



**Institute for Energy Economics
and Financial Analysis**

A Strategic Fossil Fuel Divestment Policy Would Strengthen the British Columbia Teachers' Pension Plan

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March 2023

Contents

Key Findings.....3

Executive Summary.....4

Background.....6

I. BCI’s Fossil Fuel Holdings and Carbon Exposure Are Significant 11

II. The Rationale for Divestment is Anchored in Sound Financial and Corporate Management Principles and Grounded in Principles of Prudent Fund Management 15

III. BCI’s Climate Action Plan and Position on Divestment Are Deficient 19

V. A Potential Pathway to Divestment 28

Appendix 33

About IEEFA..... 36

About the Authors..... 37

Key Findings

BCI has begun to address the risks associated with continued fossil fuel investments, but much more needs to be done—divestment will make the British Columbia Teachers' Pension Plan fund stronger and more resilient.

Implementing IEEFA's divestment recommendations would allow fund managers and pension fund beneficiaries to move capital in the direction of both climate solutions and economic growth.

BCI currently holds billions of dollars in fossil fuel reserve and infrastructure investments, yet its fragmented disclosures provide only partial insight into the full extent of its fossil fuel investments.

BCI has determined if global temperatures rise to 2°C, its portfolio will lose 5.1 percent of its value, putting \$11 billion of its investments—\$2 billion attributable to BCTPP beneficiaries—at risk of capital loss.



Executive Summary

The British Columbia Teachers' Federation (BCTF) adopted a resolution in 2022 requesting its pension fund representatives to begin divesting assets from fossil fuel companies. The resolution, made at the request of union members, has initiated a dialogue within the stakeholder community as to how divestment from fossil fuels could occur. This report details the policy and fiduciary imperatives to achieve divestment; key analyses and actions required to meet the challenge; and the potential to convert the challenge into new opportunities to achieve a stronger, more resilient pension fund.

IEEFA proposes expanding the investment options offered to the British Columbia Teachers' Pension Plan (BCTPP) and other funds under the current management paradigm to create a seamless set of decarbonized alternatives that run parallel to the existing investment strategies that include fossil fuels. Implementing IEEFA's proposal would allow fund managers and pension fund beneficiaries to move capital in the direction of climate solutions and economic growth.

Climate change poses financial risks, and financial action should be taken to address the risks. The market position of fossil fuel companies is weak, and its outlook is negative. Alternative investment products now exist for a prudent, well-managed, orderly process to reduce and ultimately eliminate fossil fuels from the BCTPP.



Climate change poses financial risks, and financial action should be taken to address the risks.

The BCTPP, established to provide retirement income security for teachers and administrators, has an opportunity—and a duty—to strengthen and improve its fund's stability by protecting it against the risks posed by fossil fuel investments. The British Columbia Investment Management Company (BCI), as the plan's investment management services provider, has taken important preliminary steps toward addressing this risk. Much more, however, needs to be done.

IEEFA analyzed annual reports, audits, policy documents and other materials related to the BCTPP and BCI's role in providing investment management services to identify the steps that have been taken and still need to be taken to address risks to the BCTPP from its investments in fossil fuels. Considering the information in the context of the fossil fuel industry's condition and outlook, as well as the disruptive impacts of climate change, IEEFA found:

- BCI holds billions of dollars in fossil fuel reserve and infrastructure investments. Yet its fragmented disclosures provide only partial insight into the full extent of its fossil fuel investments. BCI's private market investments, which are its most carbon-concentrated, are among its least transparent. Unlike assets in transparent, publicly listed portfolios, fossil

assets in private, unlisted portfolios are subject to less public scrutiny and disclosure requirements. Transparency would improve planning and accountability.

- The rationale for divestment is anchored in sound financial and corporate management principles, given that:
 - The fossil fuel industry's financial performance has declined substantially over time and now faces unprecedented competition. The loss of market share and subpar performance—despite the market disruption caused by the invasion of Ukraine and ensuing price hikes—leave the energy sector today with a 5 percent share of the Standard and Poor's 500-stock index, down from its peak in 1980, when it commanded 29 percent of the market.
 - Climate change poses risks to BCI's portfolio. BCI has determined if global temperatures rise to 2°C, its portfolio will lose 5.1 percent of its value, putting \$11 billion of its investments—\$2 billion attributable to BCTPP beneficiaries—at risk of capital loss. A loss of \$2 billion would exceed the BCTPP's current actuarial surplus.
- BCI's current climate action plan needs to be strengthened. For example:
 - Relying on an engagement strategy not backed up by a divestment option is unlikely to succeed. Fossil fuel companies have demonstrated a poor track record in meeting net-zero commitments. Divestment would put the decision to reduce financed emissions in the hands of the investment board responsible to the funds' members and retirees.
 - Relying on investments in "climate solutions" has made progress but is limited. BCI's definition of climate solution investment includes entities that derive just 10 percent of their revenue from green products or services, which can leave the portfolio exposed to significant energy transition risks.
- BCI's arguments against adopting a divestment strategy do not stand up to scrutiny.
 - Evidence shows divestment does not increase investment risks or costs, and does not negatively affect returns. The financial impact has been positive or neutral.
 - A divestment strategy does not eliminate shareholders' rights to engage with companies to spur changes. Rather, divestment and engagement work together strategically.
 - Diverting investment from the fossil fuel industry, rather than just transferring emissions to a new owner, can enhance investment in renewable solutions that cut carbon pollution.
- The BCTPP board of trustees has a fiduciary duty to address climate change as a risk factor and to safeguard the long-term value of investments. Since more risks from climate change will develop in the future, the board should act impartially in the interests of both current and future beneficiaries.

The current measures taken by BCI, while commendable, are insufficient given the degree and severity of the risks. A prudent fiduciary should work expeditiously to achieve:

1. Rapid decarbonization of the existing BCTPP investment portfolio; and
2. Exclusion of further investment in fossil fuel reserves or infrastructure, or in industries that use fossil fuel as feedstock.

Although many potential routes to portfolio decarbonization exist, BCI should consider expanding its fund offerings by introducing a new line of sustainable pooled funds that run parallel to and complement the existing menu of options for equities, bonds, real estate, private equity and alternative investments. This would provide trustees with a set of seamless investment options to tackle climate risk in line with their fiduciary obligations, investment philosophies, current asset allocation strategies and return targets. A prudent strategy to divest from portfolios containing fossil fuels is in the best interests of the BCTPP's current and future beneficiaries, and will fulfill the fiduciary duty of the BCTPP and BCI to protect income security for teachers and administrators in retirement.

