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22

Impact
Report

Who We Are

The Energy Futures Lab is an Alberta-based coalition of diverse innovators and leading organizations working to accelerate the transition to the energy system the future requires of us. Created in 2015 to address a growing polarization in perspectives on Canadian energy, the organization brings together stakeholders from across the energy system to collaboratively develop solutions for a prosperous, net-zero and equitable energy future. Our approach highlights the importance of drawing on diverse perspectives to address complex, system-level challenges.



Land Acknowledgement

The team supporting the Energy Futures Lab is committed to a continuous practice of learning and unlearning as part of our professional and personal truth and reconciliation journeys.

As a remote team that convenes a Fellowship as well as other activities across the province, we gratefully acknowledge the original territories of the Siksikáwa, Îyârhe Nakodabi, Tsuut'ina Dene, Cree, Saulteaux, Nakota Sioux, and the Métis Nation of Alberta Regions 2, 3 and 4. We acknowledge and honour these peoples as the traditional custodians and keepers of the colonized lands which many now refer to as Alberta.

We are deeply grateful for the lessons, teachings and experiences we have received, as well as the support, patience and friendship offered along the way. A very special acknowledgement to our friends at Tatâga for their direct facilitation of our journey over the course of this year, and always to the Fellows, Ambassadors, Partners, advisors and other members of our community who walk with us on a path to a more equitable future.

May we all continue to walk together in a good way to honour and acknowledge our commitments to Indigenous Peoples as we create our shared future, together.



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Our Shared 2050 Vision

We anticipate that by 2050 the world has made major advances in transitioning to a sustainable, inclusive and prosperous global energy system, where production and consumption aligns with the scientific [principles of sustainability](#). In the energy system the future requires of us, we are thriving and committed to nurturing a sustainable, inclusive and prosperous energy system.

The Energy Futures Lab defines the energy system the future requires of us as a system that simultaneously:

- is net-zero for carbon emissions for the production and consumption of energy in Alberta and Canada
- enables quality of life for all people by meeting energy needs reliably and affordably
- is a leader in energy-based partnership towards reconciliation with Indigenous peoples in Canada
- is inclusive, accessible, and equitable to current and future generations
- enhances the health of our natural environment and the health of all those living within it
- is a continued source of economic prosperity for the province and the country
- supports diversity, resiliency, and adaptability

Programming Streams





Managing Director's Note

oki — âba wathtec — dadanast'ada — tân'si — bonjour — hello

If I could nominate one word to summarize 2022, it might be 'tension.' It feels fitting given the myriad of issues piling onto and competing for attention in our collective consciousness. But as bleak as that might sound, I don't necessarily see it as a negative thing.

One of the Energy Futures Lab's strengths as a social innovation lab is holding the tensions and tradeoffs of the toughest energy challenges in a way that is generative, inclusive of opposing perspectives and makes space for creative solutions to arise. For example, the question, "How can we accelerate the transition to a net-zero future, while also staying true to our intentions of an inclusive and equitable transition?" could be seen as too cumbersome to be worth exploring. But the Energy Futures Lab prides itself on rising to the challenge this kind of complexity invites. On this question specifically, there has been a lot of learning this past year, and as you'll discover in this report, much to celebrate as well.

Over the past 12 months, the Energy Futures Lab has been on the front lines of the energy transition alongside our network, and with them we have contributed to significant advances in a number of areas. These include battery metals, sustainable aviation fuels, Indigenous equity, youth-led innovations, community projects, future-fit hydrocarbons, and more.

This year's welcome return to in-person convening was an invaluable reminder of the importance of our relationships, connections, and opportunities to engage in dialogue with those with vastly different views and experiences. I am in awe of what we achieve when we work collectively to harness diversity as a source of creativity. And yet, there remains so much to do together — and it's clearly not an easy road ahead.

This is why now, more than ever, the role the Energy Futures Lab plays in driving actionable solutions for transition is so important. It's also why our unique approach that brings together diverse perspectives in respectful and productive conversations is critical to the development and adoption of those solutions.

Of course, none of this would be possible without the vast network of colleagues and supporters who have trusted and rallied behind us at every step of the way. I express my utmost appreciation for this community of brilliant innovators and collaborators – the successes in this report are yours. As well, I offer my deep gratitude for our committed convening partners and funders: quite simply, the lab would not exist without you. Thank you to our many wise advisors and guides. To [Tatâga](#), we honour your friendship, support, and the clarity you have brought to our journey in shaping how we work with and for Indigenous peoples and communities. And I give my heartfelt thanks to the amazing team I get to work with, who I am so grateful to call my friends and colleagues.

I hope as you read through this overview of our collective work this year, you'll take a moment to celebrate these successes. It will take many more to make the kind of changes necessary to realizing our vision, but progress is being made. And every step we take together only strengthens my belief that we'll get to where we need to go.

With gratitude,

Alison Cretney
Energy Futures Lab Managing Director

Our Partners in the Energy Transition

The work of the Energy Futures Lab is made possible thanks to the vision, insight, commitment, and generous support of people and organizations working across the Canadian energy and resources sectors at all levels. Recognizing the value of our approach, their willingness to lean into the complexities and tensions of the enormous challenge we are facing is critical to ensuring not only that we reach net-zero by 2050, but also that the transition is inclusive and prosperous for all Canadians. The Energy Futures Lab would like to thank each of our Convening and Funding Partners for the wisdom and foresight they have shown in coming together to address the most pressing issue of our time.

Convening Partners



Funders



Please see page 37 for additional acknowledgements.

2022 At A Glance



41 Fellows  46 Ambassadors



and growing!

PARTNERSHIPS

18 Convening Partners

12 Funders

9 Additional Collaborators

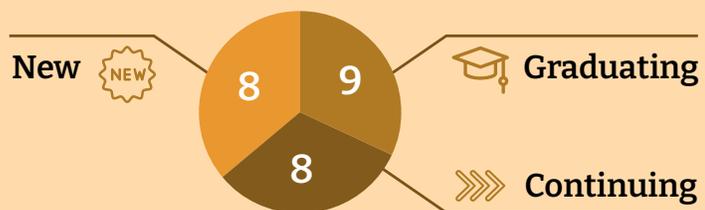
17



Recommendations made for increasing Indigenous equity in our work



25 Initiatives Supported



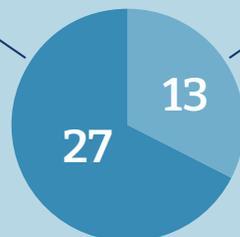
40 Workshops Hosted

2526 Workshop Participants

Online



In person



7 co-created workshops



with

3 Roadshow communities



16 Webinars





\$540B

anticipated value of global markets for technologies suggested as part of a future-fit hydrocarbon framework



88
entrepreneurs supported



62 youth supported

through the

Youth Innovation Jam

and the

Youth Seed Fund

6 research initiatives

15 Media Moments



Articles, op-eds, interviews



with a reach of

70M

WHITFORD/GLADU OP-ED

2,000,000
VIEWS

“Indigenous Peoples eager to help lead transition to ‘future-fit’ hydrocarbon industry”

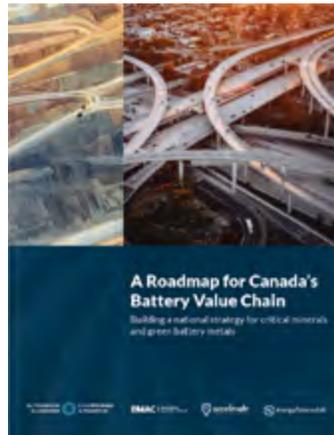
4 PUBLICATIONS



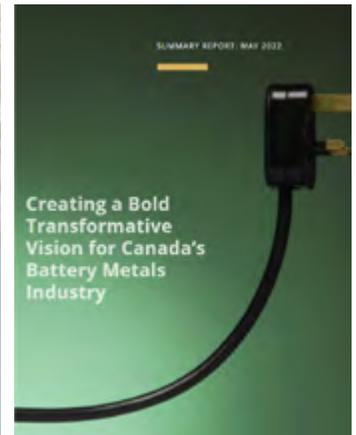
Same Game, New Rules



Tracking Progress to the Future: an indicator set for policies to support future-fit hydrocarbons



A Roadmap for Canada's Battery Value Chain: Building a National Strategy for Critical Minerals and Green Battery Metals



Creating a Bold Transformative Vision for Canada's Battery Metals Industry

The Fellowship

The Energy Futures Lab Fellowship is a diverse group of approximately 40 innovators and influencers working in today's energy system who explore and hold the significant tensions inherent in our mission to identify solutions, and show leadership in mobilizing others to address them.

