

MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020 #MaxFunding



THE REVERSE PITCH

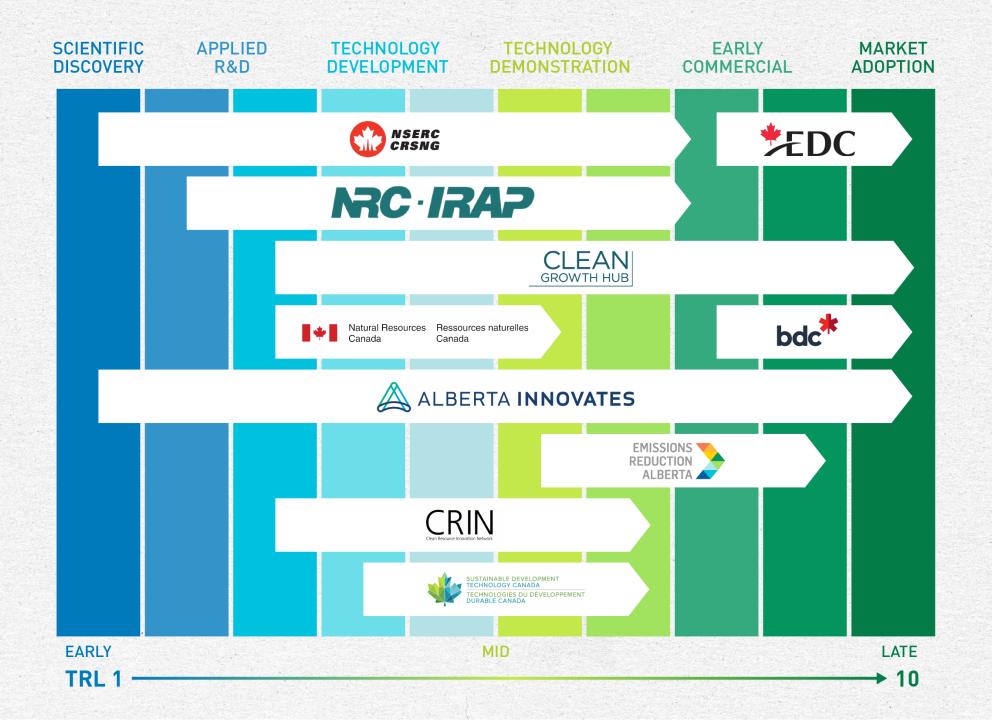
July 21, 2020 The Reverse Pitch, 9 to 10:30 a.m. (MDT) #MaxFunding





July 21, 2020 The Reverse Pitch, 9 to 10:30 a.m. (MDT) A Deeper Dive, 10:30 a.m. to 1:30 p.m. (MDT) July 22, 2020 Lessons Learned from Expert Reviewers, 9 to 10:00 a.m. (MDT) #MaxFunding





Get talking in the chat!



MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

INDUSTRIAL RESEARCH ASSISTANCE PROGRAM - IRAP



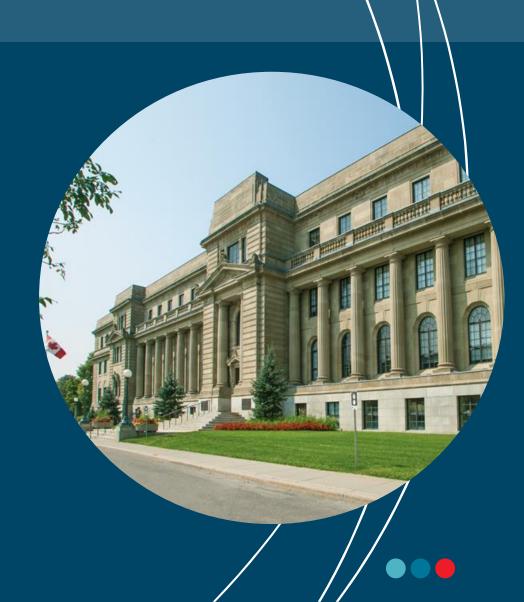


National Research Council Canada

Conseil national de recherches Canada

The National Research Council of Canada

- MANDATES
- Business innovation
- Policy solutions for government
- Advancing knowledge
- RESOURCES
- 2,151 scientists, engineers, technicians, other specialists
- 255 IRAP industrial technology advisors
- 179 buildings in 22 locations