Background

The foundation of the British Columbia Teachers' Pension Plan (BCTPP) was laid in 1929, with passage of the B.C. Teachers Pension Act.¹ The plan was established to provide income security in retirement for teachers and education administrators in the province. Approximately 102,000 members are enrolled in the plan from more than 60 provincial school boards and educational associations. Most are members of the British Columbia Teachers' Federation (BCTF). Roughly 50 percent of plan members are considered active—i.e., currently employed and making contributions—while 40 percent are retired and enjoying benefits. The remainder, approximately 10 percent, are inactive members who made contributions in the past but no longer work for a plan employer.² Beneficiaries receive annual payments ranging from \$17,000 to \$31,000, depending on number of years in active service, age at retirement and average highest salary while in service.^{3,4}



Approximately 102,000 members are enrolled in the plan from more than 60 provincial school boards and educational associations.

¹ BCTPP. [TTP: The history of your plan](#). May 5, 2019.

² BCTPP. [Organizational structure of the plan](#). Visited December 5, 2022.

³ All figures are in Canadian dollars, unless otherwise stated.

⁴ Public Sector Employers' Council Secretariat. [B.C. Government Pension Plan Partner Governance Framework](#). May 30, 2018.

As of Dec. 31, 2021, the plan had net assets of \$37.8 billion funded from the following sources:

- A. Member contributions—Employees pay 11.17 percent of their salary;
- B. Employer contributions—The provincial government makes a matching contribution of 11.3 percent of staff salary; and
- C. The return on invested assets (75 percent of funds used for pension payments can be attributed to investment gains).⁵ The assets of the plan are primarily managed by the British Columbia Investment Management Company (BCI).

An actuarial valuation is performed every three years to gauge the health of the plan and its ability to meet its long-term obligations.⁶ The plan's actuarial target rate of return, which is the return rate required to fulfill its future liabilities, is 5.575 percent.⁷ With a 10-year annualized return of 10.1 percent, a 105.3 percent-funded ratio and an actuarial surplus of \$1.58 billion, the BCTPP is secure, stable, and well-capitalized.⁸

Last year, several union members, concerned about the impact of climate change in B.C. and bolstered by the potential to secure superior financial returns, approached the BCTF with the following resolution:

“That the BCTF lobby the Teachers Pension Plan Board to set policy that guides the British Columbia Investment Management Corporation (BCI) in:

1. Divesting from portfolios containing fossil fuel industries.
2. Allocating a greater portion of investments using environmental, social and governance (ESG) criteria.⁹

The resolution was passed successfully at the Federation's 106th annual general meeting held in March 2022.¹⁰

Plan Governance

The BCTPP is governed by a 10-member board of trustees appointed by the provincial government of British Columbia as plan employer partner and BCTF as plan member partner. Both partners are signatories to a Joint Trust Agreement (JTA) and each can appoint five individuals to the board.¹¹ Board responsibilities include setting the general investment guidelines for fund management,

⁵ BCTPP. [Teachers' Pension Plan - 2021 Annual Report](#). July 19, 2022, p. 24.

⁶ Eckler. [Actuarial Report of the British Columbia Teachers' Pension Plan](#). December 31, 2020.

⁷ BCTPP. [Teachers' Pension Plan - 2021 Annual Report](#). July 19, 2022, p. 1.

⁸ *Ibid.*

⁹ BCTF. [2022 Reports and Resolutions](#). March 22, 2022, p. 29.

¹⁰ BCTF. [2022 Reports and Resolutions](#). March 22, 2022, p. 29.

¹¹ BCTPP Restated [Joint Trust Agreement](#). June 28, 2021. Also see: BCTF. [Pensions and retirement – Joint Trusteeship](#). Viewed February 23, 2023.

monitoring fund performance, adopting an annual budget, and ensuring plan rules and investments are in accordance with applicable laws.¹²

All board resolutions must be backed by at least seven board trustees.¹³ Board members are expected to be objective, exercise independent judgment and act in the best financial interests of plan members.¹⁴

Statement of Investment Policies and Procedures

The BCTPP's statement of investment policies and procedures (SIPP) outlines the board's investment objectives, beliefs, risk management approach and position on responsible investing. Trustees do not make direct buy-and-sell investment decisions. Instead, they provide guidance to the investment manager through the SIPP. The SIPP sets out a target percentage allocation for each asset class, general return objectives, as well as criteria for assessing fund performance. The board's investment committee is responsible for SIPP formulation and conducts an annual review for confirmation or modification of the statement.¹⁵

The SIPP contains broad policy language that addresses environmental, social, and governance (ESG) issues and climate change. The SIPP states that ESG issues can have an impact on portfolio performance and that climate change needs to be considered as part of its investment calculations.

In general, the SIPP states: "The Board recognizes that shareholder engagement is a more effective tool for seeking to initiate change and influence corporate practices than divesting of investments."¹⁶

Investment Management

The board relies on service providers to fulfill its mandate. It utilizes the British Columbia Pension Corporation, a plan administrative agent, to handle administrative matters, and an investment manager, BCI, to handle growth and investment of fund assets.¹⁷ The board is also authorized to hire internal staff or technical advisors when necessary to perform its duties effectively.¹⁸

BCI is a key service provider to the board in the context of the matters relevant to this report.

¹² *Ibid.*

¹³ Joint Trust Agreement, *op. cit.*, p. 13.

¹⁴ BCTPP. [Statement of Investment Policies and Procedures](#). October 1, 2022, p. 4.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Joint Trust Agreement, *op. cit.*, p. 31.

British Columbia Investment Management Company (BCI)

BCI was established by the British Columbia Public Sector Pension Act (PSPA) in 1999 to carry out investment management services in the province.¹⁹

Based in Victoria, BCI is one of the largest institutional investment managers in Canada, with over \$211 billion in assets under management for more than 30 institutional clients. BCI is responsible for generating investment returns and ensuring the growth and protection of fund assets. As an investment manager, BCI makes day-to-day investment decisions for the fund and invests plan assets that are not currently required to pay pensions to retirees. As an agent of the BCTPP board, BCI is expected to manage the fund in accordance with the SIPP. The PSPA states that BCI's chief investment officer (CIO) must "ensure that risk and returns are managed in a prudent and appropriate fashion, given the nature of the funds, and in accordance with any instructions provided by the trustees or other persons responsible for the funds."²⁰ BCI's CIO is accountable to the teachers' pension board of trustees regarding investment policy, performance, and SIPP compliance.²¹ The board's fund investment and management agreement (FIMA) sets out the terms of BCI's services to BCTPP.²²



BCI makes day-to-day investment decisions for the fund and invests plan assets.

BCI enjoys a close-knit relationship with BCTPP and the other public sector pension plans in the province. In accordance with the PSPA, each of the public sector pension plans are responsible for nominating one individual to the BCI board.²³ Also, trustees from each of these plans collaborate in an inter-plan committee where joint reviews and recommendations are made on various issues of mutual concern, such as general investment policies and procedures, responsible investing, proxy voting and engagement strategies.²⁴

BCI operates a non-profit, cost-recovery model and charges only the fees necessary to cover its investment management expenses. BCIs' fees equal 0.3 percent of BCTPPs net assets, which is generally considered competitive and less than fees charged by its private sector peers.²⁵ BCI has become the investment manager of choice for BCTPP and has been retained since the investment manager's inception. Although the BCTPP board is technically allowed to switch investment

¹⁹ British Columbia [Public Sector Pension Plans Act, SBC 1999, c 44](#), § 16(1).

