and economic challenges in Canada's oil and gas industry with clear pathways to commercialization and wide-spread adoption in oil and gas and other industries across Canada and internationally;
2. Fund the development and commercialization of innovative Canadian digital technology solutions;

¹ Source: Bloomberg New Energy Finance

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3. Support solutions that increase the competitiveness and improve the environmental, economic, safety and operational performance of Canada's energy sector;
 4. Facilitate connections between innovators and oil and gas industry partners to ensure industry pull and clear pathways to commercialization and wide-spread adoption.

The focus of this Competition is **limited to breakthrough digital solutions that result in significant environmental, economic, and public benefits to Canada, and which are between pilot phase and commercial implementation stage** (see Section 3.2 below).

The scope does not include opportunities related to existing 'business as usual' technologies or technologies that do not provide environmental, economic, and public benefits in Canada.

2.2 Competition Focus Areas

This Competition is open to digital solutions aligned with one or more of the following technology focus areas:

1. Environmental Monitoring

Monitoring of environmental impacts on land, air, and/or water at any stage of project development – evaluation, assessment, construction and operations, and closures.

2. Operational Excellence and Efficiency

Excellence and efficiency in operations is applied through the entire organization to improve accuracy, quality and productivity and reduce costs in the delivery of services and products.

3. Capital Project Execution

At all project stages – greenfield, construction, turnaround, and brownfield, digital solutions can be applied to enhance effectiveness and efficiencies in planning, contracting and procurement, project execution, construction, drilling, commissioning, maintenance, and project governance.

4. Health and Safety

The broad scope of health and safety in the oil and gas industry includes identifying, preventing, controlling, and eliminating exposure to risks, hazards and dangerous conditions, by ensuring all employees have the training and competency to work safely, whether onshore or offshore.

Digital solutions can unlock the potential of data to transform Canada's oil and gas industry. The solutions should be directly aligned with the focus areas described above and the intended outcomes and opportunities of the competition, or be a catalyst to achieve the outcomes. Examples of digital solutions include but are not limited to incorporation of advanced analytics,

augmented reality (AR) and virtual reality (VR), artificial intelligence (AI) and machine learning (ML), cloud and edge computing, digital twins, drones and sensors, internet of things (IoT), and real-time decision support systems.

For more details on these focus areas and examples of impacts potential solutions might have, please view the [Primer](#).

3 ELIGIBILITY

3.1 ELIGIBLE APPLICANT TEAMS

This Competition is open to project teams (each, a "**Project Team**") consisting of one (1) eligible organization, acting as the lead applicant (the "**Lead Applicant**") and may be comprised of additional eligible organizations acting as project collaborators (the "**Project Collaborators**"). Subject to the organization eligibility requirements set out below, the Competition is open to all categories of Lead Applicant and Project Collaborator organizations, including technology developers, oil and gas producers, industry associations, academic institutions, multinational enterprises (MNE), municipalities, small and medium-sized enterprises (SME), and others.

To be eligible to participate in the Competition: (i), the Project Team's Lead Applicant and/or Project Collaborators **must** Include:

- **at least one SME (small or medium-sized enterprise)**
- and
- **at least one oil and gas producer.**

note: a single organization may satisfy both SME and oil and gas producer requirements; (ii) all organizations participating on the Project Team (i.e., Lead Applicant and Project Collaborators) **must** be incorporated pursuant to laws of Canada or a Canadian Province or Territory (However, Lead Applicant organizations and Project Collaborator organizations are not required to have operations in any particular Canadian Province or Territory); and, (iii) all Project Team members must be members of CRIN as set out on page 14 of this Guide. Employees, representatives, agents, Competition judges and contractors (and those with whom such persons are living, whether related or not) of CRIN, MaRS and MaRS subsidiaries and affiliates, are not eligible to participate in the Competition.

Roles for Project Team members should be clearly delineated, along with clear monetary and/or in-kind contributions to the proposed project and a **firm commitment** from **authorized persons** from each Project Collaborator organization must be evident and supported by letters in the Project Team's Competition application.

SME is defined as a small or medium-sized **enterprise** with less than 500 full-time employees. For this Competition, a SME can be a technology innovator/developer, a service company, and/or an oil and gas producer.