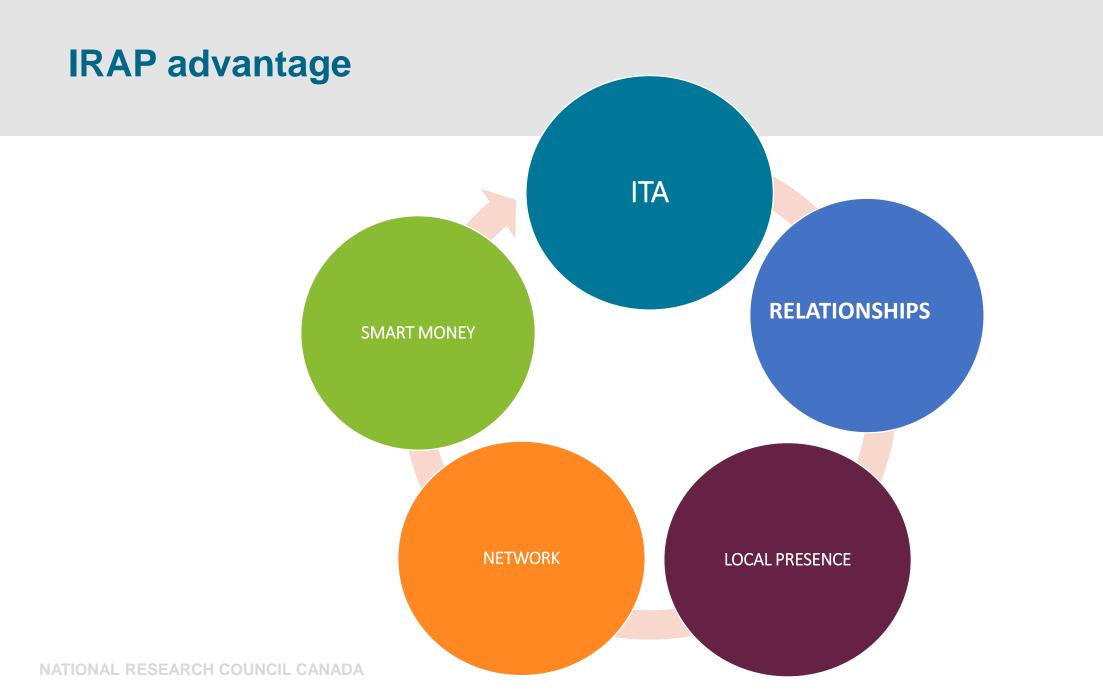


Industrial Research Assistance Program

Mandate **Mission** Vision

- STIMULATE WEALTH CREATION for Canada through innovation
- ACCELERATE THE GROWTH of small and mediumsized businesses by providing them with a comprehensive suite of innovation services and funding

BE THE MOST IMPACTFUL PROGRAM of its kind in the world, where Canadian firms go first to transform their ideas into commercial success



Industrial technology advisors

- Private sector experience
- Later in career cycle (typically 20+ years experience)
- Senior managers and entrepreneurs
- Most have an engineering or science background
- Get to know an IRAP ITA!

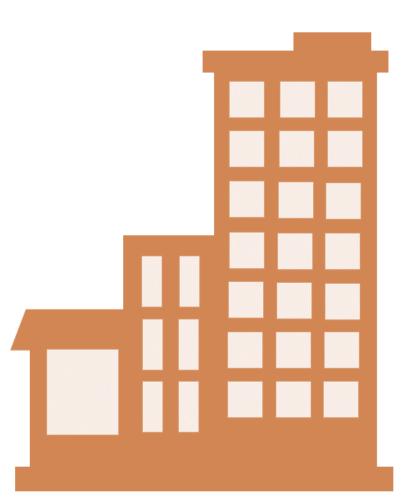


IRAP engagement model



- Business advice
 Linkages
- Linkages
- Strategic intelligence
- Technical expertise

- IRAP R&D projects
- Youth employment
- International



Who can we select?

BASIC ELIGIBILITY

- Incorporated SME operating in Canada
- 500 or fewer employees
- Objective to grow through innovation

ASSESSMENT OF THE BUSINESS

- Business opportunity
- Management & financial capabilities
- Potential to achieve expected outcomes
- Plan to commercialize results



Who can we select?

• ASSESSMENT OF THE PROJECT

- Project plan and challenges
- R&D team's capacity to achieve success
- Potential impact on the firm and Canada



THANK YOU

Julie Kennett Acting Regional Director, IRAP Prairies Alberta South 1-877-994-4727

Julie.kennett@nrc-cnrc.gc.ca



National Research Council Canada Conseil national de recherches Canada







MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

Natural Sciences and Engineering Research Council of Canada (NSERC)









CANADA FOUNDATION FOR INNOVATION

FONDATION CANADIENNE POUR L'INNOVATION

\$3B+ Innovation Support



CIHR Canadian Institutes of Health Research INSTITUTES de recherche en santé du Canada

$SSHRC \equiv CRSH$

Social Sciences and Humanities Research Council of Canada Conseil de recherches en sciences humaines du Canada



Natural Sciences and Engineering Conseil de recherches en sciences **Research Council of Canada** naturelles et en génie du Canada



Building R&D Partnerships Through NSERC

NSERC innovation programs encourage Canadian businesses and other organizations to collaborate on research projects with universities and colleges across the country

Work with university researchers

Alliance Grants

Work with colleges

College and Community Innovation Program



One New Flexible Simplified Enhanced Responsive **Partnerships** Program

Alliance Grants

... encourage university researchers to collaborate with partner organizations, which can be from the private, public or not-forprofit sectors. These grants support research projects led by strong, complementary, collaborative teams that will generate new knowledge and accelerate the application of research results for the benefit of all Canadians.



College and Community Innovation Program

Provides innovative solutions for local and regional business challenges through the expertise of Canadian colleges

- A suite of grants to support different types of applied R&D collaborations, from focused six-month projects, to longer-term partnerships, including:
 - Connect Grants
 - Engage Grants
 - Applied Research and Development Grants
 - Innovation Links Grants



www.nserc.ca

NSERC-Funded Collaborations - Key Advantages for Partners

- Significant savings in research costs
- Access to high levels of expertise and advanced research facilities
- Enhanced internal R&D capacity
- Students are potential future employees
- Built-in quality control NSERC peer-review system



Thank You

For more information, please visit <u>www.nserc.ca</u>









MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

ALBERTA INNOVATES REVERSE PITCH

Candice Paton Executive Director, Clean Technology



John Zhou VP, Clean Resources

Laura Kilcrease CEO



ALBERTA INNOVATES At-A-Glance



"Alberta's research and innovation engine, solving problems, creating possibilities"







Data-enabled Innovation

Artificial Intelligence, Machine Learning, AR/VR, cloud computing, data analysis, quantum technologies

Digital Tech for Business Transformation

Visualization, cryptocurrency, cybersecurity, geospatial tech, geomatics, Internet of Things



Clean Tech

Water & climate technologies, emissions reductions, smart grid, cleaner fuels



Innovative Production & Distribution

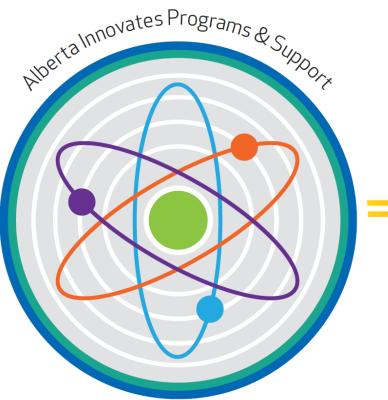
Advanced materials, robotics, value-added food processing, supply chain innovation, autonomous transportation



Government of Alberta PRIORITIES

Alberta Innovates CORPORATE GOALS

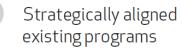
Alberta Innovates STRATEGIC DIRECTION





IMPACT ON ALBERTA

Make the lives of Albertans better today and for generations to come by contributing to a diversified economy, cleaner and sustainable environment, and healthier communities.