²⁰ British Columbia [Public Sector Pension Plans Act](#), § 21(3).

²¹ BCTPP, [op. cit.](#), ¶ 8.7.

²² [Ibid.](#)

²³ British Columbia [Public Sector Pension Plans Act](#), § 19(3).

²⁴ BCTPP. [Interplan Investment Committee Mandate](#), June 9, 2003.

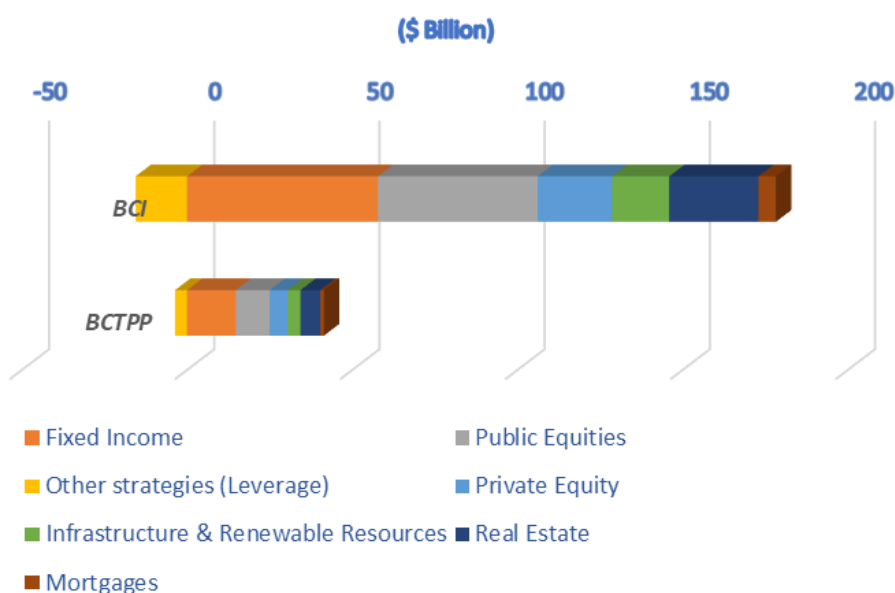
²⁵ Teachers' Pension Plan – 2021 Annual Report, [op. cit.](#), p. 24.

managers, the current interconnected structure, coupled with BCI's competitiveness, will likely see a maintenance of the status quo for the foreseeable future.²⁶

Pooled Fund Structure

BCI's pooled fund structure comingles cash from various clients (see list above) into a single fund that is characterized by asset class, region or investment style. Each pension client buying into a pooled fund buys into the same set of companies. For example, a pension fund for B.C. teachers and another for B.C. municipal workers, both clients of BCI, would each have exposure to shares of Microsoft because Microsoft is included in BCI's equity pooled fund. BCI offers a variety of pooled funds for various asset classes (fixed income, infrastructure, equity, real estate) and sub regions (U.S., Canada, emerging markets, etc).

Figure 1: BCTPP as a Component Part of B.C. Public Sector Pension Plans²⁷



Source: BCI. [2022 Annual Report](#), March 31 2022, p. 51.

BCI uses both in-house and external capacity to manage its pooled funds while employing a combination of active and passive strategies. Actively managed funds seek to outperform a prescribed benchmark; indexed or passively managed funds are designed to mirror the performance of the benchmark by holding a similar or exact set of securities. BCI's long-term goal is to transition to more in-house active portfolio management, and it has built up expertise and capacity over the years. In-house management provides BCI better oversight over its investments and the flexibility to take advantage of developments or opportunities in the market as they arise.²⁸ BCI announced last

²⁶ Joint Trust Agreement, *op. cit.*, p. 19.

²⁷ Also see: BCTPP. [Teachers' Pension Plan – 2021 Annual Report](#), July 19, 2022, p. 13.

²⁸ BCI. [2022 Annual Report](#), March 31 2022, p. 7, 28.

year that it crossed a key milestone with more equities managed in-house than externally, and credits this strategy for more than \$1.5 billion in cost savings.²⁹ A review of its annual report and audited fund financials did not reveal any quantitative breakdown of internally vs. externally managed assets.

Following policy established by the board of trustees, BCI is responsible for steering the investment mandate of its clients. BCI selects the companies or indexes featured in its range of pooled funds and selects the external managers it employs to oversee certain asset classes. Ultimately, BCI is responsible for the investment options available to its public sector pension clients.

I. BCI's Fossil Fuel Holdings and Carbon Exposure Are Significant

BCI invests its clients' assets in the entire economy. Included in its investment inventory, across multiple sectors, are energy holdings featuring companies that produce, transport and market fossil fuels.³⁰ Quantifying BCI's overall exposure to the fossil fuel industry is difficult, however, due to its fragmented disclosures characterized by incomplete and sometimes inconsistent information.

BCI does attempt to provide insight into the overall carbon exposure of its portfolio by revealing two broad-based gauges:

- a. Portfolio Carbon Footprint: A measure of the total greenhouse gas emissions generated by all assets in its investment portfolio, and
- b. Weighted Average Carbon Intensity (WACI): A metric that measures the average carbon footprint of a portfolio.

²⁹ *Ibid.*

³⁰ BCI. [Investment Inventory](#). March 31, 2022.

Table 1: BCI Portfolio Carbon Footprint, March 31, 2021

Asset class	2019 Carbon footprint (tCO₂e/\$M invested)	2020 Carbon footprint (tCO₂e/\$M invested)	2021 Carbon footprint (tCO₂e/\$M invested)
Public equities	117	111	88
Public equities benchmark	131	132	47
Fixed income	78	66	47
Fixed income benchmark	74	68	79
Real estate	10	7	7
Private markets	-	380	227

Source: BCI 2022 Annual Report.

To its credit, BCI has published a broad picture of its carbon footprint (Table 1). The data shows that for the most part, the carbon footprint of the portfolio as a whole is declining, consistent with broader sustainability trends in the economy. But the table is of limited value for achieving the goal to reduce financed emissions through investment policy. A more granular approach to this disclosure would identify specific opportunities where portfolio action is needed.



The carbon footprint of the portfolio as a whole is declining, consistent with broader sustainability trends in the economy.

Also to its credit, BCI publishes the annual audit of each asset class. The audits contain valuable information on the asset composition, value, basic policies and financial condition. BCI discloses the WACI of its public equities’ portfolio. The data show energy and utilities holdings contain heavy concentrations of fossil fuel companies with significant carbon exposure. The disclosure should be presented in a uniform manner that would allow carbon exposure to be quantified across asset classes.