An **oil and gas producer** is a company of any size incorporated pursuant to the laws of Canada or a Canadian province or territory with the capability to conduct one or more of the following:

1. Upstream exploration for hydrocarbon resources
2. Upstream development (production) and sale of hydrocarbons

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3. Midstream trading and transportation of hydrocarbons and/or hydrocarbon-based products
 4. Downstream purchase of hydrocarbons for manufacturing (refining) and sale of hydrocarbon-based products

Examples of eligible Project Teams include:

- Lead applicant is an oil and gas producer that is also a SME
- Lead applicant is a SME collaborating with an oil and gas producer
- Lead applicant is a SME collaborating with an academic organization and an oil and gas producer

All submissions **must** be completed by the Lead Applicant organization that will serve as the primary contact point with MaRS and CRIN throughout the application process. Each Lead Applicant must designate one (1) authorized representative (an "**Authorized Representative**") to register for the Competition on behalf of the Project Team, and such authorized representative must: (i) be a resident of Canada who has reached the legal age of majority in his/her province/territory of residence; and (ii) must be authorized at the time of registration (and must remain authorized during and after the Competition) by the Lead Applicant organization, and as applicable, each Project Collaborator Organization, to: (i) provide to CRIN any and all required information that relates to the project and the Project Team for the purposes of administering the Competition in accordance with this Guide; (ii) register for the Competition on behalf of the Project Team; and (iii) legally bind the Project Team to the terms and conditions of this Guide. The Lead Applicant may change the Authorized Representative at any time by notifying MaRS and CRIN in writing of such change.

An applicant organization (whether a Lead Applicant or Project Collaborator) may complete submissions for distinct and separate projects to more than one of the three CRIN technology funding competitions that were announced in March 2021 and launch between March-May 2021 (see Section 1.2 above). However, such applicants **cannot** receive funding from multiple CRIN technology funding competitions for the same project or portions thereof. Applicants are strongly encouraged to review each of the competitions in detail and apply **only** to the competition best aligned with the proposed project.

By participating in this Competition, each participant is signifying participant's agreement to be legally bound by the terms and conditions of this Guide.

3.2 ELIGIBLE PROJECTS

Submissions are invited for projects that advance innovation to the stages of Technology Readiness Levels (TRL) 6-9, as described below:

TRL 6 – Product and/or process prototype demonstration in a relevant environment:
Prototypes are tested in a relevant environment. Represents a major step up in a

technology's demonstrated readiness. Examples include testing a prototype in a simulated operational environment.

TRL 7 – Product and/or process prototype demonstration in an operational environment:

Prototype near or at planned operational system and requires demonstration of an actual prototype in an operational environment.

TRL 8 – Actual product and/or process completed and qualified through test and demonstration:

Innovation has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development.

TRL 9 – Actual product and/or process proven successful: Actual application of the product and/or process innovation in its final form or function.

3.3 PROJECT LOCATION

Technology solutions can originate from anywhere globally, but technologies **must** be piloted, demonstrated, or implemented in Canada and at least 90% of total eligible costs must be incurred in Canada. Projects that involve demonstration, deployment, or implementation of a technology at multiple Canadian sites are eligible for funding under this Competition.

4 TERMS OF FUNDING

4.1 TOTAL FUNDS AVAILABLE

The total funding available for projects in this Competition is up to **\$5 million** Canadian Dollars (CAD), subject to the discretion of CRIN and the availability of funds.

The maximum funding request to CRIN for any one project is **\$1 million CAD**. There is no minimum funding request for any one project.

Note: Applicants must justify the amount of funding requested within their submission. CRIN may choose at its sole discretion to award project funding for an amount different from that requested amount.

4.2 COST SHARING

- Subject to the terms of the Ultimate Recipient Agreement (as defined below), CRIN will contribute up to 50% of the project's eligible costs.
- Industry collaborators must contribute a minimum of 25% of the total project's eligible costs. "Industry Collaborator" means corporations, including not-for-profit organizations, incorporated in Canada that are not Academic Collaborators. For this Competition, Industry Collaborators include the oil and gas producer(s), SMEs (technology developers, start-ups, etc.) and any other industry (non-academic entities).
- Additional funding can be sourced from industry, government or Academic Collaborators (as defined below) subject to the government sources limit described in Section 4.3 (Government Stacking Limits) below.

The CRIN contribution to a single selected project will be no more than **50%** of the total project eligible costs.

Note: This Competition is designed to support Canadian projects and drive economic activity in Canada. At least 90% of total eligible costs must be incurred in Canada. Costs occurring outside of Canada shall not exceed 10% of the total eligible costs for each funded project.

For more information, please refer to the *CRIN Eligible Costs* guide in the Appendix.

4.3 GOVERNMENT STACKING LIMITS

The combined level of financial assistance for any individual project from all federal, provincial, territorial, and municipal government sources (including funding provided by CRIN) shall not exceed seventy five percent (75%) of the project's eligible costs incurred by any Industry Collaborator(s) and one hundred percent (100%) of eligible costs incurred by any Academic Collaborator. The term “**Academic Collaborator**” means universities and colleges located in Canada which grant degrees or diplomas, and their academic affiliated institution(s).