2022 Fellows

*new Fellow



Abbas Ali Beg
ATCO



Ankit Mishra*
Forbes



Brad Nickel
EQUUS REA Ltd



Cailee Ellis
Lafarge Canada Inc.



Candice Paton
Enhance Energy Inc.



Chelsea Donelon
TransAlta Corporation



Chris Brown*
Calgary Economic
Development



David Belmont*
Journey Engineering
Corporation



Deanna Burgart
University of Calgary



Duncan Meade*
Enbridge Inc.



Dustin Poole*
The GO Technology
Foundation



Erin Moffat*
Confined Space
Robotics



Eyab Al-Aini*
Pembina Institute



Gary Millard
Suncor Energy



Geoffrey Tauvette
FSM Management
Group



Jason Bradley
Carbon Asset
Solutions



Jelena Bajic*
Northern Alberta
Institute of
Technology



Jenna Anand*
Shell Canada



Jennifer Zwarich
Alberta Energy
Regulator



Jochem Kamstra
Siemens Energy



Jordan Flagel
TREE



Liz Brennan
Canfor



Maggie Hanna
Common Ground
Energy



Mark Hopkins
Swallow-a-Bicycle
Theatre



Matthew Brady*
Government of
Canada



Megan Lohmann
Community Energy Association



Melanie Ross*
Southern Alberta Institute of Technology



Michael Benson
Canada Energy Regulator



Miles Joliffe*
Kinetic Canada



Navreet Bal*
Alberta Utilities Commission



Peter Koning
ConocoPhillips Canada



Renee Hjorth
Capital Power



Rochelle Longval*
Novus Earth Energy



Sheila Schindel*
Alberta Innovates



Simon Irving*
ENMAX Power Corporation



Stephen Edison*
Chevron Canada Limited



Steve Saddleback
Indian Resource Council



Sura Abdul-Razzak*
Alberta Utilities Commission



Sydney Kjellander
Prairies Economic Development Canada

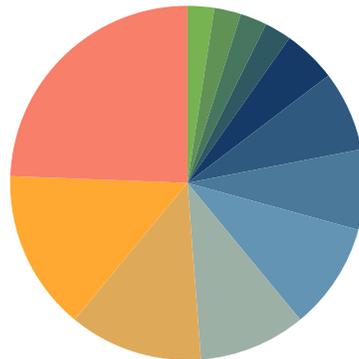


Tom Du*
Royal Bank of Canada



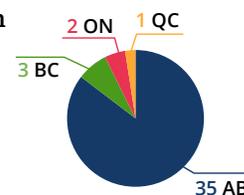
Victor Del Valle
Independent

The fellowship, by industry



- 10 Industry (Incumbent)
- 6 Government
- 5 Non-Profit
- 4 Electricity
- 4 Industry (Emerging)
- 3 Indigenous
- 3 Academia
- 2 Entrepreneur
- 1 Artists
- 1 Media
- 1 Legal
- 1 Financial / Banking

By region





Shifting the Mission

There's no question that in 2022 the world is moving fast. Today, if you seek to have an impact on our evolving energy system, the only option is to match that pace.

In our role as a non-partisan, multi-stakeholder convenor and facilitator, one of the features that sets the Energy Futures Lab apart is our flexibility to adapt to the business, social, political, and policy landscape of the day. This, combined with our agility, allows us to realign ourselves to systemic shifts in service of our vision, deploy resources quickly, seize opportunities as they arise, and make gains where others may be entrenched in rigid processes or cycles.

Sensing the need to shift

From 2019-21, the work of the Energy Futures Lab was centred on hosting innovation processes and supporting collaborative solutions around the question, “how can we leverage our leadership in today’s energy system to create the energy system that the future requires of us?” For that period, the convening question was useful in our work focused on maintaining Alberta’s leadership position in the energy system while identifying new ways to produce and use energy, but as the implications of new social and geopolitical realities emerging post-pandemic came into clearer view, we knew it was time to shift into a higher gear.

Fortunately, we also saw a corresponding acceleration in Canadian and global efforts to reduce carbon emissions by 2050, with governments and other multilateral institutions around the world responding with ambitious, new climate and energy policies and commitments to reduce emissions and reach the crucial milestone of net-zero. But while these were generally well received, not everyone was able to clearly see their place in the new narratives surrounding Canada’s net-zero commitment.

Communities dependent on incumbent oil and gas operations as employers and economic drivers worried about what this might mean for their communities and livelihoods. At the same time, innovators and entrepreneurs working with cutting-edge energy technologies felt their ability to take their net-zero aligned solutions to market stifled without clearer commitments to policy and regulatory changes.

A strategic pivot

This rapidly shifting context for our work raised important questions about the future role of the Energy Futures Lab, and how and where we can continue to make the greatest impact. As we explored these tensions, we made the decision to shift our focus for 2022-24 to emphasize three strategic pillars:

- Supporting people and communities as they lean into the energy transition
- Enabling the emergence of new growth industries
- Unlocking novel and creative solutions for Canada’s hydrocarbon resources

By focusing on these areas, we believe that the Energy Futures Lab is uniquely positioned to best serve our vision, under a new convening question that serves as our mission:

How can we leverage Canada’s assets and innovation capacity to accelerate an inclusive and equitable transition to a prosperous net-zero future?

A new urgency

As the year progressed, the relevance and importance of this renewed focus was further reinforced by growing global concerns about energy security, skyrocketing energy costs stemming from the Russia-Ukraine conflict and rising geopolitical tensions. Meanwhile, decisive responses to these challenges, such as the U.S. Inflation Reduction Act, have mounted further pressure and urgency to develop and scale low-emission Canadian economic activities that are competitive, affordable and inclusive.

It is clear that in order for Canada to succeed and thrive in the energy transition, many of the biggest opportunities before us are time-bound and require decisive and bold leadership now. Taken together, all of these factors have informed our strategic direction, and are reflected in the concentration of initiatives in our portfolio in areas we believe hold the greatest promise and greatest potential to create a stable, secure and prosperous net-zero future for all Canadians.

Measuring our impact on the system

As part of our refreshed approach, we remain committed to the practice of developmental evaluation. The practice of regularly gathering feedback and adapting our approach accordingly has become embedded in the Lab’s operational culture, where ongoing review processes support continuous improvement.

As part of our work this year, we have undertaken the development of a new framework for evaluation with the guidance of evaluation expert Sara Bateman. This framework will help us identify clear and tangible ways the Lab’s processes, initiatives and approach are contributing

to shifts in the energy system. These findings will help the Lab continue to prioritize the areas where our expertise, network and ways of working can make the greatest contribution toward realizing our vision.

By being explicit about where we are facilitating the development of new and evolved policies, narratives, resource flows, technologies, relationships and business models, we have an indication of our efforts to create the future energy system. We will continue to monitor these indicators, along with the context and conditions that have enabled them to emerge so that we can continue to maximize our shared learning and impact.

Deepening our Work on Truth and Reconciliation and Equity, Diversity and Inclusion

An equitable transition requires the involvement of every part of our society. Learning how to walk the path of transition together specifically with Indigenous Peoples requires listening, learning, and unpacking some assumptions and understandings that have shaped the relationships between the many generations of people who have called these lands home.