FOCUS AREAS

Digital Health Smart Agriculture Innovative Hydrocarbon Products ENABLED BY

Artificial Intelligence

Entrepreneurial Ecosystem

SUPPORTING SMEs

Technology Development Advisors (TDAs) provide

coaching and advice to SMEs in technology- and knowledge-based industries. TDAs connect entrepreneurs with business and professional support services, government programs, colleges, universities, non-profit and industry contacts.

TDAs work alongside *Regional Innovation Networks* (*RINs*) to create an integrated, collaborative innovation system.

RINs are made up of like-minded public organizations whose aim it is to build a strong entrepreneurial culture and to grow the and diversify the economy.





Clean Tech Focus Clean Resources Division



Clean Resources

- Advanced Hydrocarbons
- Clean Technology
- Environmental Innovation
- Bio-Industrial Materials
- Smart Agriculture and Food
- Alberta Prion Research Institute

Aligned Priorities

- GHG (CCUS, CH4, etc.)
- Water
- Land
- Tailings
- Wellsite Reclamation
- Biodiversity

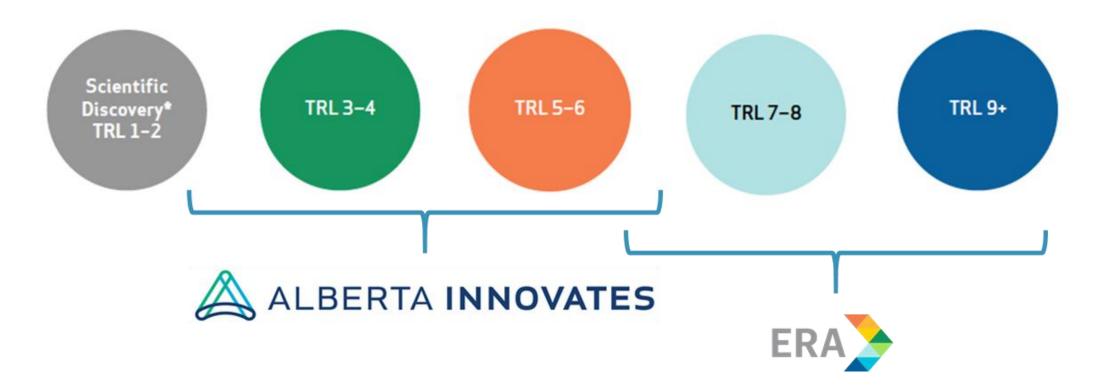
Continuous Intake

> Open Targeted Calls



Alberta Innovates and Emissions Reduction Alberta

Key Partners in Alberta







CONTACT US Thank You



CONNECTING WITH A TDA www.connectwithus.albertainnovates.ca



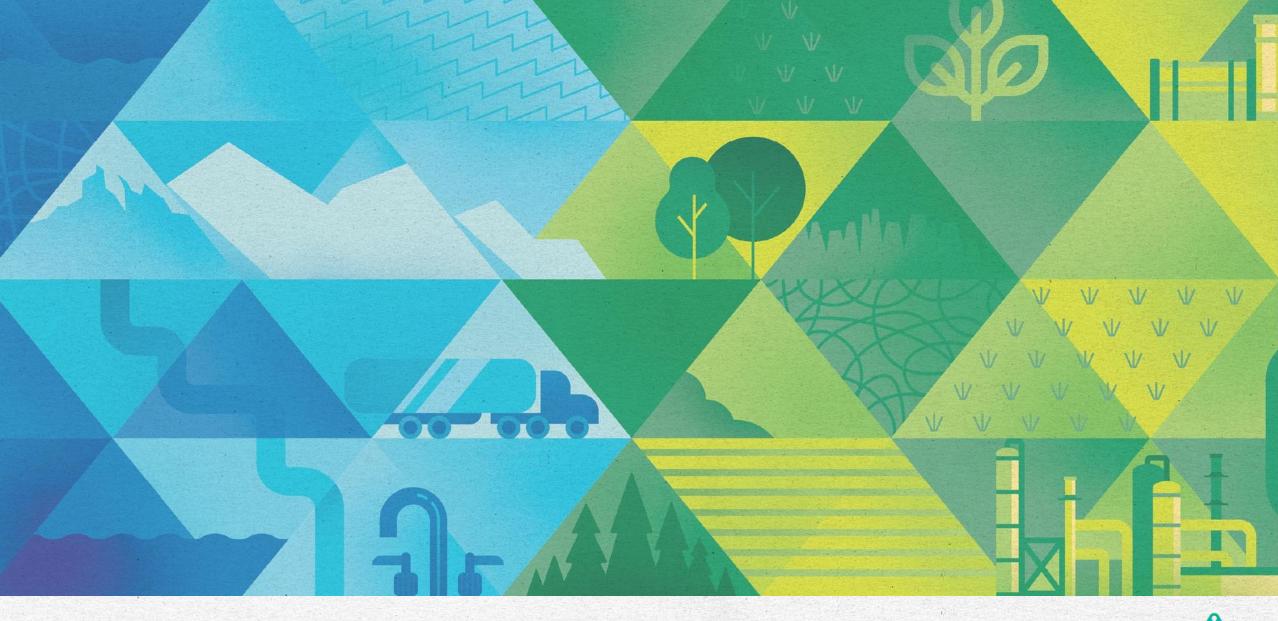
CONNECTING WITH CLEAN RESOURCES https://albertainnovates.ca/focus-areas/clean-resources/