4.4 COMPETITION TIMELINES

The following timelines apply to the full project submission and funding process. Note that CRIN reserves the right, in its sole and absolute discretion, to alter these timelines from time to time or cancel the Competition.

Activity	Date/Time
Competition Opens	May 18, 2021 11:30 AM PT
Virtual Launch Event	May 18, 2021 11:30 AM - 1:00 PM PT
Submission Deadline	July 30, 2021 5:00 PM PT
Winners Announcement	November - December 2021

5 APPLYING TO THE COMPETITION

5.1 HOW TO APPLY

Application to the Competition is a single submission/evaluation process. Only applications submitted through the [competition webpage](#) will be accepted. The complete application package, including all submission forms and required documentation, must be either completely in English or completely in French.

In order for an application to be considered for the Competition, the Authorized Representative of a Project Team applicant **must complete and submit** the following documents by the closing date and time (**July 30, 2021, 5:00 PM PT**) through the Competition website. The complete application package consists of:

- Submission form (the "**Submission Form**")
and
- Supporting documents
 - (Required) Letters of support/commitment
 - (Required) Project overview document .xls(x)
 - (Optional) Video demonstration

Note: For the application to be eligible and complete, the Authorized Representative must create a profile on behalf of the Project Team on www.challenges.marsdd.com and all Project Team members must be members of CRIN <http://www.cleanresourceinnovation.com/connect/join> (in addition to meeting all other applicable eligibility requirements set out in Section 3 of this Guide).

Submission Form consists of:

- **Applicant(s) information:** The name(s) and contact information of the Lead Applicant and Project Collaborator(s) associated with the submission, with the project Lead Applicant (organization) and Authorized Representative clearly identified as well as details of each organization's Corporation number and confirmation of CRIN membership.
- **General overview:** Basic information about the solution and project.
- **Commercial potential:** Details on business model, market opportunity, and partnerships.
- **Impacts:** Details on economic, public and environmental benefits anticipated from applying this solution.
- **Implementation plan:** Details on feasibility and risks when carrying out this project and distributing the solution.

All supporting documentation must be uploaded on the [competition webpage](#). Templates will be provided where applicable. Supporting documents include:

- **Letters of support / commitment (Required):** At a minimum, a letter of support **must** be provided by the SME Project Collaborator and the oil and gas producer Project Collaborator, and signed by those who are able to bind the respective organization. The letter should state the interest in the technology and project, the role the partner will play, the amount of monetary support they will contribute; and the type and value of any in-kind support they will provide (if applicable). Letters of support from potential end-users/clients is also useful.
- **Project overview document.xls(x) (Required):** This document found in the [Resources tab](#) of the Competition website will be used to provide details on project funding sources, costs, work plan, and risk mitigation strategy.
 - *Project costs:* Details and justification of expected costs.
 - *Project funding:* Outline other sources of project funding.
 - *Work plan:* Details on activities required to achieve the objectives for each year of the funding and expected deliverables.
 - *Risk mitigation strategy:* Outline all risks (financial, technical, operational, market, collaborator, IP, etc.) associated with the project and plans to mitigate identified risks.
- **Video demonstration (Optional):** Provide additional understanding or insight for your solution.

Note: Only the required documents and information described above will be reviewed. Any additional attachments, materials or information will not be considered during the evaluation.

5.2 SUBMISSION DEADLINE

The deadline for submission of a completed application including Submission Form and all required documents in response to this Competition is July 30, 2021 5:00 PM PT (**“Deadline”**). Submissions received after the Deadline will **not** be accepted nor eligible in the Competition. Applicant Project Teams are encouraged to complete their submissions well in advance of the Deadline. Furthermore, partial or incomplete applications will **not** be accepted.

6 EVALUATION

6.1 REQUISITE SCREENING CRITERIA

All submissions will be screened to ensure they meet all of the eligibility requirements, including the following minimum criteria:

- **Complete Application Package** received by the Deadline **July 30, 2021 5:00 PM PT**.
- Applicant Project Teams consist of **at least one** SME and **at least one** oil and gas producer, all being **incorporated** in Canada or of a Canadian Province or Territory and all being **members of CRIN** (i.e., individuals able to commit organizations have committed their organization).
- **Project is** within TRL 6-9 at the time of submission; addresses at least one of the specified focus areas, and defines anticipated environmental, economic and public benefits.
- **Complete Application Package** is submitted either completely in English or completely in French, including all attachments, and all information is received via the submission portal on the website unless otherwise specified in this document.