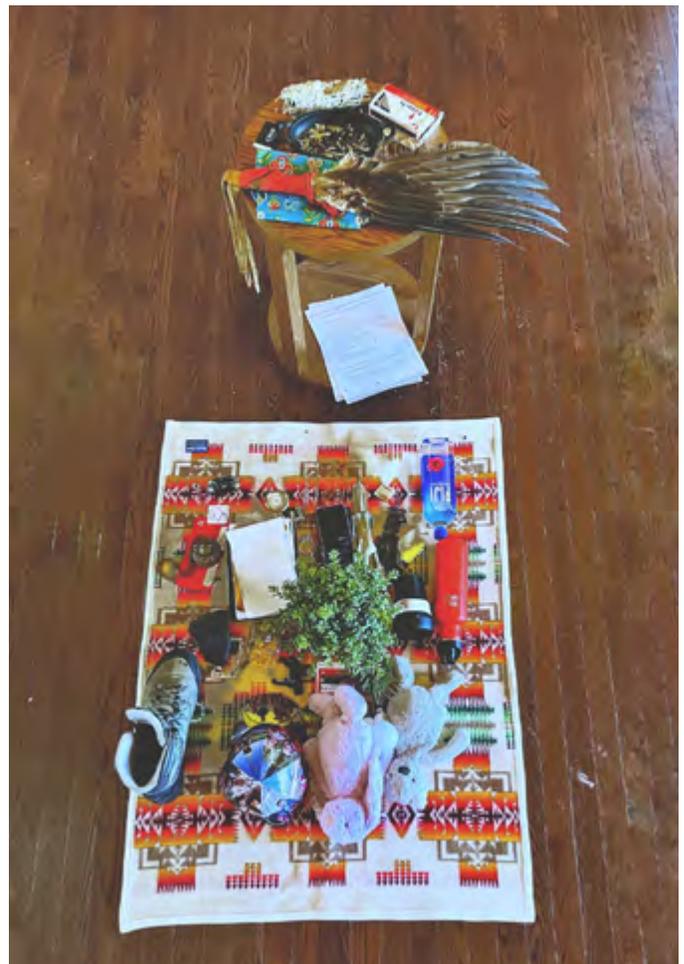


In this spirit, the Energy Futures Lab is committed to prioritizing and making space for Indigenous participation and leadership in the energy transition as a thread that weaves through all of our work. As part of our ongoing commitment, we have been working closely with our friends at [Tâtaga](#), an Indigenous consulting praxis, who performed an Indigenous Equity Audit of our work earlier this year and gifted our team knowledge and insight in the form of a report with 17 recommendations designed to ensure respectful, augmented and equitable Indigenous participation in the energy system.

The audit provided a number of actionable recommendations that we have been reflecting and working on. Based on the seasons, and rooted in the medicine wheel, our team has undertaken activities that support Indigenous spiritual practices, reimagining and revitalizing partner relationships, decolonizing media, learning about issues facing Indigenous people and communities today, and spending time on the land.

Our mission shift also specifically reorients our work to the need to ensure that we are addressing the challenge of energy transition through a broader lens of equity. Equity, which we define as a state in which all people are able to contribute to and benefit from opportunities, arises from the recognition that people's different lived realities and circumstances require different supports and sensitivities in order to overcome barriers to equitable participation. In order to increase the visibility of equity in our work, we have recognized that we need to go beyond acknowledging the general need for greater diversity, to actively enabling opportunities for people with diverse experiences and perspectives to participate, as well as focusing on identifying specific missing perspectives and, by extension, groups that energy transition may be leaving behind. In part, spotlighting this area of inquiry is why a substantial amount of initiatives this year focused on our strategic pillar of supporting people and communities in the energy transition.

Lab initiatives in this area facilitated many learnings this year, which we will carry forward into future design and core operations of the Lab. A significant part of the initial work on the Innovation Challenge centered on [Leveraging Energy Transition to Overcome Barriers for Marginalized](#)



Personal items representing what brought Fellows to the Fellowship sit on display along with materials for smudging as part of the opening of the group's first in-person workshop in March 2022.

[Communities](#) was the identification of gaps. Out of that process, a number of initiatives arose that allowed us to remove barriers to participation and lift up the voices, work and perspectives of Indigenous peoples, women, rural communities and leaders, young entrepreneurs as well as those affected by energy poverty. While the perspectives of youth were identified as a particular form of diversity missing from the Lab, our two youth-focused initiatives reinforced that there are others in the system who are better positioned to serve this group more meaningfully and we hope to continue to partner with them in nurturing the future leaders of the energy transition.

In concert with the shift in our mission and in consideration of the evolving system needs, the Lab is well positioned in the coming years to continue to unlock the "how" of energy transition, including helping to identify and create opportunities and transition pathways for as many people, communities and emerging industries as possible.

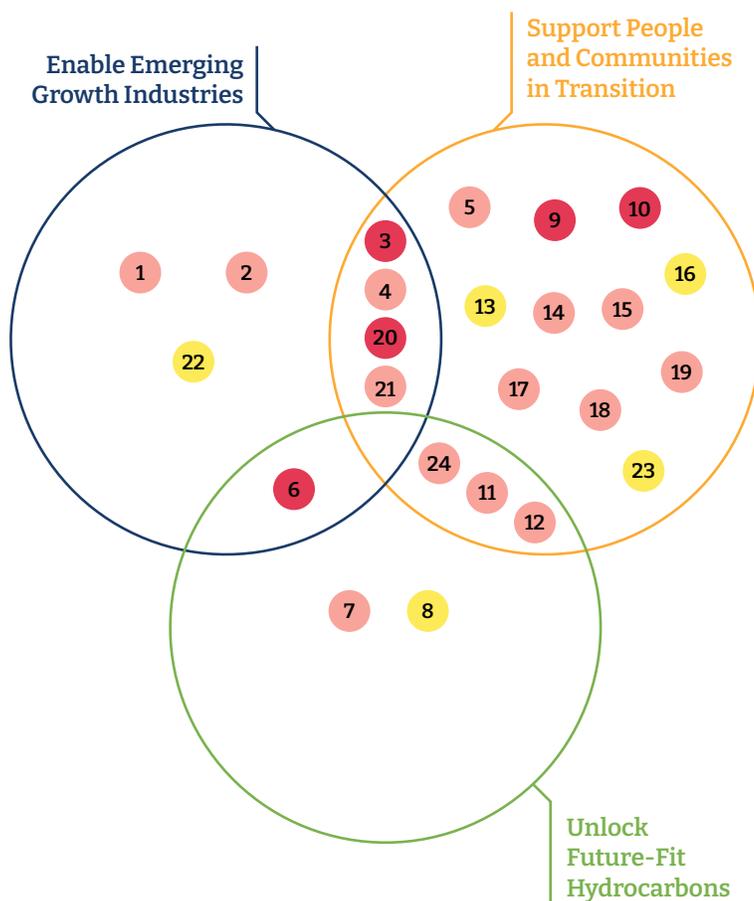
2022 Energy Futures Lab Portfolio of Initiatives

Ask anyone working in the energy ecosystem today, and they'll tell you that the way to net-zero is neither clear nor linear, but rather messy and uncertain. Forging a way forward that is fast, equitable and that brings everyone along will require courage, ambition and rapid learning and adjusting. Fortunately, the Energy Futures Lab Fellows and Ambassadors thrive under these conditions, and the passionate and committed 2022 cohort have put their efforts into a wide array of possible solutions.

The big questions and big ideas that have been defined, moved forward, answered or realized with help of the Energy Futures Lab this year are the result of thousands of hours of concerted thought and effort. Initiatives arose in part from opportunities identified by our Advisory Committee and

Partners Council, but largely from the Fellowship cohort as they worked together to identify the most pressing solutions required in the energy system. All can be mapped to our three strategic pillars (illustrated below), and follow the Lab's unique process of inquiry and problem identification (through our Innovation Challenges stream,) to solutions prototyping (though our Impact Studio stream,) as well as educating, elevating and promoting ideas and solutions to those with access to policy, funding, legislative, and other levers (through our Community Collaboration and Thought Leadership streams).

We are incredibly proud of this work and grateful to everyone behind it. We also encourage anyone reading these updates to consider how they might lend support to the powerful ideas and solutions presented within.