EMAIL intake@albertainnovates.ca

For more information please visit:

- Our website: <u>https://albertainnovates.ca/</u>
- Connectica: <u>https://connectica.ca/</u>
- INVENTURE\$: <u>https://inventurescanada.com/</u>







MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

Canada's Clean Growth Hub









Overview of the Clean Growth Hub

- Clean Growth Hub was launched in January 2018 as whole-ofgovernment focal point on clean technology
- Single-window, no-wrong-door approach for clean technology developers and adopters
- Real-time sharing of information and collaboration across federal organizations in order to help companies and programs
- We are a **service**, not a funder, and have served over 1,500 clients thus far





Helping Canadian clean technology developers and adopters



Specialized knowledge of federal programs and services



Nimble service that is responsive and reliable

Hub has three core functions

Supporting clients

Enhancing program coordination

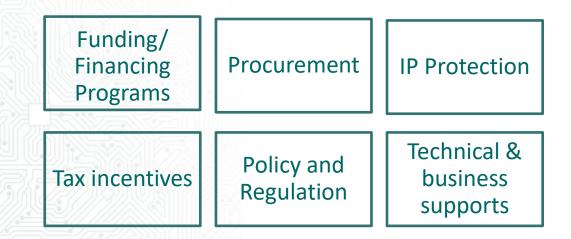
Strengthening capacity to track results

Supporting clients

- Clean technology is any process, good, or service that reduces environmental impacts (Statistics Canada definition)
- Clean tech is advanced by firms of all sizes and across all sectors of the economy, majority of clients are SMEs with under 100 employees

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 Hub leverages knowledge, expertise and networks in real time to provide tailored advice, including on:



Communicating

- Clean Growth Hub Website news, events, current list of open federal programs <u>Canada.ca/clean-growth</u>
 - Interactive tool on the Federal ecosystem of support (PDF)
 - Support for clean tech businesses during COVID-19
- Clean Growth Hub <u>Newsletter</u> issued regularly to 1500+ subscribers to update on programs, events and opportunities of interest to clean tech innovators and adopters
 - o <u>Subscribe to the Newsletter</u>
- Hub clients and newsletter subscribers also receive occasional targeted emails alerting them to new programs and funding opportunities



CLEAN GROWTH HUB

PILOT AND DEMONSTRATION

At this stage of innovation, you are:

- Proving the technology will work
- Validating the technology through demonstration or pilots
- Testing in simulated or real environments

Support available across government:

Funding to pilot or demonstrate a technology

Canada

Attributes of a strong candidate:

- Incorporated in Canada
- Strong scientific and technical basis for innovation
- Proven in a laboratory setting
- Potential for significant and quantifiable environmental benefits
- Strong business plan and strategy (including an IP strategy)
- Strong demand for the solution
- Collaborating with end users, other levels of government, academia or the non-profit sector



Federal program coordination

RESEARCH, DEVELOPMENT, & DEMONSTRATION

GROWING YOUR CLEAN TECH COMPANY

EXPORTING YOUR TECH



- Natural Resources Canada (co-chair)
- Environment and Climate Change Canada
- Fisheries and Oceans Canada
- Agriculture and Agri-Food Canada
- Crown-Indigenous Relations and Northern Affairs
 Canada
- Indigenous Services Canada
- Transport Canada
- Global Affairs Canada (Trade Commissioner Service)

- Innovation, Science and Economic Development Canada (co-chair)
- National Research Council
- Sustainable Development Technology Canada
- Business Development Bank of Canada
- Export Development Canada
- Canada Commercial Corporation
- Treasury Board of Canada Secretariat (Centre for Greening Government)
- Standards Council of Canada

Who we work with

Clients

Majority are small and medium enterprises

Technology Areas

- Renewable/Non-emitting energy supply
- Smart grid & energy storage
- Energy efficiency
- Transportation
- Biofuels and bioproducts
- Materials, mining and manufacturing
- Agriculture, aquaculture, forestry and biodiversity
- Air, environmental remediation
- Recycling, Recovery, Remediation and Cyclical Economy

No.

BIO

Testimonials

"There's a reason that every trip to Ottawa begins with a meeting at the Hub – by bringing all of the relevant parties together the Hub enables CE to do in one meeting what would otherwise take a week of meetings."

Geoffrey Holmes Business Development, Carbon Engineering "The Hub is an excellent federal government initiative that is very useful for clean technology startups such as ours."

Sylvain Bertrand CEO, Airex Energy

> "The Hub has played a critical role not only by facilitating connections for Titanium Corporation, but also by encouraging the various government agencies to talk to each other and collaborate in their support of small companies like ours."