6.2 MERIT EVALUATION CRITERIA

Submissions will be evaluated based on the following merit criteria. Each of the evaluation criteria is assigned a relative weighting. Applicants are encouraged to consider these weightings when completing the submission form.

Criterion	Description	Weight
Innovation Opportunity	<ul style="list-style-type: none">● Technology and Innovation● Growth of domestic market, end-user potential and global export (by development of new processes/products)● Commercialization pathway and knowledge transfer	30
Impact	<ul style="list-style-type: none">● Environmental Benefits (air (GHG emissions), land, water)● Economic benefits (increased competitiveness, and revenue/cost impact)● Public and social benefits (job and business creation)	40
Implementation	<ul style="list-style-type: none">● Work plan and budget● Financing plan (including risk management strategy)● Project team and required skills/resources	30

Project submissions will be selected to receive funding from CRIN, subject to compliance with this Guide. Up to \$1 million CAD funding towards eligible costs will be awarded per selected project submission (funding per project will be determined by CRIN and total available funding for the Competition from CRIN is up to \$5 million CAD). CRIN may choose, at its sole discretion, to fund less than a selected project's requested amount. There is no minimum number of projects that will be selected to receive funding, and no minimum CRIN funding guarantee.

Note: Applicants will be required to demonstrate that the project is responding to a need articulated by industry collaborators to solve a high-priority problem, and that if the technology is successful, there will be a strong market pull from industry.

Project outcomes must include benefits to Canada in each of the following areas:

- Environmental benefits
- Economic benefits
- Public benefits
- Innovation ecosystem development

Examples of environmental benefits:

- Reduction of environmental footprints and GHG emissions
- Increased energy efficiency
- Conservation of natural resources
- Land reclamation or remediation and reduced water use
- Improved ecology and biodiversity

Examples of economic benefits include:

- Job and business creation
- Increased competitiveness
- New sales, revenue, commercial opportunities
- Attraction of new investment
- Growth of domestic market and global export
- Development of new processes/products

Examples of public benefit include:

- Development of highly skilled workforce
- Improved health and safety
- Energy security
- Embodiment of equity, diversity and inclusivity

Examples of innovation ecosystem development include:

- Market disruption and breakthrough technology potential
- Knowledge transfer
- Technology commercialization and adoption

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- New and incremental collaboration

Note: Projects will be assessed on the ability to rapidly deploy technology and provide significant environmental benefits, such as contributing to CRIN's target of 100 megatonnes of CO₂e reduction by 2033.

Following the evaluation period, CRIN will contact the Authorized Representative associated with each selected project by email or phone (using the information provided on the Submission Form). Before being declared a funding recipient and awarded funding, the Authorized Representative and Project Team associated with each selected Project will be required to execute a form of Competition declaration and release, and all parties of the Project Team of a Project identified as a funding recipient (Ultimate Recipient) will be required to execute an Ultimate Recipient Agreement with CRIN (described below) and no selected Project shall be a recipient of funding until it has completed such declaration and release and entered in the Ultimate Recipient Agreement.

For the avoidance of doubt, the Project Team becomes the eligible recipient of funding subject to compliance with all the terms of this Guide including but not limited to entering into the Ultimate Recipient Agreement.

Without limiting the foregoing, by accepting funding, the Project Team, Authorized Representative and Project Team member organizations and participants of each selected project hereby: (i) confirm compliance with this Guide; (ii) acknowledge acceptance of the funding (as awarded) and that the funding shall only be eligible towards eligible project costs (as described in Section 7 and the Appendix of this guide, below) ending March 31, 2024; (iii) release the Released Parties (as defined below) from any and all liability in connection with this Competition, their participation therein and/or the awarding and use/misuse of the funding or any portion thereof; (iv) agree to indemnify the Released Parties against any and all claims, damages, liabilities, costs, and expenses arising from the project and/or use of the funding or any portion(s) thereof; (v) agree to the publication, reproduction and/or other use of their name, statements about the Competition and/or other likeness without further notice or compensation, in any publicity or advertisement carried out by or on behalf of CRIN or MaRS in any manner or medium whatsoever, including print, broadcast or the internet, worldwide and in perpetuity; and (vi) acknowledge and agree the role of MaRS in the Competition is limited to coordinating the Competition up until the list of potential recipients is provided to CRIN and that MaRS is not responsible for any other aspect of the Competition, including without limitation the awarding and subsequent distribution of CRIN funding.