Innovation Challenges

- 9. Rural Community Resilience in Energy Transition
- 3. Digital Innovation for Net Zero Buildings
- 6. Financing the Transition to Future Fit Hydrocarbons
- 20. Alberta's Electricity Future (Prospective)
- 10. Leveraging Energy Transition to Overcome Barriers for Marginalized Communities (Graduated)

Impact Studio Solutions

- 2. Sustainable Aviation Fuels Vision, Roadmap and Action Plan
- 1. Bold Vision and Roadmap for Canada's Battery Metals Industry (Graduated)
- 4. Grid Sandbox
- 5. eVenture: NW Alberta E-mobility Charging Network
- 14. Behind Closed Doors: The Reality of Energy Poverty in Alberta (Graduated)
- 19. Youth Innovation Jam (Graduated)
- 15. Brave Spaces for Energy Transition
- 17. Energy Futures Print Portfolio
- 24. Alberta Municipal Climate Leaders Council
- 21. Getting to know the electricity customers of the future
- 7. Bitumen Scenarios to 2050 (Graduated)
- 18. Youth Seed Fund (Graduated)
- 11. Reclaiming Our Future: Wellsite Abandonment & Reclamation Training Program (Graduated)
- 12. Wise Practices Workshop (Graduated)

EFL Community Collaborations

- 22. Alberta Electricity Demand Response Coalition
- 8. Carbon Capture Utilization and Storage Ecosystem
- 13. Indigenous Equity Participation
- 23. Green Building Summits at Alberta Native Friendship Centres (Prospective)
- 16. Spirit of the Earth

Portfolio of Initiatives: Icon Key

Status	 New	 Continuing	 Shifting	 Graduated	 Handed Off	 Completed
Stream	 Innovation Challenge	 Impact Studio	 Community Collaboration	 Thought Leadership		
Transformative Outcomes	 Relationships	 Technologies	 Policies	 Narratives	 Resource Flows	 Business Models
Impact Area	 Calgary and southern Alberta	 Edmonton and capital region	 Red Deer and central Alberta	 Northern Alberta	 Canadian Rockies	 All of Alberta
	 Western Canada (AB, BC & SK)	 Central & Eastern Canada	 Canadian Territories	 All of Canada	 North America	 Global
Strategic Pillar	 Unlocking future-fit hydrocarbons	 Enabling emerging growth industries	 Supporting people and communities in transition			

Portfolio of Initiatives: Strategic Pillars

<h3>Enabling the emergence of new growth industries</h3>	<h3>Unlocking creative solutions for Canada's hydrocarbon resources</h3>	<h3>Supporting people and communities as they lean into the energy transition</h3>
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1

Bold Vision and Roadmap for Canada's Battery Metals Industry

Status	Stream	Outcomes	Impact Area
			
			
			
			

Challenge

As a fledgling industry, until recently battery metals were represented by just a few players who formed a disconnected network trying to advocate in isolation for the necessary investment and regulatory framework to get Canadian production ready to capture the coming wave of global demand.

Initiative

The Lab supported the Battery Metals Association of Canada (BMAC) to connect and collaborate with individuals from 26 different organizations representing Canada's battery value chain. Through the Lab's transformative facilitation, the group was empowered to surface, articulate and, in June 2022, publish [A Bold, Transformative Vision for Canada's Battery Metal Industry](#). Developing a vision with strong alignment from industry and government laid the foundation to create an [industrial roadmap for Canada's battery value chain](#). The group now is mobilizing to implement and drive towards the priority actions identified in the roadmap. This initiative was undertaken in collaboration with The Transition Accelerator and Accelerate.

Our Contribution

By creating a Canadian strategy in collaboration with its partners, BMAC has presented a unified voice representing the industry, and developed a roadmap of essential actions required to seize this once-in-a-generation opportunity for Canada to capture a share of this rapidly growing market. Through active outreach and government relations efforts led by the Lab, the report has been leveraged to mobilize financial resources towards this push across Canada.

Impact

In the space of two years, this ecosystem of previously unconnected organizations has now come to see itself as the battery value chain in Canada and is well-positioned to begin to expand its membership and take important next steps.

Significance

As a result of this newfound alignment, and BMAC's success in promoting its vision and roadmap, the public narrative shaping actions, investments and ecosystem development for battery metals and critical minerals has shifted towards a recognition of Canada's leadership potential and created a heightened sense of urgency to capitalize on this opportunity.



2

Sustainable Aviation Fuels Vision, Roadmap and Action Plan

Status	Stream	Outcomes	Impact Area

Challenge

The global aviation sector has adopted ambitious targets to reduce carbon emissions, and low-carbon sustainable aviation fuels (SAFs) could play a significant role in achieving these. Canada is well-positioned to become a world leader in the development and production of affordable SAFs, but currently none are being produced here in significant quantities due to the need to develop supply chains and policies to spark demand as a nascent industry emerges.

Initiative

The Canadian Council for Sustainable Aviation Fuels (C-SAF) and its network of stakeholders will develop a shared vision, roadmap and action plan that identifies necessary priority actions and investments to build a thriving SAF industry in Canada that harnesses Canada's sustainable feedstocks, innovative technology sector, well-established infrastructure, and a forward-thinking aviation industry.

Our Contribution

Thanks to the Lab's credibility in fostering collaborative innovation and championing SAF since its inception, C-SAF requested our help in designing and facilitating a series of national, interactive workshops that will mobilize the network and develop a clear and compelling vision and roadmap. The roadmap is being developed in partnership with The Transition Accelerator to leverage their research expertise in green industrial strategy. The Lab will then work with partners to share the results and assist with policy advocacy and mobilizing regional value chains.

Impact

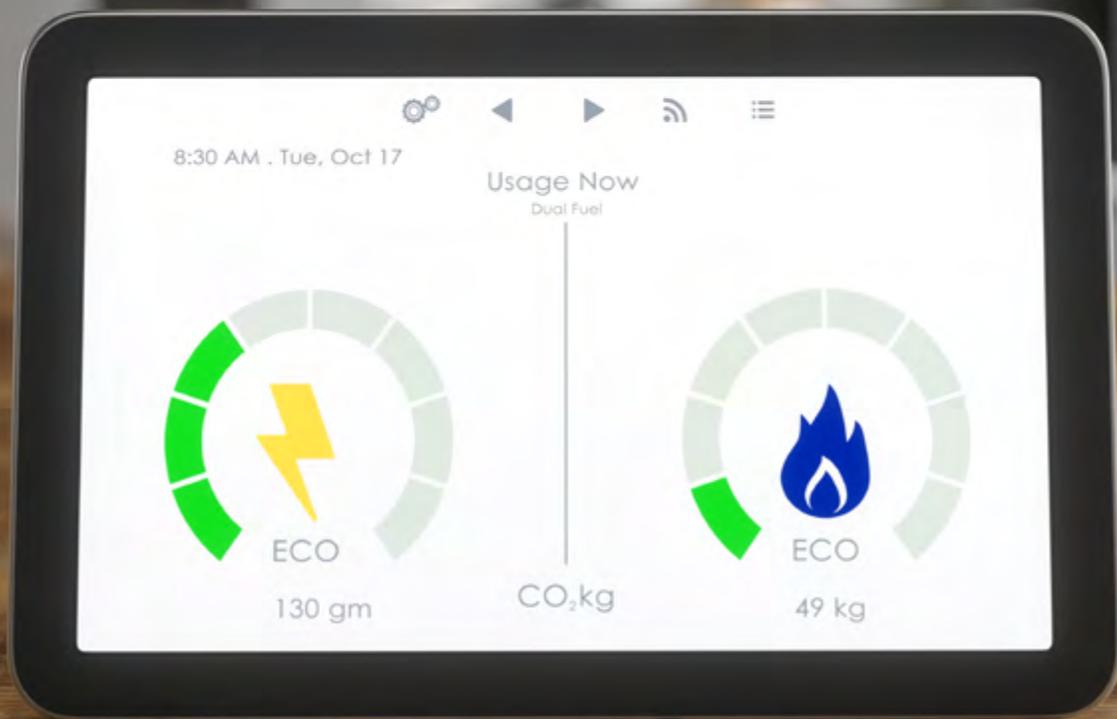
No single industry or player can do this work alone. This initiative will identify and align potential players in the value chain to propel Canadian-made SAFs into production swiftly. Simultaneously, this work seeks to ensure a market for SAF by working with airlines, the aviation industry, regulators and policymakers to enable a coordinated set of policies that create market certainty and clear the path for investment.

Significance

With greater alignment and a clear path forward, this work will enable the competitiveness of an emerging Canadian sector that is poised to both capture economic opportunity in a growing global market and help to significantly reduce emissions from an industry that's difficult to decarbonize.

“C-SAF is leveraging Energy Futures Lab’s proven social innovation and energy systems thinking approaches to convene our ecosystem to create a shared vision and action plan for accelerating SAF in Canada in a socially equitable way.”