Jennifer Kaufield CFO, Titanium Corporation

Thank you! Please reach out to the Clean Growth Hub





info.cgh-ccp@canada.ca

Canada.ca/clean-growth



#CleanGrowthHub





Clean Resource Innovation Network (CRIN)



CRIN Executive Team



Joy Romero Canadian Natural/ CRIN President



Glenn McCrimmon Husky Energy/ CRIN Vice Chair



Jason Switzer ACTia/ CRIN Vice Chair



Ginny Flood CRIN Chair



Tanis Shortt Suncor/ CRIN Ecosystem Chair



James Dunn Ph.D. Imperial/ CRIN Tech Chair

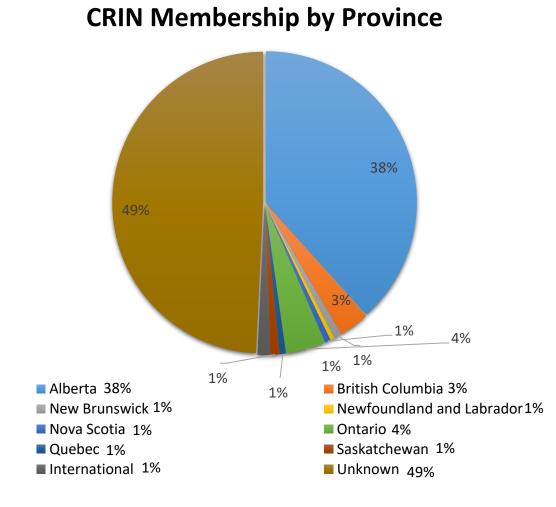
Canada is the Global Leader in Producing Clean Hydrocarbon Energy from Source to End Use

- CRIN aims to create connections and collisions between the many nodes across the innovation ecosystem regionally, nationally and internationally
- Solutions to today's energy challenges require an understanding of the entire innovation system and how pieces fit together

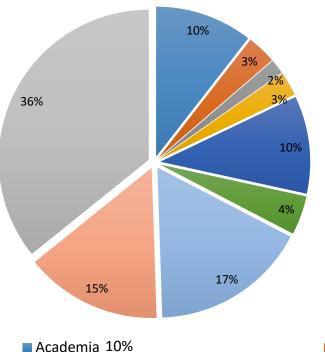


CRIN Membership Engagement & Outreach

Membership numbers April 2020: 1400+ members



CRIN Membership Breakdown



36%

Banking/Finance 2%

Oil and Gas Producer 17%

Government 10%

Service and Supply

Incubators and Accelerators 3%
 Economic Development 3%
 Industry Association 4%
 Researcher/Innovator 15%

Oil and Gas Cleantech Challenges - Theme Areas



Digital Oil and Gas Technology – Jeff LaFrenz, VizworX



Land and Wellsite Remediation

- Simone Levy , InnoTech Alberta

Cleaner Fuels – Reducing Carbon Intensity

Dave Schick, Canadian Fuels Association



Novel Hydrocarbon Extraction

- Matt McCulloch, COSIA



Low Emissions Value Added Products

- Bryan Helfenbaum, Alberta Innovates



Water Technology Development

- Mick McGregor, Suncor



Methane Monitoring, Quantification and

Abatement – Soheil Asgarpour, PTAC

Tech challenges to accelerate technology deployment

- The program objectives will be to:
 - Improve the environmental performance and global competitiveness of the Canadian energy sector
 - Strengthen Canada's capacity to develop and export low carbon energy technology across the innovation continuum;
 - Accelerate testing, piloting and demonstration of clean technologies
- While the focus is on the oil and gas sector, the technologies could address challenges in other sectors. A water treatment technology from the oil sands could have applicability in waste treatment globally.
- In addition to grand challenges, CRIN will be investing in early stage (TRL 2-4) technologies and supportive test bed networks.
- This will include mini challenges to create market pull for emerging technologies and solutions.

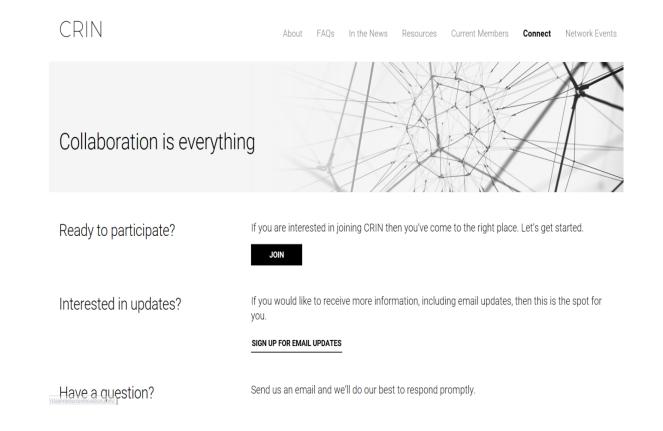
Conclusion

- Think of CRIN as an amplifier.
- It's the "and" in the Canadian conversation about energy that seeks to change the narrative from being a choice of one energy source or another
- The world's most vexing challenges such as climate change require a multi-pronged approach that incorporates all disciplines and knowledge.
- That's CRIN's foundation: diverse members, a shared passion for innovation, and the common goal of leading the global transformation to a cleaner energy future and ensuring our Canada long-term prosperity.
- Join the CRIN network, stay connected and keep an eye out for more information on our upcoming challenges.

Sign our Social Contract and Join CRIN

• Become a member

- Sign the social contract and become part of the community of people and organizations committed to becoming the global leader in producing clean hydrocarbon energy
- Visit <u>cleanresourceinnovation.com</u>
- Sign up to receive CRIN monthly e-newsletters
 - You need to join CRIN as a member and then will automatically be added to the distribution list)





Sustainable Development Technology Canada (SDTC)

















SDTC invests in Canadian companies – clean technology leaders – and through our work together we create economic and environmental prosperity for Canadians.