The Released Parties will not involve themselves in, and accept no obligation or liability in respect of, any decision of the Ultimate Recipient regarding the subsequent distribution, allocation, use or misuse of funding awarded.

7 PROJECT ACTIVATION AND REPORTING

7.1 PROJECT STRUCTURE

Funding made available through this Competition is provided to support the completion of projects with well-defined objectives, milestones, deliverables, and timelines. Applicants must clearly delineate the scope of the project for which funding from CRIN is being requested. Any related work completed concurrently or before the project term but outside the scope of the project may be discussed in the submission form and must be clearly indicated as such.

7.2 PROJECT TERM

All project activities funded by CRIN through this Competition must be completed before or on March 31, 2024. The project may complete after this date including project activities, reporting, submission of final deliverables to CRIN, and other obligations outlined in the Ultimate Recipient Agreement between CRIN and each Ultimate Recipient(s).

7.3 PROJECT INITIATION

CRIN will only contribute to go-forward project costs incurred after the date of funding approval from CRIN. Project-related costs incurred prior to funding approval from CRIN will be considered out of scope, will not be considered eligible project costs, and are not eligible for funding from CRIN. Furthermore, no disbursements will be made prior to execution of an Ultimate Recipient Agreement with CRIN, and any project costs incurred prior to execution of an Ultimate Recipient Agreement will not be reimbursed by CRIN in the event that an Ultimate Recipient Agreement is not executed.

7.4 ULTIMATE RECIPIENT AGREEMENT

Applicants selected for funding (“**Ultimate Recipients**”) will enter into a recipient agreement (“**Ultimate Recipient Agreement**”) with CRIN. The Ultimate Recipient Agreement(s) will address the project scope, work plan, milestones, deliverables, performance targets, eligible costs, payment schedule, reporting requirements, terms of funding including intellectual property and project assets, and other aspects related to CRIN’s funding contribution.

Potential recipients will be encouraged to obtain independent legal advice prior to entering into the Ultimate Recipient Agreement as it contains material legal terms and long term obligations.

7.5 INTELLECTUAL PROPERTY TERMS

Details of intellectual property (IP) ownership will be addressed in the Ultimate Recipient Agreement between CRIN and the Ultimate Recipient(s). However, a few basic principles apply, including:

- Background IP and third-party technology remains with its original owner(s).
- Project IP created in projects funded through this Competition will be owned by the Ultimate Recipient and any co-inventor collaborator(s) and will be available for use in Canada to other parties through fair, reasonable, and non-discriminatory terms.

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- Project IP generated in projects funded through this Competition cannot, without incurring penalty and repayment obligations, be sold or exclusively licensed outside of Canada to a non-Canadian entity for a minimum of five (5) years after the end of the funding agreement with the Ultimate Recipient(s), except in particular respects outlined in the Ultimate Recipient Agreement.
 - Furthermore, project assets, excluding Project IP, may not, without incurring penalty and repayment obligations, be disposed of outside of Canada or in a manner contrary to the objectives of the Competition for a minimum of five (5) years after the end of the Ultimate Recipient Agreement.

CRIN understands that intellectual property is an important element of technology development. CRIN will work with Ultimate Recipients to facilitate reasonable IP protection of the technology developed during a funded project, while ensuring the technology is retained in Canada and can be reasonably shared / licensed in the marketplace as per the requirements of the Ultimate Recipient Agreement.

7.6 OUTCOMES REPORTING AND KNOWLEDGE SHARING

Ultimate Recipients will be required to report on project outcomes, achievements, and lessons learned, including without limitation environmental benefits (actual and projected), job creation, and other environmental, economic, and public benefits.

Monitoring and reporting obligations for environmental, public benefit and economic metrics from project completion to March 2034 will also be outlined in the Ultimate Recipient Agreement between CRIN and each funding recipient.

8 GENERAL TERMS & CONDITIONS

8.1 CONFIDENTIALITY

By participating in this Competition, each participant expressly consents to CRIN, MaRS and their respective agents and/or representatives storing, sharing and using personal information submitted only for the purpose of administering the Competition in accordance with applicable privacy laws and CRIN and MaRS's privacy policy, as applicable. If any participant has questions regarding CRIN's privacy policy, contact privacy@cleanresourceinnovation.com. MaRS's privacy policy can be found at <https://marsdd.com/privacy/>. This section does not limit any other consent(s) that a participant may provide CRIN or MaRS or others in relation to the collection, use and/or disclosure of personal information. The personal information of participants will not be otherwise sold, shared, or disclosed with third parties, other than to third parties engaged by permitted parties to fulfill any applicable purposes or as permitted or required by law.

