



Same game, new rules:

How policy can unlock future-fit innovation
in Alberta's hydrocarbon sectors

SUMMARY REPORT | APRIL 2022

The global sprint to decarbonization is on and will define the coming decades for energy production and use. Governments around the world are creating increasingly ambitious policies to address climate change, setting the stage for change across oil and gas sectors. In response, forward-looking investors are asking companies how they plan to compete in a net-zero future, with others likely to follow suit in the coming years. This leads to both a challenge and opportunity for oil and gas sectors: to differentiate its activity in ways that not only contribute to decarbonization, but could potentially lead these efforts for global energy systems.





As home to Canada's largest oil and gas sector, whether Alberta can meet this challenge will be a determining factor for Canada's success in meeting its climate targets as well as its economic future. Importantly, the seeds of what this could look like are beginning to take root in the province in the form of innovations to build **future-fit hydrocarbon industries – industries built on the assets and expertise of hydrocarbon sectors that are compatible with climate targets.**

A broad range of assets from Alberta's oil and gas industry give the province a head start in promising low-emissions and non-combustion opportunities – from hydrogen to carbon capture and storage to lithium mining and geothermal, and materials such as carbon fibre, to name a few. Yet, even as these transformative opportunities for hydrocarbon sectors are positioned to grow into multi-billion dollar global markets, serious challenges must still be overcome. Core among these is how future-fit hydrocarbon projects will be financed as public and private sectors contend with the economic and social dimensions of recovery post-pandemic and as a growing number of investors look to reduce the emissions and climate risks in their portfolios.

If Alberta wants to compete in these emerging markets, the province needs to create a policy environment capable of connecting these opportunities to the tremendous growth of capital being directed towards sustainable development. While several companies operating in the province are already taking steps to transition to low or zero-emissions business models, situating this as an opportunity for the sector as a whole – not just individual companies – demands additional policies beyond what currently exists. In particular, there is a need to explore policy levers other than direct funding of specific technologies which governments can pull to complement public funding decisions.

It is time for focused, open-minded discussion among industry, governments and Rights Holders, and civil society about what this suite of policies to attract climate-conscious investors to Alberta could look like. These discussions face the challenge of identifying policy solutions that are deeply rooted in Alberta's unique identity, while incorporating learnings from other jurisdictions.

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Energy Futures Policy Collaborative

Our mission:

To identify the case for future-fit hydrocarbons, underlying challenges, a vision of success, and an array of promising policy levers critical for catalyzing future-fit hydrocarbon industries and building alignment across the current landscape of interests.

The Energy Futures Policy Collaborative (EFPC) is convened by the Energy Futures Lab in collaboration with the Business Council of Alberta, the Canada West Foundation, Emissions Reduction Alberta, Max Bell Foundation, Smart Prosperity Institute, The Natural Step Canada, and The Cooperators, with support and guidance from members of an Indigenous Advisory Committee.

Given continued polarization in the energy and climate dialogue across Canada, the EFPC adopted a 'policy lab' format – a model for facilitating policy research and design on emerging issues that require creative thinking, across and outside traditional silos of expertise and experiences. Through this format, the EFPC convened a mix of perspectives from Alberta-based businesses, Indigenous leaders, finance and investment, environmental groups and think tanks, and the provincial and federal government to engage in open dialogue on future-fit hydrocarbons.

About Energy Futures Lab

Established in 2014, the Energy Futures Lab (EFL) is a coalition of diverse innovators and leading organizations working to accelerate the transition to a more sustainable, prosperous, and inclusive energy future.

The EFL operates as an independent initiative of The Natural Step Canada, a national charity with over 25 years experience advancing science, innovation and strategic leadership to foster a strong and inclusive economy that thrives within nature's limits.

Partners



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Highlights

As a result of this process, the EFPC provides a policy framework as guidance for policy makers exploring a diverse range of economic proposals that align with the EFPC definition of future-fit hydrocarbons. In combination with supporting research initiatives, this framework:

- underscores a **new narrative** now emerging for Alberta's energy sector as a leading contributor to climate action
- illustrates how hydrocarbon-related activity can align with a **net-zero future, Indigenous reconciliation, and number of priorities** important to Albertans and Canadians
- links research evidence with expert deliberations to identify where additional policy is needed to stimulate the ecosystem for future-fit hydrocarbons and where the **opportunities exist to act**


The EFPC does not prescribe a recipe for future-fit hydrocarbons. Rather, these results offer markers that will increasingly define hydrocarbon related activity that can align with evolving investor expectations. The EFPC then provides an approach for identifying policies further needed to enable this type of activity across the sector, as well as series of 'opening moves' for policy makers – policy actions that can reframe the net-zero debate, build common ground, and provide the clear signals investors need to confidently fund future-fit hydrocarbons.