From data disclosed in the audits, we are able to determine partial energy and utilities sector holdings of \$2.8 billion and \$9.7 billion respectively for public equities.³¹

Table 2: BCI Fossil Holding Disclosures

Pooled Fund Asset Class	Total Assets \$ '(000)	Maturation Schedule	Sectoral Weighting	Energy \$ '(000)	Utilities \$ '(000)
Public Equity	52,074,228	N/A	Yes	2,543,265	1,732,168
Fixed Income	75,085,332	Yes	No	<i>Not Reported</i>	<i>Not Reported</i>
Infrastructure & Renewable	13,490,532	N/A	Partial	1,371	8,052,927
Private Debt	7,515,927	Yes	Partial	303,105	<i>Not Reported</i>
Private Equity	21,282,969	N/A	Partial	<i>Not Reported</i>	<i>Not Reported</i>
Real Estate	11,946,846	N/A	N/A	--	--
Mixed [Equity + Fixed Income]	4,597,998	Partial	Partial	<i>Not Reported</i>	<i>Not Reported</i>

Source: BCI Pooled Fund Audited Financial Statements, compiled by IEEFA.

The data in Table 2 provides a restricted view of BCI's overall carbon exposure. With the exception of the public equity portfolios, the audited financials do not contain full sector weightings for asset classes. Also, the disclosures for longer term illiquid assets (such as private equity and private debt) are missing exit date information needed to assess carbon risk or assist with decarbonization strategies.

BCI's private market investments—its most carbon-concentrated (see Table 1)—are among its least transparent. The private equity audit, for example, contains valuation information for 21 separate private equity funds. The disclosures do not have a consistent breakdown by sector. At best, some of the fund valuation information contains sector weightings for healthcare and technology and other categories like “unlisted Investee funds” that bury energy utilities into broader categories that are unworkable for the purpose of a carbon exposure analysis.³²

Although BCI's disclosures are imperfect, a review of corporate filings, government reports and press accounts does offer a partial profile of its involvement with fossil fuel investments and companies.

- BCI was part of a consortium that purchased 90 percent of Nova Transportadora do Sudeste (NTS), a major natural gas transporter in Brazil, in a 2016 deal valued at \$5.19 billion.³³
- In a partnership with other investors, BCI purchased a significant stake in Puget Energy, a Washington-based natural gas distributor in a 2010 deal valued at \$7.4 billion. Although BCI

³¹ *Ibid.* See appendix for more data.

³² BCI. *Private Equity – Pooled Fund Financial Statements*. December 2021

³³ Pipeline & Gas Journal. *Petrobras Sells 90 Percent of Gas pipeline Unit*. September 23, 2016.

began with an initial stake of 14.1 percent of Puget, it had increased its stake to 20.9 percent by 2018.^{34,35} Two of BCI's portfolio managers currently sit on the board of Puget.³⁶

- BCI is reported to own 32 percent of Open Grid Europe (OGE), a large-scale natural gas transmission entity in Germany valued at \$7 billion.³⁷
- BCI also announced an agreement last year to be part of a consortium acquiring 60 percent of the U.K. national gas transmission system, National Grid, which is valued at \$11.6 billion. The consortium has an option to purchase the remaining 40 percent of the business.³⁸
- BCI also invests significant capital with Brookfield Infrastructure Partners, which owns or controls more than 15,000 kilometers of transmission pipelines, 600 billion cubic feet (bcf) of gas storage, 17 LNG processing plants, 525 kilotons per annum (KTA) of polypropylene production capacity, and 17 natural gas and liquids processing plants.³⁹ BCI is actively invested in Brookfield Infrastructure Funds I, II, III-D & IV.⁴⁰
- Also, BCI is actively partnered with ArcLight, a major energy infrastructure investment firm that has deployed more than \$27 billion in capital. BCI is an investor in ArcLight funds II, III, IV & fund VI which, as observed by IEEFA in an earlier report, owns a stake in one of the largest CO₂ emitters in the United States, the Gavin coal-fired plant.⁴¹

Although its portfolio carbon footprint may exhibit a downward trend, BCI continues to hold billions of dollars in fossil reserve and infrastructure investments.

At a policy level, BCI would be better served with a uniform system of carbon accounting that discloses emissions and the carbon exposure of investments in each asset class in a consistent manner. Carbon exposure by asset class would give its board of directors and stakeholders precise information about the concentration of fossil fuel risks in the portfolio and support future decarbonization efforts.



BCI continues to hold billions of dollars in fossil reserve and infrastructure investments.

The private equity industry, flush with cash from limited partners such as BCI, has funnelled over \$1.1 trillion dollars into private energy assets since 2010, with only about 12 percent going into renewable assets.⁴² Fossil assets are increasingly moving from transparent, publicly listed portfolios

³⁴ FERC. [Order Conditionally Authorizing Merger and Disposition of Jurisdictional Facilities](#). April 17, 2008.

³⁵ BCI. [Puget Sound Energy Welcomes New Investment](#), August 8, 2018.

³⁶ Puget Energy. [Board of Directors](#), Viewed January 7, 2023.

³⁷ Reuters. [Macquarie prepares gas pipeline Open Grid Europe for sale](#), March 24, 2021.

³⁸ IPE Real Assets. [Macquarie, BCI to buy stake in National Grid's gas transmission, metering arm](#), March 28, 2022.

³⁹ Brookfield. [Investor Factsheet](#), 2022.

⁴⁰ BCI. [Investment Inventory](#), March 31, 2022.

⁴¹ *ibid.* See also: IEEFA. [Pension funds investing indirectly in Ohio's Gavin coal plant](#), October 14, 2021.

⁴² New York Times. [Private Equity Funds, Sensing Profit in Tumult, Are Propping Up Oil](#), November 13, 2021.

to private, unlisted ones where they are subject to less public scrutiny and disclosure requirements. The potential cloaking of fossil investments in opaque structures is a worrying trend that should be monitored since it has potential to reverse gains made in the fight against climate change.

II. The Rationale for Divestment Is Anchored in Sound Financial and Corporate Management Principles and Grounded in Principles of Prudent Fund Management

The call for BCI to reconsider the continued investment of pension funds in carbon-based fuels and related infrastructure rests on strong financial reasoning.