CRIN Members, including Competition applicants and volunteers, and contracted staff, or contracted organizations and their representatives ("**Contractors**"), are responsible for ensuring the security and privacy of confidential and proprietary information and for exercising discretion in the handling of such information. CRIN Members and Contractors will not knowingly, or willfully, directly or indirectly, misuse, disclose or disseminate to any third party any confidential information belonging to a CRIN Member, acquired in connection with or as a result of engagement with CRIN.

All records containing confidential information created or received by CRIN Members or Contractors are protected against unauthorized access, collection, use, disclosure, retention or disposal through the use of reasonable security measures and effective records management. Confidential information that is collected, used, or disclosed by CRIN will be handled in a manner that recognizes both the right of the individual to have their personal or confidential information protected and the need of CRIN to collect, use and disclose such information for purposes that are reasonable.

8.2 VERIFICATION

All submissions, eligible costs, Project Teams, Authorized Representatives and Project Team member organizations and participants are subject to verification at any time and for any reason by CRIN. CRIN reserves the right, in its sole and absolute discretion, to require proof of identity and/or eligibility (in a form acceptable to CRIN) for the purposes of verifying the eligibility and/or legitimacy of any submission, eligible cost, Project Team, Authorized Representative and/or Project Team member organization or participant, information entered (or purportedly entered) for the purposes of this Competition, and/or for any other reason CRIN deems necessary, in its sole and absolute discretion, for the purposes of administering this Competition in accordance with the letter and spirit of this Guide. Failure to provide such proof to the complete satisfaction of CRIN within the timeline specified may result in disqualification in the sole and absolute discretion of CRIN. CRIN reserves the right to disqualify any Project

Team, Authorized Representative and/or Project Team member organization or participant in its sole discretion should any such individual or organization at any stage supply untruthful, incomplete, inaccurate, or misleading personal details and/or information. Any participant deemed by CRIN to be in violation of the letter and/or spirit of this Guide for any reason is subject to disqualification in the sole and absolute discretion of CRIN at any time.

8.3 GENERAL

By participating in the Competition, each participant hereby agrees to release the CRIN and MaRS, MaRS subsidiaries and affiliates, and each of their respective agents, representatives, employees, directors, officers, successors, and assigns (collectively, the "**Released Parties**") from any and all liability in connection with the Competition and their participation therein and to indemnify the Released Parties against any and all claims, damages, liabilities, costs, and expenses arising from their participation in the Competition and for any use of the submission by the Released Parties in accordance with the terms of this Guide. By participating in the Competition, each participant also agrees that the submission (and each individual component thereof) and all other aspects of their participation in this Competition complies with all terms and conditions stated in this Guide. The Released Parties will bear no liability whatsoever regarding: (i) the use of any submission and/or project (or any component thereof); (ii) participation in any Competition-related activities; (iii) any use, collection, storage and disclosure of any personal information; and/or (iv) if a project receives funding, the funding (including any use or misuse of any project funding received). The Released Parties shall be held harmless by each participant in the event it is discovered that the participant has departed from or not otherwise fully complied with any of this Guide. This release and indemnity shall continue in force following the termination of the Competition and/or awarding of any funding. By participating in the Competition, each participant hereby warrants and represents that: (i) the Project Team has full rights in and to the submission for the purposes of submitting such submission in the Competition; (ii) any submission or other Competition-related information submitted does not contain any reference to any identifiable third party organizations or individuals, unless consent has been obtained from such organization or individual; and (iii) the submission (and corresponding project) is compliant with all applicable laws, statutes, ordinances, regulations and guidelines and will not give rise to any claims whatsoever, including, without limitation, claims of infringement, invasion of privacy or publicity, or infringe on any rights and/or interests of any third party.

The Released Parties will not be liable for: (i) any failure of any information to be received in connection with the Competition; (ii) any technical malfunction or other problems of any nature whatsoever, including, without limitation, those relating to the telephone network or lines, computer on-line systems, servers, access providers, computer equipment or software; (iii) the failure of any submission and/or other information to be received, captured or recorded for any reason whatsoever, including, but not limited to, technical problems or traffic congestion on the Internet or at any website, including the online Submission Form; (iv) any injury or damage to a participant's or any other person's computer or other device related to or

resulting from participating in the Competition; (v) any participant being incorrectly and/or mistakenly identified as an Ultimate Recipient; and/or (vi) any combination of the above.