Five guiding criteria for future-fit hydrocarbons

What is future-fit today may not be future-fit tomorrow. This means hydrocarbon sectors will need to advance projects that are executed in a manner increasingly attractive to investors and how investors see the long-term, and what is considered attractive is changing.

Future-fit hydrocarbons are not only a set of new hydrocarbon applications where actors may choose to

compete, but also a matter of how actors do business and how projects are planned and managed in a decarbonizing world. As such, the EFPC introduces a **set of five guiding criteria** to illustrate strategic responses that companies in the sector **may exhibit today** to build resilience and spread across three levels of ambition: ‘meeting,’ ‘striving,’ or ‘leading.’

Criteria	 Meeting	 Striving	 Leading
1 Aligned with net-zero trajectory Commitment to net-zero by 2050 and Paris targets have become the minimum expectation for companies/projects to be considered for energy investment.	<ul style="list-style-type: none"> Adopting a net-zero target grounded in science and short, medium, long-term milestones to drive significant absolute GHG reductions by 2050 for production and operational emissions (scope 1&2). Integrated companies have separate targets in place for upstream operations. Confirmed investments in immediate decarbonizing technologies. 	<ul style="list-style-type: none"> Demonstrable, rapid, large-scale reductions in CO₂ emissions, additional deep reductions in non-CO₂ GHG, and ramping up of strategies and investments in technology to remove CO₂ from the air. Accounting for total emissions (including product use/scope 3), or for materials development. 	<ul style="list-style-type: none"> Demonstrable reductions across a company's entire supply chain through direct reductions, offset, or use of new technologies to diversify into other forms of energy/ materials. Positioned to address emissions impact beyond individual corporate inventories and generate shared benefit for emissions reductions.
2 Integrates a forward-looking ESG approach ESG integration is now a key risk management and investment norm and increasingly critical as factors beyond emissions are likely to become flash-point issues or key differentiators.	<ul style="list-style-type: none"> Climate reporting in line with standards from the Task Force on Climate-Related Financial Disclosures (TCFD)/ International Sustainability Standards Boards (ISSB), including disclosure of interim net-zero targets and related progress, as well as strategies for improving governance and social factors. Integration of climate risks (physical and reputational) into Enterprise Risk Management systems or strategic planning processes. 	<ul style="list-style-type: none"> Enhanced ESG disclosure on emerging risk areas such as water management, land use, and biodiversity. Expansion into energy transition reporting that outlines strategies for business transformation and fossil fuel and price forecasts underpinning accounts and underlying assumptions. 	<ul style="list-style-type: none"> ESG goals and reporting established as a core part of corporate and growth plans linking ESG strategies with financing strategies for credible capital driven ESG progress.
3 Economically viable Economic viability of hydrocarbon activities is not static, and as climate moves from being a marginal consideration for investors, the costs of delays to decarbonize may threaten the financial viability of product offerings and services.	<ul style="list-style-type: none"> Resilient to carbon pricing applicable in a producing jurisdiction and price-competitive with alternatives. Where ‘future-fit’ activities target new market opportunities, climate-oriented investors can serve as a proxy for future consumers and demand. 	<ul style="list-style-type: none"> Products, technologies, and services are viable in markets prioritizing life-cycle intensity through fuels standards or border taxes. Where diversification is a key strategy, customer/export contracts have been confirmed for these products and services. 	<ul style="list-style-type: none"> Products, technologies, and services have comparative advantages and increasing global market share. Diversified activities are profitable and represent new revenue streams.
4 Fosters an inclusive Indigenous economy Moving forward in a mutually respectful, equitable partnership with Indigenous Peoples on energy development is a basic requirement for building resilient, future-fit hydrocarbon industries and an opportunity to weave in reconciliation efforts with the development of these industries.	<ul style="list-style-type: none"> Implementing the articles outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). 	<ul style="list-style-type: none"> Establishing ambitious, but achievable, targets for Indigenous procurement, employment, and board representation. Including Indigenous Peoples in every step of the process in developing clean energy policies and projects. 	<ul style="list-style-type: none"> Improving access to cost effective capital for Indigenous Peoples through equity participation and/or ensuring the availability of payments or backstops to support financial participation and bridge investment interest with communities. Providing Indigenous Peoples with the opportunity to co-lead the development of future-fit hydrocarbon projects.
5 Builds on current assets and strengths Building on something from something – repurposing assets – creates critical bridges to low-emissions opportunities by capitalizing on existing infrastructure, distribution channels, and human capital to create a path forward.	<ul style="list-style-type: none"> Maximizing the efficiency of existing assets and infrastructure and retrofitting with decarbonization technologies to drive low-emissions operating models. Incorporating reskilling and training programs as safeguards for employees against potential impacts of shifts in operations. 	<ul style="list-style-type: none"> Retiring high-emitting assets early, and where possible repurposing assets, deploying new technologies, and using retail networks to expand into wider energy sources. Recognizing that employee transitions also impact families and communities, participating in local community transition dialogues and efforts. 	<ul style="list-style-type: none"> Leveraging and exporting technical capabilities and expertise into new areas of the emerging clean energy and technology sector. Engaging and supporting just transition policy and program discussions, including through financial supports for local communities.