The Fossil Fuel Industry's Financial Performance Has Declined Substantially Over Time and Now Faces Unprecedented Competition

The fossil fuel industry underperformed financially for more than a decade before the market disruption caused by the invasion of Ukraine. The loss of market share and subpar performance leaves the energy sector today with a 5 percent share of the Standard and Poor's 500-stock index, down from its peak in 1980, when it commanded 29 percent of the market.⁴³

The fossil fuel industry's poor performance, as well as the current volatile and unsustainable high prices, feed a negative outlook.⁴⁴ Innovation and the increased adoption of substitutes for fossil fuel use, coupled with rising social, environmental, and legislative pressure are expected to continue. As the world prepares to transition to a low-carbon future, a consensus in financial and technical circles is growing that the fossil fuel industry faces historically unprecedented competition that will cause a substantial decline in the scope of oil and gas use and the size of the industry.⁴⁵

The energy industry's most stable customer base in transportation, petrochemicals and power generation is eroding. Major capital shifts are driving growth in electric vehicles, renewable energy and "reduction and replacement" strategies in the petrochemical sectors. BCI acknowledges this reality in its net-zero statement by noting that "future policy changes and consumer demand will increasingly favour clean energy solutions and create unfavourable market conditions for...carbon-intensive energy."⁴⁶

The current improvement in oil and gas stock prices is not built on lasting fundamentals, but rather on temporary geopolitical turbulence and the destabilizing actions of authoritarian leaders. BlackRock argues that the current run-up in prices has actually hastened the transition out of fossil

⁴³ Sibilis. United States SP 500 Sector Weightings, 1980 to present, (Proprietary, available upon request). See also: SP 500 Index.

⁴⁴ IEEFA. [Two Economies Collide](#). October 2022.

⁴⁵ Pembina Institute. [The future of oil in the energy transition](#). December 14, 2022.

⁴⁶ BCI. [Climate Action Plan](#), 2022.

fuels by pushing the economics decisively in favour of clean energy.⁴⁷ Rather than view the current upturn as a justification for continued investment, astute long-term investors might capitalize on these disruptions by unloading their fossil investments at decade-high prices while deploying capital into more sustainable sectors with stronger long-term fundamentals.

The Fossil Fuel Industry Increasingly Faces Regulatory and Litigation Risk

BCI's portfolio, which contains significant carbon exposure in several areas, is increasingly vulnerable to regulatory risk. Environmental approvals for pipeline and other fossil fuel related infrastructure are coming under heightened scrutiny and increasingly being denied.⁴⁸ The trend has potential to upend growth plans, cash flow and dividend projections.

Regulatory efforts to speed the transition to renewables will continue to undermine the financial stability of fossil fuel-based energy plants.⁴⁹ The introduction and escalation of carbon taxes, which is imminent in certain jurisdictions, will combine with other market forces to transform the economics of the upstream oil and gas sector. Depending on the size and policy incentives of any taxation system, fossil fuel companies and projects are likely to experience heightened cost pressures, cash flow constraints and significant negative adjustments to net present value projections.⁵⁰



Risks associated with litigation in the fossil fuel industry are significant and ballooning.

A significant percentage of fossil fuel investments currently held by BCI and other institutional investors faces substantial declines in value if global leaders and industries take the steps needed to meet the threshold stipulated in the Paris Agreement, a landmark climate change treaty.⁵¹ BlackRock states, “structural shifts are typically underappreciated by financial markets ... asset prices can be slow to adjust to growth opportunities and risks, creating potential for higher (lower) investment returns for investors who move early (late). We think the transition to lower carbon emissions could be similar.”⁵² Investors who continue to hold fossil fuel assets, as the transition deepens, risk steep losses in the value of their investments.

⁴⁷ BlackRock. [Climate-aware return assumptions: an update](#). Viewed January 18, 2023.

⁴⁸ Moody's Investor Services. Shifting environmental agendas raise long-term credit risk for natural gas investments. September 30, 2020. Proprietary.

⁴⁹ IEEFA, [op. cit.](#)

⁵⁰ Wood Mackenzie. [How carbon pricing could reshape upstream oil and gas economics](#). March 31, 2022.

⁵¹ Carbon Tracker Initiative. [Unburnable Carbon: Are the World's Financial Markets Carrying a Carbon Bubble?](#) Viewed November 12, 2022.

⁵² BlackRock. [Climate-aware return assumptions: an update](#). Viewed January 18, 2023.

Risks associated with litigation in the fossil fuel industry are significant and ballooning. Recent years have seen a proliferation of climate-related suits by parties looking to hold countries and public corporations accountable for their role in climate change.⁵³ Potential claims range from environmental contamination, personal injury, misrepresentation to securities fraud and human rights violations. Advances in attribution science that establish a clear link between extreme weather events and human activity could have negative implications for corporate liability.⁵⁴

Disruptive Impacts of Climate Change Pose Risks to BCI's Portfolio

In its climate action plan, BCI attempts to quantify the potential financial impact that climate risk poses to its investment portfolio. BCI estimates that a 2°C rise in global temperature will cause a loss of 5.2 percent of its portfolio's value.⁵⁵ According to its own calculations, \$11 billion of its investments—\$2 billion of which are attributable to BCTPP beneficiaries—are at risk of capital loss.⁵⁶

The effect of climate-related economic effects on BCI's portfolio could be substantial. A loss of \$2 billion, for example, would exceed the entirety of the BCTPP's current actuarial surplus.⁵⁷ Absorbing a loss of this size would have significant implications for the fund's stability. Any short- or long-term scenario that includes actions to offset losses at levels of this magnitude puts retiree benefits and annual taxes at risk.

The probability of this scenario (or an even more severe one) is not negligible. The Paris Agreement set an ambitious target to limit the rise in mean global temperature to 1.5°C to avoid catastrophic impacts of climate change. The World Meteorological Organization (WMO) estimates there is a 50 percent chance that the average global temperature rise will hit 1.5°C in the next five years.⁵⁸ U.N. Secretary General António Guterres sums up the situation by stating the 1.5°C goal "is on life support and the machines are rattling ... we're getting dangerously close to the point of no return."⁵⁹ A report by the UN Environmental Programme concludes that no credible strategy to limit warming to 1.5 °C has been adopted, and policies currently in place will result in 2.8°C by the end of the century.⁶⁰ In one survey of top climate scientists, 60 percent predicted warming of 3°C by the end of the century.⁶¹

⁵³ Harvard Law School Forum. [The Rise of Climate Litigation](#). March 3, 2022

⁵⁴ The Lancet. [How scientists are helping sue over climate change](#). May 2022.

⁵⁵ BCI. [2022 ESG Annual Report](#). 2022, p. 17.

⁵⁶ Potential percentage loss applied uniformly to BCTPP assets.

⁵⁷ Plan surpluses are to act as buffers for economic downturns. Surpluses can be transferred to the inflation adjustment account. See: BCTPP. [Teachers' Pension Plan – 2021 Annual Report](#). July 19, 2022, p. 1. Also see: Eckler. [BCTPP Actuarial Report](#). December 31, 2020, p. 3.

⁵⁸ World Meteorological Organization. [WMO Climate Update](#). May 9, 2022.

⁵⁹ United Nations. [Secretary-General remarks to high-level opening of COP27](#). November 7, 2022.