\$1B+ In funding reviewed from federal funding calls



\$300M¹⁰

Of follow-on, scale-up support for SDTC companies from BDC and EDC approved



Companies approved were through our one-window approach with provincial partners

ONE WINDOW TO MANY OPPORTUNITIES

Canada ALBERTA









Ontario Centres of Excellence





TECHNO CLIMAT

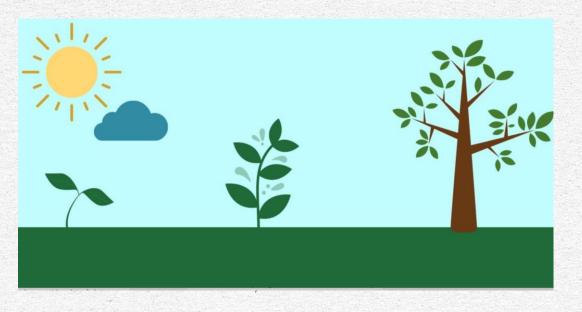




Two ways to Access Funding

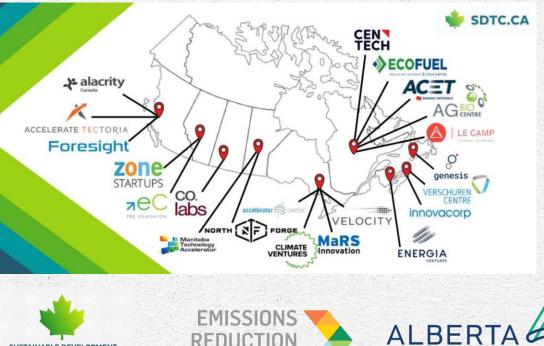
SD Tech Fund (*the Original)

- Larger Start-up & Scale-up Projects (\$MM)
- Approvals in < 6 months •
- ~35-40 projects approved annually across all • sectors



SEED Fund (*New!)

- Smaller grants (\$50,000 \$100,000) •
- Earlier stage companies
- Approvals in < 8 weeks .
- **Nominated by Accelerators** •



REDUCTION

AI BFR

INNOVA



Evaluation Criteria



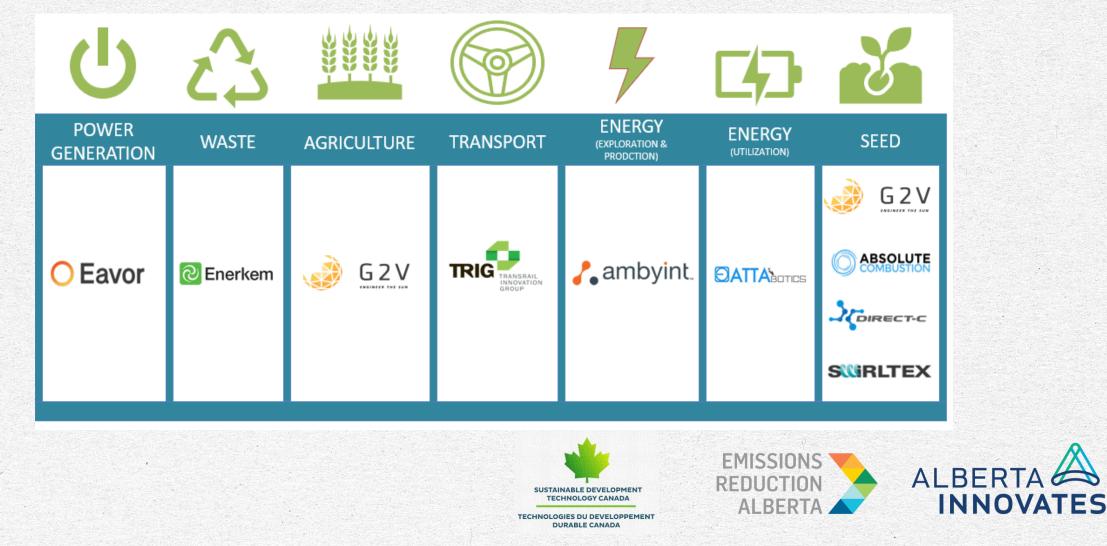
- Support for Canadian small-to-medium size enterprises
- 33% (up to 40%) of eligible projects costs
- Average investment ~\$2-3M, complete in 5 years or less
- 25% of the eligible project costs must be funded through private sector / market partner contributions (including in-kind)
- Funding from all levels of government must not surpass 75% of eligible costs
- At least 50% of eligible project costs must be incurred in Canada







A few of SDTC's Cleantech Innovators from Alberta



Interested in working with us? If you're ready, we're ready.

Check out our website for more info www.sdtc.ca/en/apply

Or contact us, we'd love to hear from you.

Zoë Kolbuc VP, Partnerships & Ecosystem z.kolbuc@sdtc.ca

Jonathan Kaida Partnership Lead j.kaida@sdtc.ca Graham Allen Partnership Lead g.allen@sdtc.ca









MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

Investments in Forest Industry Transformation (IFIT)







Natural Resources Canada



Investments in Forest Industry Transformation

IFIT:

- Delivered by the Canadian Forest Service
- Launched in 2010
- 43 funded projects
- Nearly \$200M in contributions





Natural Resources Ressources naturelles Canada Canada





Who & What We Fund

For-profit companies located in Canada that produce forest products



Project Objectives:

- Deploy first-in-Canada applications of innovative technologies and processes
- Support the production of bioproducts
- Create new business models for the forest industry
- Improve sector competitiveness and environmental sustainability







Natural Resources Ressources naturelles Canada Canada





Stream 1 – Capital Investment Projects

Provides **capital funding** to support transformational projects by forest sector firms to diversify into new product streams and implement innovative process improvements to ensure industry competitiveness.