-Geoffrey Tauvette, Executive Director of C-SAF



3

Digital Innovation for Net-Zero Buildings

Challenge

Energy as it pertains to buildings (in the forms of electricity and heating) represents a significant pathway to reach net-zero targets, accounting for 13% of Canada's CO₂ emissions.¹

But according to a recent report, Alberta lags other jurisdictions in terms of energy efficiency policies and initiatives.² In recent years, the Lab has been exploring the intersection of digital innovation and energy transition with over 200 thought leaders across sectors and fostering initiatives that mobilize the ecosystem of stakeholders needed to unlock digital solutions that help Alberta communities thrive in a low-carbon energy transition through our Energy.AI initiative. Through a series of interviews conducted in 2022 the following convening question was identified for this work: "How might we enable the application of digital technology in buildings to accelerate our progress* towards net-zero targets?" *(in a just and equitable way)

Status	Stream	Outcomes	Impact Area
			
			
			
			

Initiative

Building on Energy.AI learnings, and supported by the RBC Foundation, this phase of the initiative began with a ‘system sensing’ assessment that involved interviewing key thought-leaders in the energy transition space, and conducting focus groups with Lab Fellows. Enabling the application of digital technology in buildings was identified as an area ripe for further exploration and innovation. The Lab then convened a multi-stakeholder cohort of 30 individuals representing utilities, regulatory bodies, technology and data experts, governmental agencies, entrepreneurs and building specialists. Together they are now identifying collaborative solutions that address four principal innovation areas: equity, data, policy, and business case.

Our Contribution

The Lab hosted three workshops following a design-thinking process where participants learn from one another as well as from external stakeholders and together explore the problems at hand. Convening a group of individuals that had largely never collaborated before generated many new relationships and deep learning across many different perspectives on the topic, as well as new avenues of inquiry for addressing the challenge.

Impact

With a project arc spanning from early 2022 to late 2023, the work of the group to this point has focused on learning about the issue, defining the challenge and determining its scope. The current stage is focused on surfacing high-potential solutions that the group feel compelled to champion into 2023 and for possible future intake to the Impact Studio. Initiatives that have already arisen out of the work of this Innovation Challenge and are housed under the umbrella of the Lab include [Alberta’s Electricity Future](#), [Grid Sandbox](#) and [Getting to Know the Energy Customer of the Future](#).

Significance

Motivating and aligning an industry and assets that are seen as inhibitors to achieving net-zero targets requires a transformative approach in order to break through barriers to change. Working across silos to address the barriers to the adoption of digital technology has the potential to enable transformation, yet reveals a tension between making rapid progress and ensuring a just and equitable transition.

¹ <https://transitionaccelerator.ca/pathways-to-net-zero/buildings/>

² https://www.calgaryeconomicdevelopment.com/assets/Reports/Sectors/Energy-Environment/CED-2021_EnergyTransition_Report.pdf

4 Grid Sandbox

Status	Stream	Outcomes	Impact Area
			
			
			



Initiative

Grid Sandbox is a new data collection and scenario-planning software testing environment that uses real customer data to create simulations of what our future energy usage might look like. It is being piloted with real homes and families in parts of Alberta. The Sandbox leverages additional data from sensor devices that are installed in each participant's home which can also help to better engage customers to reduce their energy consumption. Our thanks to the RBC Foundation for supporting this initiative.

Impact

By empowering electricity consumers to share more granular data about their energy consumption, this collaboration supports energy providers as they conduct more nuanced modeling and scenario-planning to better meet Albertans' future electrical grid needs without having to completely overhaul costly grid infrastructure. It also enables energy providers to better support and engage with customers as the needs of the electrical grid shift.

5 eVentures: NW Alberta eMobility Charging Network

Status	Stream	Outcomes	Impact Area
			
			
			



Initiative

In order to accelerate the development of a regional EV charging network in northwest Alberta, the Lab convened a series of collaborative online workshops with rural municipalities, in close collaboration with the Community Energy Association and Fellow Megan Lohmann. The initiative team has now coordinated and developed collaboration agreements and a shared network map.

Impact

The project is now "shovel-ready" thanks to the alignment and collaboration of eight local governments and municipal districts. The EVenture NW Alberta charging network will include completion of a charging network map and capital funding proposals.

Unlocking novel and creative solutions for Canada's hydrocarbon resources



6

Financing the Transition to Future-Fit Hydrocarbons & The Energy Futures Policy Collaborative

Challenge

The relationship between hydrocarbon development and climate action is a highly polarized and divisive topic, where entrenchment continues to stall meaningful action towards energy transition.

The predominant narrative among Canadian policymakers and investors is that Alberta's oil and gas sectors represent a legitimate economic and regional interest (as of 2020, it accounted for [26% of Alberta's GDP](#)), and an important piece of the path to net-zero. However, within the decade international stakeholder pressures may create a "chokepoint" that discourages further lending towards these sectors as they look today.

Initiative

The Energy Futures Policy Collaborative (EFPC) was established with support from the Max Bell Foundation as a multi-stakeholder partnership to help policy leaders build more inclusive visions for the energy transition, bridge divides, and — most critically — enable the development of policy signals that reignite investor confidence in the transformative potential of Alberta’s hydrocarbon resources, assets, and expertise in alignment with net-zero commitments. It outlines a policy direction that can capture the best of both worlds - a bridge to a net-zero economy, and an economic path that builds on the expertise and the assets that characterize Alberta’s energy sector today.

Our Contribution

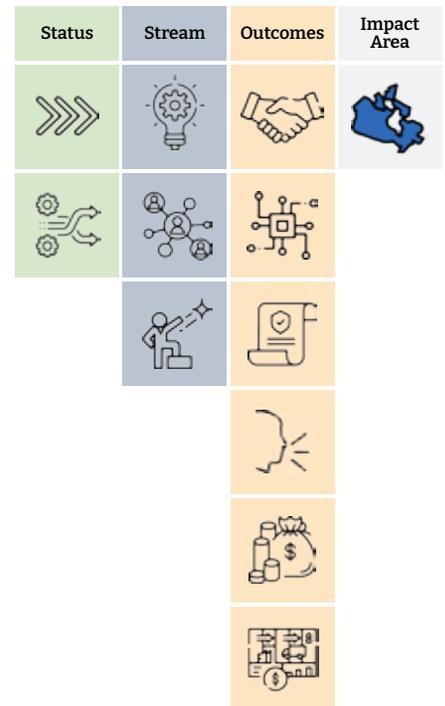
The Lab convened and designed the EFPC as a ‘policy lab’ — a model for facilitating policy research and designing solutions on complex challenges that require creative thinking outside of traditional silos of expertise and experience. Through this format, the Lab brought together perspectives from Alberta-based businesses, Indigenous leaders, finance experts, environmental groups, think tanks, and the provincial and federal governments to engage in open dialogue and build alignment on policy actions that have the potential to send an unequivocal signal to businesses and investors that future-fit hydrocarbons are a new, net-zero aligned priority for Alberta and Canada. The partners in this effort are the Business Council of Alberta, Canada West Foundation, The Cooperators, Smart Prosperity Institute, The Natural Step Canada, Max Bell Foundation, and Emissions Reduction Alberta, with support and guidance from members of an Indigenous Advisory Committee. Special thanks to the members of EFPC Indigenous Advisory Committee, chaired by JP Gladu (Mokwateh). Indigenous Advisory Committee members include Mark Podlasly (First Nations Major Project Coalition), Ryan Robb (Riversdale Resources), Steve Saddleback (Indian Resource Council), Desiree Norwegian (Atunda Inc.), Anne-Marie Garby (BFL Canada), Raylene Whitford (Canative Energy), Richard Piche (Cascade Projects).

Impact

The EFPC officially launched its policy framework, [Same Game, New Rules](#), in April of 2022. The framework identifies [six areas](#) where governments can accelerate policy action to attract private investment and scale future-fit hydrocarbon activity across the Canadian oil and gas sectors. As the work of the EFPC now shifts to the promotion of the framework and direct engagement with decision-makers at all levels of government, we look to the growing number of constituents taking action that aligns with the framework as its metric of success. This includes pursuing policy options and other actions that contribute to attracting investment towards the transformation of Canada’s hydrocarbon sector. To date, more and more system actors are confirming their willingness to act by adopting and reinforcing the future-fit hydrocarbons concept and narrative, and reflecting the framework’s narrative and recommendations in their own work.