CRIN reserves the right, in its sole and absolute discretion to cancel, withdraw, amend or suspend the Competition (or to amend this Guide) in any way, in the event of any cause beyond the reasonable control of CRIN that interferes with the proper conduct of the Contest as contemplated by this Guide. Any attempt to undermine the legitimate operation of the Competition in any way (as determined by CRIN in its sole and absolute discretion) may be a violation of criminal and civil laws and should such an attempt be made, CRIN reserves the right to seek remedies and damages to the fullest extent permitted by law.

In the event of any discrepancy or inconsistency between the terms and conditions of this English Guide and disclosures or other statements contained in any Competition-related materials, including, but not limited to, the French version of this Guide, print or online advertising and/or any instructions or interpretations of this Guide given by any representative of CRIN, the terms and conditions of this English Guide shall prevail, govern and control to the fullest extent permitted by law.

The invalidity or unenforceability of any provision of this Guide shall not affect the validity or enforceability of any other provision. In the event that any provision is determined to be invalid or otherwise unenforceable or illegal, this Guide shall otherwise remain in effect and shall be construed in accordance with the terms as if the invalid or illegal provision were not contained herein. To the fullest extent permitted by applicable law, all issues and questions concerning the construction, validity, interpretation and enforceability of this Guide or the rights and obligations of participants, CRIN or any of the other Released Parties in connection with the Contest will be governed by and construed in accordance with the domestic laws of the Province of Alberta and the federal laws of Canada applicable therein, without giving effect to any choice of law or conflict of law rules or provisions that would cause the application of any other jurisdiction's laws. The parties hereby consent to the exclusive jurisdiction and venue of the courts located in Alberta in any action to enforce (or otherwise relating to) this Guide or relating to the Competition.

9 CONTACT US

For any questions or clarifications regarding the CRIN Digital Oil and Gas Technology Competition, please contact: CRINcompetition@marsdd.com with Subject: CRIN Digital Oil and Gas Technology Competition.

Updates will be provided on the competition website, where applicants can review the FAQs and find out the latest competition news.

APPENDIX: ELIGIBLE COSTS

1. ELIGIBLE COSTS PRINCIPLES

Eligible costs incurred by the Ultimate Recipient(s) are generally non-recurring and incremental to the ordinary business activities of the Ultimate Recipient(s). Eligible costs shall be reasonable, such that the nature and the amounts do not exceed what an ordinary prudent person would conduct in a similar business context.

For Ultimate Recipients, eligible costs will generally include expenditures related to:

- Collaborative technology development and/or commercialization for company scale-up and ecosystem development;
- Technology-focused companies, including SMEs, focusing on the technology play of high growth industries and firms with the potential to attract further private sector investment;
- Development and advancement of intellectual property;
- Increased participation and development of the Canadian supply chain; and/or
- Potential for a disruptive market impact from a project result.

2. DIRECT COSTS

In performing the project, eligible cost categories may include the following:

1. **Direct Labour:** The portion of regular gross wages or salaries incurred by Ultimate Recipients which can be specifically identified and measured as having been performed for the project and which is so identified and measured consistently by the Ultimate Recipient(s)' cost accounting system as accepted by CRIN.
2. **Subcontractors and Consultants:** The costs of subcontractors or consultants incurred for statement of work activities, which can be specifically identified and measured as having been incurred for the project. The overhead rate calculation for Ultimate Recipient(s) does not apply to bona fide subcontractors and consultants.
3. **Direct Materials:** The cost of materials that can be specifically identified and measured as having been processed, manufactured and made into the final product/prototype under the project, which are measured consistently by the Ultimate Recipient(s)' cost accounting system as accepted by CRIN.
 - a. Materials purchased solely for the project shall be at the net laid down cost to the Ultimate Recipient(s), net of any sales tax and after any discounts offered by the supplier.

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- b. Materials issued from the Ultimate Recipient(s)' general stocks shall be measured in accordance with the material pricing method consistently used by the Ultimate Recipient(s).
 - c. Small tools and low value material and equipment are generally not considered direct material, but rather as a part of indirect costs (overhead).
4. **Equipment:** The capital cost of equipment, which can be specifically identified as having been purchased for the project and measured consistently by the Ultimate Recipients' costing system as accepted by CRIN. Capital equipment acquired under the project may be subject to CRIN's approval for disposal.
 5. **Land, Building and Building Improvement:** The capital cost of land, buildings or building improvement that are necessary to carry out the project and have been approved by CRIN. Eligible building costs may include the acquisition costs, construction of new or expansion of existing facilities, the development of testing facilities, and investments in modern buildings and permanent building improvement.
 6. **Other Direct Costs:** Applicable direct costs, not falling within the categories of direct material or direct labour or equipment, but which can be specifically identified and measured as having been incurred by the Ultimate Recipient(s) for the project and which are so identified and measured consistently by the Ultimate Recipient(s)' costing system as accepted by CRIN.
 7. Travel and outreach costs incurred by the Ultimate Recipient(s) that are directly related to the project may be eligible. However, travel costs shall not include expenses for regular daily commutes or for regular Board meetings. Travel expenses shall be appropriate, economical and reasonable, and available to most of the employees of the Ultimate Recipient(s).