Establishing a policy portfolio for future-fit hydrocarbons

While some companies operating in Alberta may already be leading in terms of these criteria, not all companies are. The ambition of the EFPC is for Alberta's energy sector to be at the forefront of future-fit hydrocarbon industries. This means establishing a policy environment that can enable more actors to adopt activities aligned with these criteria, thereby positioning the sector as a destination of choice for climate-smart investment.

The EFPC framework identifies **six strategic areas of focus** where policy action is needed to accelerate future-fit hydrocarbon activity across the sector:

1. **Climate reporting**
2. **Transition finance**
3. **Next generation technology**
4. **Energy communities**
5. **Aging assets**
6. **Net-zero commitment**

For each of these areas, a set of policy levers are presented outlining actions that can happen quickly, promising proposals that will require additional time to assess and implement, as well as ambitious proposals that can inspire bold thinking about the next transformation around the corner for Alberta's hydrocarbon sector.

Policy makers should consider this effort as an initial policy portfolio against which they should track the performance of policies to attract investment into future-fit hydrocarbons, revising the portfolio as new information becomes available. Here we highlight an anchor proposal for each strategic area that can initiate meaningful change to establish future-fit hydrocarbons as a provincial priority and pave the way for additional policy action.



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Climate reporting

Policy objective: create a forward-looking, consistent ‘climate reporting’ environment to support investor decision-making

Anchor proposal: advance and build on the recommendations of the Canadian Securities Administrator (CSA) for mandatory climate disclosure

For future-fit hydrocarbon projects and activities to be valued as transitional and sustainable investment opportunities, it is critical that investors have access to information and data for these projects that aligns with international best practices for climate disclosure, currently outlined by the Task Force on Climate-Related Financial Disclosure (TCFD) and the Sustainability Accounting Standards Board (SASB). Even as many Alberta companies are well-placed to meet these information needs, the current information landscape in the province lacks coordination mechanisms, presents a steep capacity curve for junior or smaller companies, and overall

disclosure can be selective. This unevenness creates a credibility challenge for high emitting sectors. Therefore, as the CSA finalizes its recommendations on mandatory disclosure, confirming provincial alignment as a baseline for mandatory reporting and establishing supporting infrastructure provides an important foundation for demonstrating the business value of future-fit hydrocarbons projects launching in Alberta. This coupled with Scope 3 emissions and overall emissions reduction strategies will be critical for accelerating the market for transition finance, increasingly seen as crucial for achieving climate commitments.

Transition finance

Policy objective: advance ‘transition finance’ tools to accelerate capital investments and support heavy emitters to reduce their emissions and bridge to greener business models

Anchor proposal: formally support a Canadian transition finance framework to accelerate the issuance of transition-labeled instruments

Transition finance captures an emerging market of sustainable finance where investors aim to offer high emitters financing for projects that can put them on an accelerated path to a low- or zero-emissions business model. With the pool of dedicated sustainable finance funds available, this presents a key opportunity for Alberta-based companies to access financing for future-fit hydrocarbon projects and to help scale underpinning technologies. However, realization of a robust transition finance market will not come without challenges, including advancing a common

understanding of what constitutes transition-aligned economic activities and overcoming the risks of greenwashing – actual or perceived. The development of a Canadian Taxonomy for Transition Finance will be an opportunity for the province to situate future-fit hydrocarbons as emissions reduction projects aligned with a net zero trajectory. As market acceptance will ultimately depend on its tangible application, Alberta is well-positioned to kickstart the process of utilizing such a taxonomy through the issuance of loans or bonds under a transition-label for aligned projects.

Next generation technology

Policy objective: anchor Alberta at the heart of Canada's 'living lab' for technologies that can unlock transformative opportunities for future-fit hydrocarbons

Anchor proposal: commit to removing regulatory barriers to future-fit innovation and build out partnerships across regional innovation hubs to identify priorities for transformative technologies

Alberta represents approximately 40% of Canada's GHG footprint – with industrial activity emitting 70% of that – making it a critical solution space to target priorities and funding for decarbonizing technologies. While future-fit hydrocarbon projects can deliver real-world emissions reductions necessary for Canada to achieve net zero by 2050, most promising opportunities rely on transformative innovations in technologies, processes, or business models. These innovations are at a variety of stages, from lab research to demonstrated technologies looking to

commercialize. While this innovation needs to be led by the private sector, it will not happen at the speed required without a complimentary regulatory approach that can help fill funding gaps for RD&D, create early demand, and accelerate deployment of future-fit hydrocarbon projects. Given the regional nature of many of these opportunities, multilateral collaboration will be imperative to maintain local social license, overcome existing regulatory inefficiencies and ensure climate policies and regulations coming online support rather than hinder related technologies.