Significance

The global sprint to decarbonization has begun and will define the coming decades for energy production and use. Whether Alberta can meet this challenge will be a determining factor for Canada’s success in meeting its climate targets, as well as strengthening its economic resilience.



“Governments should see this work as a gift. It’s a stellar example of the high quality, relevant and thoughtful work that EFL can deliver.”

- Steve MacDonald, former CEO, Emissions Reduction Alberta

7 Bitumen Scenarios to 2050

Status	Stream	Outcomes	Impact Area
			
			
			
			
			
			



Initiative

As part of Alberta Innovates' Innovative Hydrocarbon Products program mandate to support projects that will contribute to Alberta's hydrocarbon resource value in a net-zero economy, the National Partial Upgrading Committee looked to develop a Technology Roadmap to guide its research, investment decisions, and to inform its portfolio mix. The Lab designed and delivered a series of workshops to clarify collectively how potential future scenarios related to bitumen might inform the development of the Roadmap.

Impact

A total of four plausible scenarios were created with the participation of 17 organizations. The future scenarios analyzed the market potential and possible implications for Alberta bitumen markets, providing guidance as to where investment could be most pragmatically directed.

8 Carbon Capture Utilization and Storage Ecosystem

Status	Stream	Outcomes	Impact Area
			
			
			
			



Initiative

Previously, the Lab has leveraged its platform to support and inform the creation of the Investment Tax Credit and create greater acceptance of CCUS projects as part of a pathway to net-zero. Recently, CCUS has been supported as one of five innovation "building blocks" in the future-fit hydrocarbon policy framework created by the Energy Futures Policy Collaborative. Now this initiative seeks to create an updated ecosystem map of CCUS projects in Alberta to identify players, pain points, and roadblocks to the implementation of projects.

Impact

This work aims to increase the uptake of CCUS projects sooner as a part of a net-zero pathway, as well as spur commitments and incentives for its development by organizations, governments and other system players.



9

Rural Community Resilience in Energy Transition

Challenge

Rural communities in Alberta are eager to engage citizens and business owners in conversations about how their communities might take part in the energy transition, but struggle to know where to begin. Each community's entry point is different, and regional leaders need help designing inclusive and effective processes that create dialogue and build capacity towards ensuring their community is set up to thrive in the energy transition.

Status	Stream	Outcomes	Impact Area
			
			
			
			
			
			

Initiative

Energy Futures Lab Roadshows support rural Alberta communities as they explore the challenges and opportunities they are facing in light of the energy transition. By harnessing the combined knowledge, resources, skills and networks of the Lab and its Fellows, the Roadshows support rural communities to develop greater shared understanding by:

- exploring the polarization of energy issues
- envisioning what their future energy system might look like through community workshops
- identifying and advancing strategic initiatives and areas of personal and collective action in service of the energy transition and local prosperity

Our Contribution

In 2022 the Lab team collaboratively developed and hosted 7 workshops with the communities of Rainbow Lake, Brooks, and Innisfail. Participants included representatives from the private and public sectors, industry, youth, Indigenous communities, schools, agriculture, and centres for innovation. The Lab supported each community's mobilization around areas of collective action in the energy transition through workshops, relationship building, and facilitated learning opportunities. This project was undertaken in part with the financial support of the Government of Canada.

Impact

The community of Rainbow Lake allocated funds to their 2023 capital budget for a geothermal conversion project based on their shared long-term vision developed in the Roadshow workshop. The Geothermal District Heating System will serve town infrastructure and the entire community and is an integral element of their future net-carbon-negative community.

The Town of Brooks has partnered with APEX regional innovation network to develop a local group to support entrepreneurs in the area. The town is also looking at developing a biogas initiative from their livestock waste. Lab Fellows have been instrumental in supporting grant applications and identifying a clear path forward for this project.

Significance

The Lab's unique approach to co-creating workshops has proven to be a key for unlocking the adoption of emerging technologies and local solutions for rural communities who lack the capacity and expertise to design and initiate these conversations. By ensuring initiatives originate from the community itself, it has helped to create greater buy-in, as well as identifying and stewarding local champions to ensure communities remain resilient to a changing climate and economy.

“I have enjoyed being exposed to more ideas about what is possible. This is messy and creates work but is part of co-creating a vibrant future. I learn so much when taken out of my day-to-day to collaborate with people that have different formative experiences to develop solutions for problems we agree need solving.”

-Brooks Roadshow participant



10

Leveraging Energy Transition to Overcome Barriers for Marginalized Communities

Challenge

To enable an equitable and inclusive energy transition, the system requires high transparency and accountability in striving to not leave any person or community behind, especially those who have been historically marginalized.

The COVID-19 pandemic laid bare many inequities facing Canadian entrepreneurs, and the resulting “build back better” movement encouraged the Lab to examine the disproportionate supports available for those who are part of or serve marginalized communities. The convening question for this challenge is: “How can we overcome barriers for entrepreneurs who identify as or work with or in service of marginalized communities to succeed as the Canadian economy recovers?”

Status	Stream	Outcomes	Impact Area
			
			
			
			
			

Initiative

This initiative convened Fellows and other stakeholders to conduct a consultative needs assessment with the goal of identifying where progress towards energy transition has been restrained because of equity issues, or where groups of people were being left behind. Based on the results of the inquiry, the challenge shifted towards program development, and led to the implementation of the [Youth Seed Fund](#), [Youth Innovation Jam](#) and providing low-barrier financial support for female and Indigenous entrepreneurs.

Our Contribution

This initiative enabled the Lab to consult, identify, and provide direct support to projects and entrepreneurs who identify as or support marginalized and under-represented groups within our network. This project was undertaken with support in part from Prairies Economic Development Canada and the Suncor Energy Foundation.

Impact

In addition to the work of the many initiatives it generated, this challenge led to significant internal learnings and shifts within the Lab that have helped refine our approach to equity and supporting communities. It identified areas where we were well-suited to lead, and others where the work might be better led or devised by others, or where our team needed to develop further competencies. It also led to the formalization of the Impact Studio stream, which enabled initiative champions to identify their own needs and receive support in the form of funding, program or process development and facilitation, and connections to our broader network. Most importantly, however, it has led to our understanding that this area of our work shouldn't stand apart from the rest. The Lab is now taking the opportunity to integrate equity work into our approach at a higher level, as part of a larger process lens on everything we do. This will ensure that our work isn't reinforcing or perpetuating existing inequities, but rather seeking to create greater equity for more people as we work together in the energy transition.

Significance

The greatest learning throughout this project has been the experiential reassurance that, especially in social innovation and systems change work, it takes active, meaningful and transformational (as opposed to transactional) effort to build relationships, scope valuable and impactful projects, remove barriers, and establish a foundation of trust in order to take action in response to emergent opportunities. Ultimately, the opportunity identified and the progress made in various initiatives and for the various entrepreneurs and businesses has felt significant and transformational for our community.



11

Reclaiming our Future: Wellsite Abandonment & Reclamation Training Program

Initiative

In response to the ongoing labour shortage, the Indian Resource Council sought to alleviate the bottleneck created since the inception of the Site Rehabilitation Program by offering workforce training through their First Nations owned and operated National Energy Business Centre of Excellence.

Impact

Through the Lab's assistance in securing funding, 54 participants graduated from the Wellsite Abandonment and Reclamation Training Program. Participants from the Káínaa and Piikáni First Nations will now be able to meet the demand for skilled workers and fill employment gaps in wellsite reclamation across Alberta.

Status	Stream	Outcomes	Impact Area
			
			
			

Wise Practices Workshop

Status	Stream	Outcomes	Impact Area
			
			
			



Initiative

The Lab facilitated a workshop with the Socioeconomic Subcommittee of the Indigenous Advisory and Monitoring Committee for the Trans Mountain Expansion and Existing Pipeline to co-create a vision and practices for major energy projects that hold the priorities, rights and interests of Indigenous communities at the forefront from the outset.

Impact

Under the team's facilitation, important insights, practices and lessons from members of the committee were surfaced and shared back to the federal government in a report whose recommendations will be incorporated into areas of oversight on major energy development projects.