Projects selected via a competitive call for proposal



- IFIT funds up to 50% of total project costs
- Program funds up to \$20M per project
- Non-repayable contributions
- Allows up to 100% government stacking

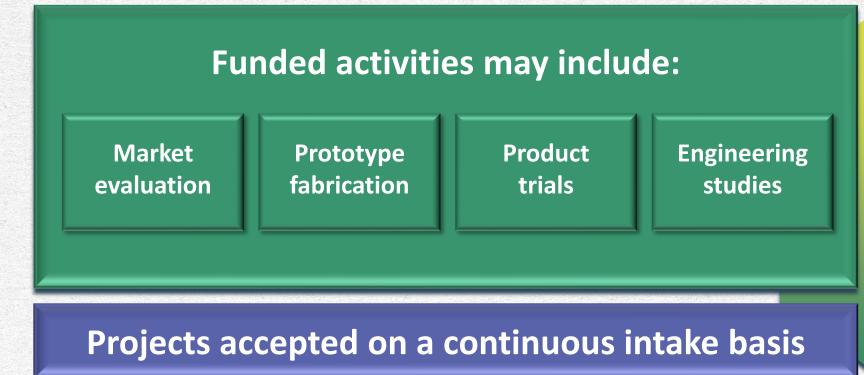


Natural ResourcesRessources naturellesCanadaCanada





Stream 2 – Studies





S

- IFIT funding per study is \$100k - \$500k
- Non-repayable contributions
- Allows up to 100% government stacking



Natural ResourcesRessources naturellesCanadaCanada







http://forest-transformation.nrcan.gc.ca





Reverse Pitch: Emissions Reduction Alberta

Mark Summers, Executive Director, Technology and Innovation



Top 3 reasons to apply for ERA funding...

1. You can get MONEY to advance your technology toward commercialization





Who We Are

MANDATE

Reduce GHG emissions and grow Alberta's economy by accelerating the development and adoption of innovative technology solutions.

VISION

Alberta has competitive industries that deliver sustainable environmental outcomes, attract investment, and are building a diversified, lower carbon economy.

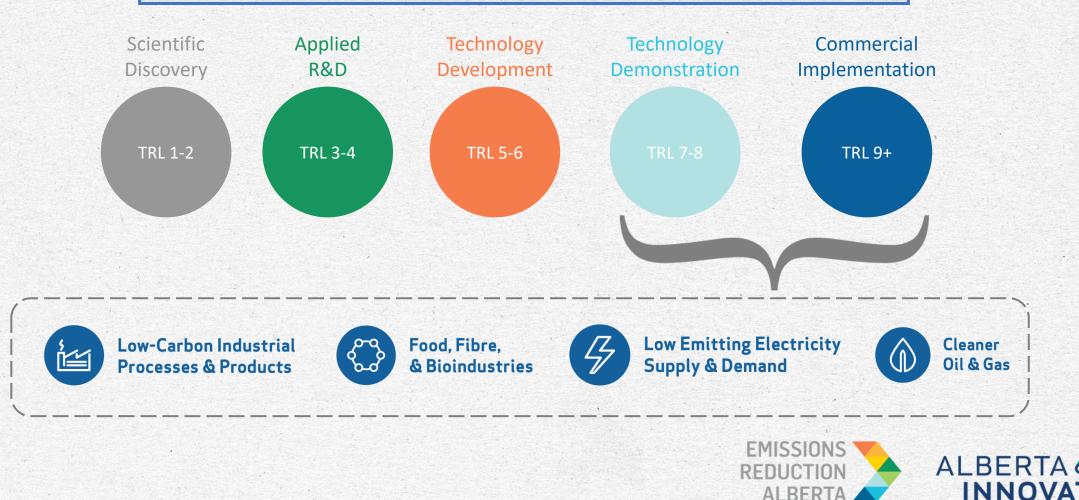
STRATEGIC PRIORITIES





What We Fund

<u>Projects</u> to accelerate innovative solutions that secure Alberta's success in a lower-carbon economy



How We Fund

1. By Application: through one of our funding challenges

- Guided by market needs, provincial priorities, and our Technology Roadmap
- Two calls annually
- Over \$80 million per year
- 2. By Referral: from one of our trusted partners
 - Alberta Innovates (AI)
 - Sustainable Development Technology Canada (SDTC)
 - Natural Resources Canada (NRCan)
 - Business Development Bank of Canada (BDC)
 - Others (see website for full listing)



Top 3 reasons to apply for ERA funding...

1. You can get MONEY to advance your tech

2. Applying can unlock other opportunities

- Funding partners
- Commercialization partners
- Regulators and policy makers



Top 3 reasons to apply for ERA funding...

- You can get MONEY to advance your tech
 Applying can unlock other opportunities
- 3. There are benefits to going through the process
 - Tell your story
 - Test your ideas
 - Get on our radar





Maximizing Funding Potential July 21, 2020

Susan Rohac, VP BDC Cleantech Practice

Who We Are



We are a different kind of bank

We are BDC, the Business Development Bank of Canada and the only financial institution devoted exclusively to entrepreneurs.

60,000 entrepreneurs 123 business centres 2,300 employees

We help create and develop strong Canadian businesses through <u>financing</u>, <u>advisory services</u> and <u>capital</u>, with a focus on small and medium-sized enterprises.

- We support entrepreneurs in all industries and at all stages of development from 123 business centres across Canada and online at bdc.ca.
- We're committed to the long-term success of Canadian entrepreneurs and we understand that a business is more than just dollars and cents.
- We complement the role played by private-sector financial institutions and have been serving Canadian entrepreneurs since 1944.
- We are a financially sustainable Crown corporation and we operate at arm's length from our sole shareholder, the Government of Canada.

BDC is Deeply Invested in Cleantech



Growth Capital Fund aimed at scaling high potential Canadian Cleantech firms into enduring global technology champions

- Launched January 18, 2018
- \$600M to be deployed over 5 years
- > Providing **flexible**, **patient**, **creative** capital solutions to accelerate growth:
 - Instrument agnostic equity, convertible debt, sub-debt, senior debt
 - Invest in the parent company
 - Deal sizes from \$5M up to \$20M
- Focus on supporting companies to commercialize and scale natural progression from other partners such as ERA, SDTC, NRCan, etc.
- In addition when including other departments within BDC, we have more than \$1.4 Billion in investment and financing for Cleantech.