⁶⁰ UNEP. [Emission Gap Report 2022](#). October 27, 2022.

⁶¹ Nature. [Top climate scientists are sceptical that nations will rein in global warming](#). November 1, 2021.

The Moral Case for Divestment Is Compelling—and a Matter of Good Corporate Management

The UN notes that fossil fuels—coal, oil and gas—are “by far the biggest contributors to global climate change,” accounting for more than 75 percent of global greenhouse gas emissions and almost 90 percent of all carbon dioxide emissions.⁶² In its 2021 ESG report, the CEO of BCI noted the effects of climate change felt in the province: “British Columbians felt the impacts of extreme weather events as we experienced deadly wildfires, unprecedented heat, and flooding during the year. These events took lives, forever impacted communities, and resulted in major damage to infrastructure and the environment.”⁶³ The effects of climate change are neither abstract nor consigned to remote regions of world. They are real and are increasingly being felt in British Columbia.

The UN Intergovernmental Panel on Climate Change (IPCC), an internationally accepted authority on global warming, notes that exceeding the 1.5°C cap set in the Paris Agreement will result in irreversible impacts in certain ecosystems, resulting in melting of glaciers and ice sheets, rising sea levels, flooding and risks to human safety and security.⁶⁴ It is widely accepted that meeting the goal will require deep cuts in emissions generated by the fossil fuel industry.⁶⁵



The writing on the wall regarding the future of fossil fuels as an investment is clear.

Last year, BCI acknowledged in a press release that “it recognizes that holding Russian securities in our portfolios is not aligned with our values as an organization nor that of our clients.”⁶⁶ In light of this, one has to question the rationale behind using member contributions to indirectly fund the gradual degradation and destruction of the environment and economy. Ignoring the centrality of fossil fuel politics and economics in Russia’s invasion of Ukraine is dangerously naïve—high oil prices are funding Russian military operations (and current profits in the oil and gas sector), and Ukraine is a highly relevant asset in Russia’s fossil fuel calculations.⁶⁷

The writing on the wall regarding the future of fossil fuels as an investment is clear. Many forward-looking institutional investors are gradually repricing these risks, minimizing investment, and shifting capital away from the sector.⁶⁸ BCI is aware of the risks but apparently believes it can manage its

⁶² UN. [Cause and Effects of Climate Change](#). Viewed January 28, 2023.

⁶³ BCI. [2022 ESG Annual Report](#). 2022, p. 4.

⁶⁴ IPCC. [Impacts of 1.5°C global warming on natural and human systems](#). Viewed Feb 1, 2023.

⁶⁵ [Ibid.](#)

⁶⁶ BCI. [BCI is actively working to sell remaining Russian securities](#). March 1, 2022.

⁶⁷ Agnia Grigas. *The New Geopolitics of Natural Gas*. 2017. (See Chapters 3-5)

⁶⁸ [Global Fossil Fuel Divestment Commitment Database](#). Viewed January 28, 2023.

effects while continuing to provide high-carbon options to its pension clients. We explore BCI's line of reasoning below and explain why it may be financially too optimistic in light of the renewable energy transition.

III. BCI's Climate Action Plan and Position on Divestment Are Deficient

BCI's strategy to deal with climate risk, which rests on the following four areas of activity, does not do enough to protect its portfolio assets. In our opinion, its results are indicative of still-elevated levels of carbon concentration in the portfolio and persisting substantial climate risk. BCI's main strategies, described below, are not sufficient to achieve the 1.5°C Paris Agreement goal.

- a. **Engagement and advocacy:** BCI wants to continue leveraging its status as a shareholder to push for policy change in its most carbon-intensive investments. It aims for companies in which it invests to set short- and long-term climate specific goals. BCI will assess the success of its strategy by the percentage of its investments that declare net-zero aligned commitments.⁶⁹ The value of such commitments is questionable, since companies have a poor track record in meeting their declarations.⁷⁰ And despite the gulf between commitments and credible action, only 25 percent of BCI's current investments have set commitments with a credible path to achievement.⁷¹
- b. **Integration:** BCI plans to continue inserting climate considerations into its investment decision by deploying stress tests to evaluate portfolio performance under different climate scenarios. The primary metric to be measured here is climate value at risk (VAR), which is the potential percentage change in portfolio value under a given climate scenario. BCI's results so far fall short. By its own account, under a 2°C long-term climate outcome, BCI would lose \$1.8 billion more in 2021 (\$10.3 billion) than it would have lost in 2020 (\$8.5 billion).⁷² The \$1.8 billion growth in climate value at risk is not merely due to an increase in BCI's assets under management, but also due to a widening in the percentage of overall fund assets that are at risk from climate change.⁷³ The integration process currently being employed by BCI is apparently not sufficiently selective against investments that present a risk related to climate change. The deterioration in portfolio protection is not consistent with a highly effective climate action plan.
- c. **Seeking opportunities:** BCI plans to capitalize on opportunities created by the energy transition by pursuing climate solutions in all asset classes. The primary metric BCI aims to measure is the gross amount invested in climate solutions. While investment in renewable technologies and related infrastructure is a sure path to portfolio decarbonization, BCI's definition of a climate solution investment is tenuous. By its standards, a coal-fired electric utility that generates partial revenues from solar energy would qualify as a climate solution

⁶⁹ Climate Action Plan, *op. cit.*, p. 5.

⁷⁰ MSCI. [The Role of Capital in the Net Zero Revolution](#). Viewed January 12, 2023.

⁷¹ Climate Action Plan, *op. cit.*, p. 5.

⁷² *Ibid.*

⁷³ *Ibid.*

investment. By considering entities that derive just 10 percent of their revenue from green products or services as potential investment-worthy climate solutions, BCI risks diluting the effectiveness of its initiative—and could end up hitting superficial targets while leaving the portfolio still exposed to significant transition risks.⁷⁴

- d. **Risk management:** This strategy revolves around the proper understanding, measurement, and disclosure of the various climate risks that may have affect the portfolio. BCI's primary metric in this regard is tonnes of carbon dioxide equivalent per million dollars enterprise value. BCI has yet to disclose its performance on the metric, stating that it is still under development.⁷⁵

Excluding the same types of investments responsible for high-carbon concentration in a portfolio is a direct, credible and proven pathway to reducing climate risk while protecting the financial interests of the fund from losses. BCI is fundamentally opposed to this option. Its views on divestment are outlined in its Climate Action Plan:

- “Divestment eliminates our rights as a shareholder to engage with management and raise awareness of long-term risks and encourage change of practices.”
- “Divestment does not encourage companies to amend their policies and practices.”
- “Divestment may compromise our investment strategy, increase risks and costs, and negatively affect our clients’ investment returns.”
- “Divestment transfers emissions to another owner and does not result in absolute emissions reductions.”⁷⁶

Recent data, however, call such conclusions into question.