Indigenous Equity Participation

Status	Stream	Outcomes	Impact Area
			
			



Initiative

Led by Fellow Miles Joliffe, this initiative aims to expand options and bolster access to capital for Indigenous communities through the creation of novel investment opportunities modeled on a special purpose acquisition company (SPAC). This model would create alignment between Indigenous groups and companies involved in Canada's resource development and infrastructure sectors, using Indigenous equity ownership, and Indigenous board participation. After incubation and testing within the Lab over the year, this initiative has evolved from a "what if...?" idea, to a well-developed potential investment solution currently seeking pilot project opportunities.

Impact

The use of a financial sector tool to unlock equity investment opportunities has the potential to be a game-changer for Indigenous communities across Canada. It could also accelerate consultation processes with ready-made equity engagement parameters, built-in cultural expertise, and access to established networks within Indigenous communities across the country, and generate quicker returns on resource and infrastructure projects.

Supporting people and communities as they lean into the energy transition: Raising underrepresented voices in the transition

14

Behind Closed Doors: The Reality of Energy Poverty in Alberta

Status	Stream	Outcomes	Impact Area
			
			
			

Initiative

Lab Ambassador Yasmin Abraham from EmPower Me and the Lab team engaged multiple stakeholders to build awareness of energy poverty in Alberta and identify community champions for subsidized energy efficiency upgrades. The initiative also surfaced potential solutions and created a map highlighting potential funders of an Alberta-based program to support people struggling with energy poverty.



Impact

EmPower Me and the Alberta Ecotrust Foundation will relaunch the Home Upgrades Program in Calgary and Edmonton in late 2022. This program will help renters and homeowners reduce their energy consumption by implementing energy savings measures, and providing energy education and mentorship free of charge. The program provides different levels of support, products, and installations depending on the home, its energy consumption and participants' financial need.

15

Brave Spaces in the Energy Transition

Status	Stream	Outcomes	Impact Area
			
			
			



Initiative

To facilitate collaborative conversations across cultures and amidst power imbalances and social dynamics, the Lab team and Fellows worked together to learn, innovate and test ways to host Brave Spaces in energy transition conversations. This is ongoing work as part of Lab convening, though different streams of work have been undertaken by staff and Fellows to better understand and, ultimately, host Brave Spaces.

Impact

Fellow Deanna Burgart has been working with IndigeSTEAM to create knowledge bundles that support the braiding of Western and Indigenous knowledge in facilitation and in the energy transition.

Lab team member Laura MacTaggart created a Facilitators' Guidebook and Toolkit as a part of her Master in Indigenous Community Planning on "Facilitating Brave Spaces in the Energy Transition".

Spirit of the Earth

Status	Stream	Outcomes	Impact Area
			
			



Initiative

This initiative emerged early in the 2022 Fellowship in the form of an informal, bi-weekly gathering of Fellows working to change their relationships to the earth, each other, and all living creatures. Similar to the work of the [Inner Development Goals](#), which are focused on nurturing the transformational skills each of us require for successfully implementing sustainable development, the aim of this initiative is to enhance personal leadership skills to be better prepared for leading and influencing energy system transformation.

Impact

The self-organized space for Fellows to have regular conversations about their own inner development, and how to potentially expand beyond themselves has proven extremely popular and facilitated the development of deeper relationships between Fellows.

Energy Futures Print Portfolio

Status	Stream	Outcomes	Impact Area
			
			



Initiative

Lab Ambassador Eveline Kolijin wanted to find a different entry point to the often polarizing energy transition conversation, one that allows participants to remain open, honest and curious. To that end she has invited writers and artists to visualize and express their understanding of the energy transition in ways that are different from scientists and policy makers. With the support of the Lab, Eveline assembled 41 Alberta-based artists, print-makers, poets, and playwrights, and paired them with Fellows and others from across the energy system. The outcome will be a print portfolio consisting of both hand-made fine art prints and large folio pages of text, as well as a printed book, forming a tangible vision of Alberta's energy future.

Impact

This initiative draws non-traditional voices into the public conversation about energy transition, prompting more open and inclusive conversations, new thinking, new ideas, and new understandings about why and how the energy system is changing.

Supporting people and communities as they lean into the energy transition: Youth engagement in the energy transition

18

Youth Seed Fund

Status	Stream	Outcomes	Impact Area
			
			
			
			



Initiative

The Youth Seed Fund was designed to inspire action and collaboration on energy transition among Albertan youth. The initiative offered Albertans aged 18-30 access to low-barrier financial support for projects or initiatives.

Impact

Over two rounds of funding, the Lab distributed approximately \$35,000 in grants ranging from \$200-\$2,500 to 15 Alberta-based, youth-led projects that ranged from AI technology that increases value from energy created by distributed energy resources, to a solar-powered race car, to the creation of a self-sustaining greenhouse. Some, like iDIG founder Selishia Smith, went on to receive other significant funding and investment as a result of this seed funding removing initial barriers to pitching her innovation. You can read more about these projects [on our website](#). This project was undertaken with support in part from Prairies Economic Development Canada and the Suncor Energy Foundation.

19

Youth Innovation Jam

Status	Stream	Outcomes	Impact Area
			
			
			
			



Initiative

Designed and hosted by the Lab, the Youth Innovation Jam was a full-day event for young people to learn about the energy transition, connect with members of the industry and share their unique perspectives on the challenges the transition has surfaced. The event included keynote presentations, small group activities, two-way learning and a process for youth to share their projects and receive feedback, further developing their capacity to take action.

Impact

42 youth between the ages of 18-30 from across Alberta took part in the event, and have continued to be engaged in opportunities and communications from the Lab and Fellows, with the goal of nurturing long-term relationships with the participants.

“The day was filled with passion, energy and growth. Three themes that speak to the event itself, every one of its attendees, and act as the very keys to realizing an inclusive energy transition in our lifetime.”

– Matthew Rygus, Youth Innovation Jam participant



What's Coming Up

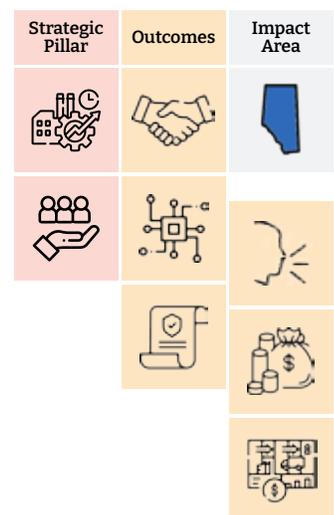
20 Alberta's Electricity Future

The existing electricity system in Alberta is not currently equipped to reliably or affordably integrate the necessary systems, technologies and processes that will be critical in creating a net-zero future, but system players are not currently collaborating effectively or being incented to address this issue. This challenge is centered around the convening question, "How must electricity system players work together to provide Albertans with safe, affordable, accessible and net-zero electricity by 2035?" We expect to launch Alberta's Electricity Future as a new Innovation Challenge in 2023.



21 Getting to know the electricity customers of the future

Electricity users tend to have a transactional relationship with their energy, which inhibits both providers' and users' ability to learn from each other. With a different kind of relationship, providers can uncover unmet needs as well as undiscovered possibilities for new products or information that would assist in planning for the future of the grid. Simultaneously, users would gain a say in shaping their energy services going forward.



Alberta Electricity Demand Response Coalition

This initiative seeks to influence industry leaders and policymakers to get necessary policy changes on the agenda of lawmakers and regulators in order to address regulatory barriers impeding the deployment of novel technology that is essential to addressing the challenge of peak power demand in Alberta.



Strategic Pillar	Outcomes	Impact Area

Alberta Native Friendship Centres Green Building Summits

An initiative originating from the Southern Alberta Institute of Technology in partnership with Green Building Technologies Lab and the Alberta Native Friendship Centre Association will bring the partners together to host green building summits at four friendship centres across Alberta in 2023. This is part of a multi-year project to retrofit the centres for energy efficiency and offer interactive skills-building workshops as well as other educational opportunities, and will draw on the Lab's network and convening power.



Strategic Pillar	Outcomes	Impact Area

Alberta Municipal Climate Leaders Council

The Climate Leadership Council will be a peer network that enables municipal government staff and elected officials to hear directly from peers implementing specific climate actions, learn from their experiences, and understand how to adapt solutions for their own communities. It will provide a forum for ongoing coaching on tactical implementation and building support across different perspectives, resulting in Councillors and Mayors receiving the support and tools they need to move energy transition actions forward.