A copy of the Ultimate Recipient(s)' travel policy may be required for review by CRIN during the claim process.

3. INDIRECT COSTS (OVERHEAD)

Indirect Costs, also called overhead costs, are those costs which, though necessarily having been incurred by the Ultimate Recipient(s) for the conduct of the business in general, cannot be identified and measured as directly applicable to the carrying out of the project.

Indirect costs include but are not limited to:

1. Indirect materials and supplies such as supplies of low value, high-usage and consumable items which meet the definition of direct material costs but for which it is

commercially unreasonable, in the context of the project, to account for their costs in the manner prescribed for direct costs.

2. Indirect labour and overtime premium
3. All types of benefits paid by an employer including but not limited to: Canada Pension Plan (CPP), Employment Insurance (EI), fringe benefits, medical benefits, dental benefits, pension benefits and other taxable benefits.
4. Public utilities expenses of a general nature, including but not limited to power, HVAC (heating and water), lighting, and the operation and maintenance of general assets and facilities.
5. Expenses such as property taxes, rent (not covered as part of direct costs) and depreciation costs.
6. General and administrative expenses, including but not limited to the remuneration of executive and corporate officers (including bonuses and incentives), general office wages and salaries, clerical expenses related to the administration and management of the project, expenses such as stationery, office supplies, postage and other necessary administration and management expenses, such as:
 - a. Office furniture (considered a general expense);
 - b. Pay for executive employees (considered an indirect cost under most circumstances);
 - c. Administration costs e.g., review and approval of documents, oversight, quality review, strategic guidance, participation in all-staff meetings, professional development, performance reviews (considered indirect costs);
 - d. Any costs associated with interactions with CRIN and/or the Competition Coordinator(s) including application, submission, claims, amendment, audit, and reporting communications.

Indirect costs shall be calculated at a rate of 55% of eligible direct labour costs for the Ultimate Recipient(s), but no more than 15% of total eligible costs will apply for each Ultimate Recipient(s) and for each individual project if more than one project is selected for an Ultimate Recipient.

4. INELIGIBLE COSTS

Ineligible costs incurred by the Ultimate Recipient(s) are costs not eligible for CRIN contribution, regardless of whether they are reasonably and properly incurred in the carrying out of the project.

Ineligible costs include:

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1. Any form of interest paid or payable on invested capital, bonds, debentures, bank or other loans together with related bond discounts and finance charges; the interest portion of the lease cost that is attributable to cost of borrowing regardless of type of lease.
 2. Legal, accounting and consulting fees in connection with financial reorganization (including the set-up of new not-for-profit organizations), security issues, capital stock issues, obtaining of licenses, establishment and management of agreements with CRIN and prosecution of claims against CRIN. Such costs may be eligible if they are in connection with obtaining patents or other statutory protection for project intellectual property.
 3. Losses on investments, bad debts and expenses for the collection charges
 4. Losses on other projects or contracts
 5. Federal and provincial income taxes, goods and services taxes, value added taxes, excess profit taxes or surtaxes and/or special expenses in connection with those taxes. Duty taxes paid for importing is an eligible cost.
 6. Provisions for contingencies
 7. Premiums for life insurance on the lives of officers and/or directors where proceeds accrue to the Ultimate Recipients
 8. Amortization of unrealized appreciation of assets
 9. Depreciation of assets paid for by CRIN
 10. Fines and penalties
 11. Expenses and depreciation of excess facilities
 12. Unreasonable compensation for officers and employees
 13. Product development or improvement expenses not associated with the work being performed under the project
 14. Advertising, except reasonable advertising of an industrial or institutional character placed in trade, technical or professional journals for the dissemination of information for the industry or institution.

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15. Entertainment expenses (including but not limited to catering, alcohol, non-travel expenses).
 16. Donations
 17. Dues and other memberships other than regular trade and professional associations
 18. Extraordinary or abnormal fees for professional advice in regard to technical, administrative or accounting matters, unless prior approval is obtained from CRIN.
 19. Selling and marketing expenses associated with the products and/or services being developed under the project
 20. In-kind costs
 21. Recruiting fees