Evidence Shows Divestment Does Not Increase Investment Risks or Costs or Decrease Returns

Ample evidence disproves the notion that fossil fuel divestment has negative effects on investment risk and return. A simple comparative analysis of two sets of indexes—a broad stock market index vs. its fossil fuel-free counterpart—over time and across different global markets, can help provide some cues on this subject.

The S&P/TSX 60 measures the 60 largest, most liquid companies listed on the Toronto Stock Exchange (TSX) and is considered a benchmark for the overall performance of the Canadian stock market. The S&P 500-stock index measures the performance of 500 leading U.S. listed companies, has more than \$15 trillion indexed or benchmarked and is considered a bellwether for the U.S. economy. The MSCI World Index measures performance of large and mid-cap stocks from 23 developed markets around the world including the U.S., Canada, the UK, and Germany. The MSCI World is often used as a benchmark for global equity performance. All three benchmarks have

⁷⁴ *ibid.*

⁷⁵ *ibid.*

⁷⁶ *ibid.*

corresponding fossil-free indexes that exclude companies that own and produce fossil fuel reserves. By comparing both sets of indices over a 10-year period—a long enough period to minimize the effects of recency bias and economic fluctuations—we are able to assess if divestment has had negative effects on investment returns.

Table 3: 10-year Return Comparison—Market Benchmark vs. Fossil Fuel-free Indices

Benchmark	Gauge	Benchmark	Fossil Free	Delta
S&P TSX 60	Canada	5.39%	5.97%	0.58%
S&P 500	U.S.	10.45%	10.98%	0.53%
MSCI World	World	8.85%	9.33%	0.48%

Source: IEEFA.

The results are summarized in Table 3 above.⁷⁷ (Also see the appendix to this report.) The data paints a picture of the relative superiority of fossil fuel-divested portfolios. In all three markets, the 10-year annualized return of the fossil-free index portfolio exceeded the broader market benchmark. When one factors risk into the equation, the performance of the divested portfolios is even more impressive. Risk-adjusted return is a measure that allows for better comparison between two investments by focusing not only on return, but including the level of risk assumed to generate that return.⁷⁸ The Sharpe ratio is one measure of risk-adjusted return.⁷⁹ In general, a higher risk-adjusted return or Sharpe ratio indicates a superior investment. When we compare the risk-adjusted return of the S&P TSX 60, S&P 500 and MSCI World Index with their fossil-free counterparts, a clear pattern emerges.

For all three markets over the past decade, the fossil-free portfolio delivered superior risk-adjusted returns. The data also shows that fossil-free portfolios are less risky as measured by standard deviation—a widely regarded measure of investment risk.⁸⁰

Our analysis is consistent with the findings of various other comprehensive studies on this issue:

- A similar study conducted over a more extensive period (1927-2016) and across multiple market indices concluded that fossil fuel divestment had not significantly impaired the financial performance of investment portfolios.⁸¹
- NEPC, a Massachusetts based investment consultancy, conducted a study for the U.S. state of Maine's public employee retirement pension fund. Modelling the performance of a hypothetical fossil fuel-divested portfolio and comparing it to a market benchmark, it was able

⁷⁷ See appendix for more data.

⁷⁸ The Wall Street Journal. [What Are Risk-Adjusted Returns?](#) July 6, 2015.

⁷⁹ The Sharpe ratio measures risk adjusted return by dividing the excess return of the portfolio by its standard deviation.

⁸⁰ Corporate Finance Institute. [Deviation Risk Measure](#). Viewed February 3, 2023.

⁸¹ A. Trinks, *et al.* [Fossil Fuel Divestment and Portfolio Performance](#). Ecological Economics. 146:740-748. April 2018.

to conclude that over the long term, a divested portfolio would deliver a marginally higher return to investors.⁸²

- BlackRock, in a similar analysis for a number of New York City pension funds, found there was no negative impact observed from fossil fuel divestment.⁸³

Although modern portfolio theory suggests that excluding certain options from the investable universe might have negative implications for portfolio diversification, studies show that fossil fuel stocks have limited diversification benefits due to their relatively higher market risk and inferior risk-adjusted performance.⁸⁴ Although past performance is no guarantee of future results, the confluence of factors heralding the global transition to a low carbon future is likely to enhance the better performance of fossil-free indexes in future decades. The evidence is strong that a decision by BCI to divest from fossil fuel holdings will not prevent BCTPP from achieving its target return requirements.

BCI can reduce the risks of cost escalation in executing a divestment plan through a strategic timing and disposal strategy. The details of such a strategy would likely vary by asset class as the costs associated with liquidating investments in certain asset classes might be considerable. Exits from illiquid investments, especially under aggressive timelines, need to be carefully considered, since a forced-sale scenario could lead to significant discount on assets and valuation markdowns on the portfolio. If a fund is making considerable progress in reducing its carbon exposure, the illiquid assets can be treated in a manner to maximize value. The key to moving forward in bonds, private equity and other long-term assets very likely is to forego new investments and to allow existing investments to roll off accordingly.

A Divestment Strategy Does Not Eliminate Shareholder Rights to Engage With Management to Spur Changes. Rather, Divestment and Engagement Work Together Strategically

Engagement and divestment are not mutually exclusive, but are part of a continuum. To argue otherwise creates a false and unnecessary dichotomy between divestment and engagement.⁸⁵ Divestment is a fallback option that can be activated when dealing with recalcitrant operators or a fundamentally flawed sector. By not including divestment as an alternative, investors limit their options and decrease the likelihood that their engagement demands will be taken seriously.

The International Association of Insurance Supervisors offers a best practices approach on shareholder engagement that summarizes how an effective program of action is formulated.

⁸² NEPC. MainePERS: Divestment Consulting Project Update. November 10, 2022. (Proprietary)

⁸³ IEEFA. [Major investment advisors BlackRock and Meketa provide a fiduciary path through the energy transition](#). March 22, 2021.

⁸⁴ Trinks, *et al.*, *op. cit.*

⁸⁵ Two Economies Collide. *op. cit.*, p. 81.

“In order to be effective, an engagement strategy with the investee company may include exercising voting rights as a shareholder, sending letters or attending meetings with the management of investee companies, setting up documented and time-bound engagement in actions or shareholder dialogue with specific sustainability objectives, planning escalation measures in case those objectives are not achieved, including reductions of investments or exclusion decisions.”⁸⁶

An engagement strategy without an exclusion or divestment provision is not effective because it ties the hands of the investor and sends a message to the company that the investors position is not resolute.