Strategic Pillar	Outcomes	Impact Area



Energy Futures Lab Managing Director Alison Cretney moderates a panel discussion Case Studies in Climate Collaboration as part of the Globe Forum 2022. Panelists included Michelle George, Enbridge (VP, New Energy Technologies), Wes Jickling, COSIA (CEO) and Tabatha Bull, Canadian Council of Aboriginal Business (President and CEO).

Thought Leadership

Part of the Lab's work involves shifting narratives to overcome polarization and increase support for collaborative solutions in the energy transition.

This often finds us at the forefront of conversations as they emerge onto the public stage and become a focus for the media. The Lab is also frequently invited to be part of governing bodies, agenda setting and organizing committees for major Canadian energy industry events or provide editorial comment for the media. The inclusion of the Lab's voice is a testament to both the credibility of the people we work with, the work we're doing and our approach to it.

By presenting, organizing panels and in other ways sharing our results and learnings with the industry and the public, we continue to shift the conversations being had around transition and create space to bring new stakeholders into our work. More often than not, our work sees us actively engaged in the topics presented or debated, and championing the solutions being discussed by leaders across the energy ecosystem. This allows us to continue to expand our network of funders, supporters, policymakers and policy influencers and create direct relationships that open up channels for fast-tracking future initiatives.



Fellow Geoffrey Tauvette presents his work with the Lab creating a vision, roadmap and action plan for sustainable aviation fuels in Canada to the audience at the 2022 Energy Futures Lab Year End Showcase on November 24, 2022.

Op-eds

The Hill Times

August 11, 2022: [There's no energy security without net-zero](#) by Alison Cretney

November 11, 2021: [A just transition must reflect the voices of those who will be impacted most](#) by Alison Cretney and Elizabeth Shirt

Calgary Herald

June 9, 2022: [Opinion: Alberta, it's time to move from hedging bets to staking claims in the energy transition](#) by Alison Cretney and Mike Wilson

May 9, 2022: [Opinion: Indigenous Peoples eager to help lead transition to 'future-fit' hydrocarbon industry](#) by JP Gladu and Raylene Whitford

EFPC members and partners: Medium

December 14, 2021: [Working with what we have got: Why economic clusters are a useful frame for thinking about Alberta's energy transition](#) by John McNally

December 6, 2021: [Alberta's future: turning nonsense to common sense](#) by Alicia Planincic

November 18, 2021: [Harnessing possible futures for better policy outcomes](#) by Dr. Sara Hastings Simon

Conferences and Event Presentations, Panels and Consultation

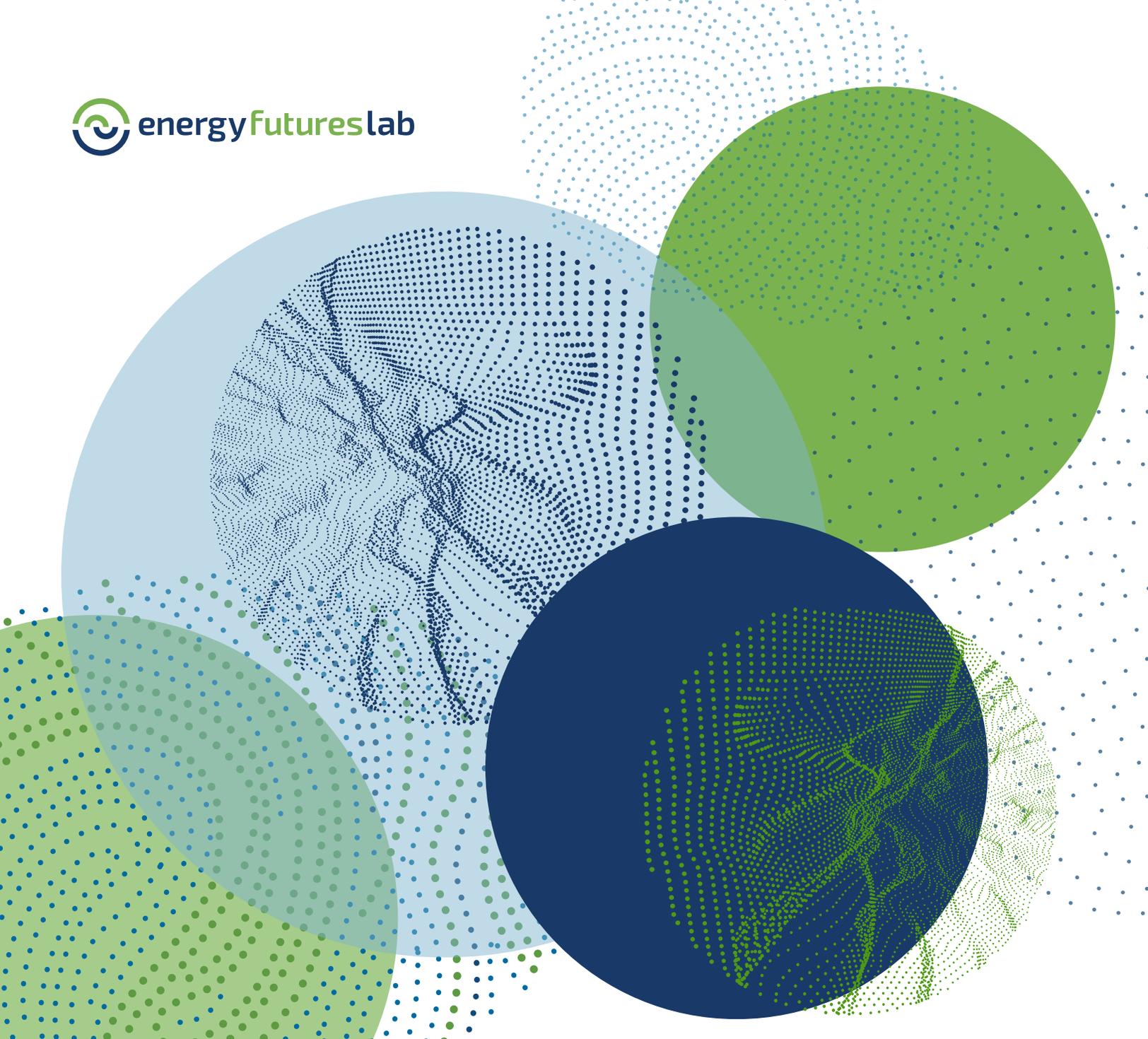
- Inventure\$
- Global Energy Show
- Energy Disruptors
- World Petroleum Congress 2023
- Carbon Capture Canada
- Forward Summit
- Avenue Calgary Innovation Event
- Canada West Foundation Webinar on Future-Fit Hydrocarbons: Same game, new rules
- Ten Peaks 10Pix Conference
- Scotiabank ESG Talks
- Daily Oil Bulletin Perspectives Panel
- Globe 2022
- The Value Of Integrated Geosciences Panel, GeoConvention
- CSUR Webinar on the LEAD Project
- FUSE AB2050 Innovation Competition
- What Works Summit
- Heritage Park Innovation Crossing

Additional Acknowledgements

Social innovation is a critical part of shifting large, complex, human systems, and creating lasting change. It requires the consistent, dedicated input and involvement of innovators, influencers, organizers, advocates, champions, supporters and fans.

At every level, past and present, whether your contributions have been big or small, we thank all who have made our work — and its impact on the changing energy system — possible.

We extend our thanks and gratitude for the generous feedback and guidance of so many wise advisors over the years, including Amar Bokhari, Mark Cameron, Alec Carton, Colleen Collins, Monica Curtis, Luisa Da Silva, Cheryl De Paoli, Lori Hewson, David Hughes, Tanya Giulford, Daniel Jurijew, Simon Knight, Barb Korol, Kevin Krausert, Lee Kruszewski, David Layzell, Pat Letizia, Steve MacDonald, Alexia McKinnon, Paul-Emile McNab, Jon Mitchell, Chad Park, Alex Ryan, Chris Severson-Baker, Elizabeth Shirt, Kelli Stevens, Mark Summers, Bonnie Veness, Bill Whitelaw, Dan Wicklum, Ericka Wicks, Mike Wilson, Dan Woynillowicz, and John Zhou.



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