Energy communities

Policy objective: create 'onramps' for broader, more local participation to reduce barriers and uncertainty associated with project development


Anchor proposal: grow financing opportunities for local communities that connect future-fit hydrocarbon projects to achieving sustainable milestones

Alberta's municipalities and Indigenous communities have a central role to play in both identifying and realizing opportunities for future-fit hydrocarbons. Notably, municipalities own approximately 60% of the public infrastructure, and focus continues to mount on closing the infrastructure gap in many Indigenous communities by advancing successful equity infrastructure projects across Canada. In Alberta, however, these communities will also be some of the hardest hit by disruption to the hydrocarbon sector, with many facing direct job losses and outward flow of people and knock-on effects on community finances.

Local economic development planning is a promising mechanism for communities to explore the benefits of, and opportunities to, build on existing assets to diversify into future-fit hydrocarbon industries and strategies for community investment. Given that the risk profile of many communities is different from those of private sector investors, provincial and federal governments have an opportunity to collaborate with key funders to grow financing opportunities for local future-fit hydrocarbon projects that can attract a wider array of investors.

Aging assets

Policy objective: build on Alberta's assets and minimize economic losses by creating 'off-ramps' for legacy hydrocarbon assets


 **Anchor proposal:** enable more creative business models, corporate arrangements, and financial structures to further incent repurposing efforts

As investors increasingly hedge against transition risks, Alberta's aging physical infrastructure presents not only an economic risk in the form of stranded assets and write-offs, but also an opportunity for future-fit growth. Pivoting the use and focus of these assets can provide an early-mover advantage for a number of future-fit hydrocarbon industries – for example, natural gas infrastructure can unlock hydrogen supply and drive carbon capture, combining wells with new technologies that can tap geothermal and extract

other substances, and exhausted fields that can be used for storage. Extending the market resilience of these assets can also include attracting investments into decommissioning or associated reclamation opportunities. Given the risks that are currently faced by many hydrocarbon sector firms, there is a need to develop new corporate and financial structures that allow investment in repurposing legacy hydrocarbon assets while shielding investors from the risk profile of the asset-owning firms.

Net-zero commitment

Policy objective: establish a provincial commitment to net-zero emissions on an 'absolute basis' by 2050 (or sooner) to reinforce individual company commitments

 **Anchor proposal:** establish a provincial commitment to contribute to national net-zero targets for scope 1 and 2 GHG emissions and plan for scope 3

Absolute emissions reduction remains the dominant metric used to assess environmental performance for high-emitting sectors. Additionally, to align with evolving investor considerations, projects will need to demonstrate resilience across a range of climate scenarios, with minimal risk of stranded assets if the world decarbonizes faster than expected. This means that the more aligned with a net-zero future an investment is, the less risk it offers and the more future-fitness it is attributed. Yet, even as companies operating in Alberta set out targets and plans for net zero, these plans will continue to contend with scrutiny. A provincial commitment that Alberta will be net-zero compliant by 2050 is therefore necessary to:

reinforce private sector action; build global investors' confidence that companies in Alberta are operating in a jurisdiction aligned with international policy; and validate future-fit hydrocarbon projects are substantive emissions reduction projects. Whereas inclusion of scope 1 and 2 emissions are vital for a provincial commitment to be considered meaningful, scope 3 will be a critical differentiating factor for shareholders investing in hydrocarbon activity in the longer-term. Decision-making should anticipate and begin planning for calls to disclose the full scope of emissions including scope 3, or for change/decline in demand for traditional fuels.



Conclusion

For Canada, future-fit hydrocarbons industries represent a path forward that can realize deep emission reductions while continuing to benefit from economic activity and inclusion in its resource sectors.

Alberta has all the ingredients to excel in this space and capture a low-emission future, but there is no time to waste. Even with its many advantages it will take time to build up the technologies, workforce capabilities, infrastructure, and other assets needed to compete in these sectors, and competing jurisdictions will not wait. Importantly, future-fitness is not static, and as ambition towards net-zero grows, future-fit hydrocarbons – in their execution – will be a race to the top not the bottom. The EFPC has developed this framework to illuminate both the challenge and opportunity that is front and center to Alberta's resource sector as energy investment evolves, and as a platform for policy makers to work together to successfully navigate the journey from hydrocarbons to future-fit hydrocarbons.



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