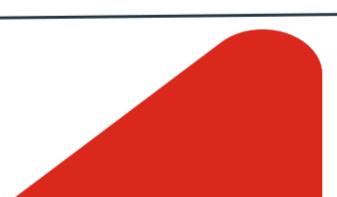


Alberta Team Members

Edmonton Karim Kennedy Director, Cleantech Practice 780 495-4187 karim.kennedy@bdc.ca **Calgary**

Cheri Corbett Director, Cleantech Practice 403 407-9222 cheri.corbett@bdc.ca

bdc.ca 1-888-INFO-BDC





MAXIMIZING FUNDING POTENTIAL JULY 21 & 22, 2020

Export Development Canada (EDC)



Export Development Canada is Canada's export credit agency.

OUR MISSION: HELP COMPANIES TO GO, GROW AND SUCCEED IN MARKETS ACROSS THE WORLD



WE HELP CANADIAN COMPANIES OF ALL SIZES, INDUSTRIES **AND SECTORS:**

- supporting traditional exports, service-based exports and companies selling into global supply chains
- regardless of their knowledge and experience with international trade
- that want to grow and make their mark in global markets



OUR SOLUTIONS

We manage and take on risk to help Canadian businesses grow internationally.

FINANCING

We help Canadian companies get access to capital.

INSURANCE

We offer protection that lowers the risk for Canadian businesses expanding beyond our borders.

KNOWLEDGE

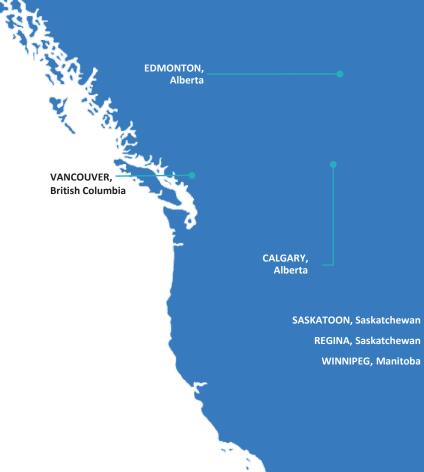
We provide expertise that enables our clients to make informed decisions and learn more about international markets.

CONNECTIONS

We connect Canadian and international companies to help both parties grow.



COAST-TO-COAST presence



OTTAWA, Ontario TORONTO, Ontario MISSISSAUGA, Ontario KITCHENER/WATERLOO, Ontario LONDON, Ontario WINDSOR, Ontario de

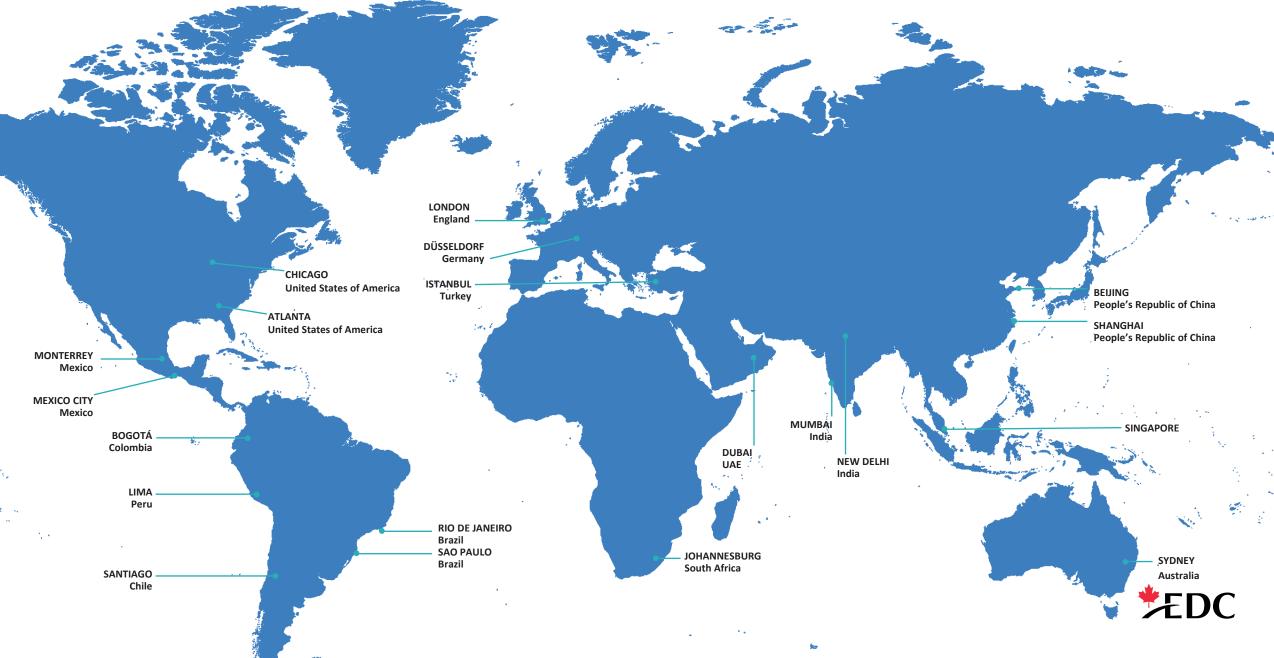
MONTREAL,

Quebec

ST. JOHN'S, Newfoundland and Labrador

CHARLOTTETOWN, Prince Edward Island MONCTON, New Brunswick HALIFAX, Nova Scotia QUEBEC CITY, Quebec DRUMMONDVILLE, Quebec SHERBROOKE, Quebec BROSSARD, Quebec VILLE SAINT-LAURENT, Quebec

FEET ON THE GROUND WORLDWIDE



QUESTIONS AND WRAP-UP



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Tammy Huston Global Accounts Director Cleantech Team 604.678.2252 thuston@edc.ca

₩DC

TAKE ON THE WORLD

*EDC