Also, IEEFA notes that while engagement is effective for certain issues, the issue of climate change as it has been handled by oil and gas producers does not rank among them.⁸⁷ The issue in contention—the emissions of carbon pollutants—is at the core of the fossil fuel industry’s business model. The industry sees the issue as one that threatens its profitability if not its very existence. Companies like ExxonMobil have effectively alienated shareholders by opposing strategies that would cause a decline in oil and gas production.⁸⁸

This is also the problem in situations where carbon lock-in—the deep intermarriage between fossil fuel ecosystems, technology development, society and regulators—is present. Climate breakthroughs in locked-in ecosystems are unlikely to be generated from within.⁸⁹ In such cases, prudent investors should have a strong and effective Plan B to supplement where engagement falls short. Numerous institutional investors—including the Rockefeller Brothers Fund, the New York State Common Retirement Fund and Dutch pension fund ABP—have adopted divestment strategies after unsuccessful engagement efforts.⁹⁰

Divestment Can Encourage Companies to Improve Their Policies and Practices

Divestment can have a significant impact on the social license of fossil fuel companies. It is an example of erosion of public support and legitimacy. When large institutions and investors divest from fossil fuel companies, it signals a lack of confidence in the companies’ practices and can harm their reputations. This can lead to increased public pressure and scrutiny. The pressure from divestment can provide incentives to fossil fuel companies to address public concerns and make changes to their practices to regain public and investor trust and maintain their social license.

⁸⁶ International Association of Insurance Supervisors. [Application Paper on the Supervision of Climate-related risks in the Insurance Sector](#). May 2021.

⁸⁷ Two Economies Collide. [op. cit.](#), p. 82.

⁸⁸ In the most recent earnings call CEO wood stated that XOM’s plans to continue to drill aggressively put them at a competitive advantage to companies that were curtailing upstream exploration and production. See: ExxonMobil. [Quarterly Earnings](#). January 31, 2023.

⁸⁹ Energy Policy. [Understanding carbon lock-in](#). March 23, 2000.

⁹⁰ Two Economies Collide. [op. cit.](#), p. 84.

There is reason for caution regarding the commitments by fossil fuel companies to pivot toward sustainable strategies. For example, BP enjoyed widespread praise for its initial climate announcements. In February, however, it announced it was rolling back its emission targets.⁹¹ Companies like ExxonMobil, once considered the poster child for successful shareholder intervention, makes no excuses for upping its capital commitments to drill more and to increase its reserves. Darren Woods, ExxonMobil's CEO, reported in the company's most recent earnings call that the company "leaned in when other competitors leaned out" from new acquisitions and drilling.⁹²

- Diverting investment from the fossil fuel industry—rather than just transferring emissions to a new owner—can enhance investment in renewable solutions that cut carbon pollution.

Divestment is first and foremost a defensive mechanism to protect against value loss in an investment portfolio. It is difficult to see how a fund that remains heavily invested in fossil fuels can achieve significant emissions reductions.

Divestment is also a signal to government and regulators that while individual funds can and will protect themselves, the key to emission reduction policies is joint, international cooperative action that is beyond the control of any one investor.

Most fiduciaries willing to entertain an exclusion or divestment strategy also undertake more comprehensive carbon-neutral or carbon-reducing investment strategies. This is at the core of Divest-Invest strategies. The strategies are separate investment decisions made only when they bolster the fund's financial objectives.

For example, the California State Teachers Retirement System (CALSTRS) assessed four indexes from the MSCI sustainable investments family of indexes.⁹³ The funds – Paris Complaint, Low Carbon, Climate Change, excluding Fossil Fuels and a customized staff-generated fund of the top 100 emitters met CALSTRS performance standards and moved the portfolio toward its net-zero strategy. CALSTRS ultimately has taken steps to invest more than \$20 billion in equities using one of these funds, confident in the ability of these indexes to absorb substantially larger capital allocations and to meet performance targets. Once these fiduciary concerns were satisfied, the fund elected to place its investments with the fund with equities that produced the least emissions.

The cumulative impact of divestment, collective action by governments, companies and investors and capital allocation within the portfolio to increasingly levels of sustainable investment will be the strongest lever in the control of a pension fund.

Capital realized from the disposal of fossil assets—when reinvested back into the larger economy, including decarbonized opportunities—can contribute to displacement of carbon-intensive activities,

⁹¹ Washington Post. [BP dials back climate commitments amid soaring oil profits](#). February 7, 2023.

⁹² ExxonMobil. [Q4 2022 Earnings Release](#). January 2023.

⁹³ See: CalSTRS. [Investment Committee Item Number 3a – Open Session](#). August 31, 2022. Also see: CalSTRS. [Item 3a CalSTRS Net Zero Strategy First Year Progress and Planning Update](#). August 31, 2022.

leading to a reduction in emissions. Market forces and public policies are already reducing carbon pollution through enhanced renewable energy generation. In the U.S state of California, for example, a decline of 40 million metric tons of emissions was recorded in the energy sector due to increased adoption and use of renewable energy.⁹⁴ In Germany, where more than 43 percent of energy is generated from renewables, a decline of more than 51 million tons of emissions was recorded in 2019.⁹⁵ According to the U.S. Energy Information Administration, “using renewable energy can help to reduce energy imports and fossil fuel use, which is the largest source of U.S. carbon dioxide emissions.”⁹⁶ By committing to divestment, BCI would be joining forces with an increasing list of institutions capable of making a difference.



Market forces and public policies are already reducing carbon pollution through enhanced renewable energy generation.

With more than \$40 trillion committed to divestment strategies,⁹⁷ the effect of divestment on capital markets is material and can no longer be dismissed. Some of the largest fossil fuel producers in the world now publicly acknowledge that divestment is a real risk that might affect their business and its ability to access capital and financial markets.⁹⁸ When Peabody Energy, once the largest private sector coal producer in the world, filed for bankruptcy in 2016, it listed an inability to raise capital as one of the reasons behind its insolvency.⁹⁹

Divestment strategies cannot be said to be an exercise in futility. By reallocating capital, institutional investors can help alter energy demand and supply dynamics, indirectly leading to lower emissions.

- The board of trustees for BCTPP has a fiduciary duty to address climate change as a risk factor.

The clear and evident financial risks presented by climate change has implications for BCTPP fiduciaries. A failure to properly consider climate change as a risk factor could result in lawsuits under various theories of liability for breaches of fiduciary duties.

British Columbia law states that a trustee must exercise the care, skill, diligence, and judgment that a prudent investor would exercise in managing a portfolio.¹⁰⁰ Trustees are legally required to safeguard the long-term value of investments. Climate change poses a direct challenge to these objectives.

⁹⁴ California Legislative Analyst's Office. [Assessing California's climate policies - electricity generation](#). January 6, 2020.

⁹⁵ Federal Government of Germany. [FAQs on the Climate Action Report 2019: Significant reduction in greenhouse gas emissions](#). August 19, 2020.

⁹⁶ U.S. Energy Information Administration. [Renewable Energy Explained](#). April 2022.

⁹⁷ Divestment database. [Global Fossil Fuel Divestment Commitment Database](#). Viewed January 28, 2023.

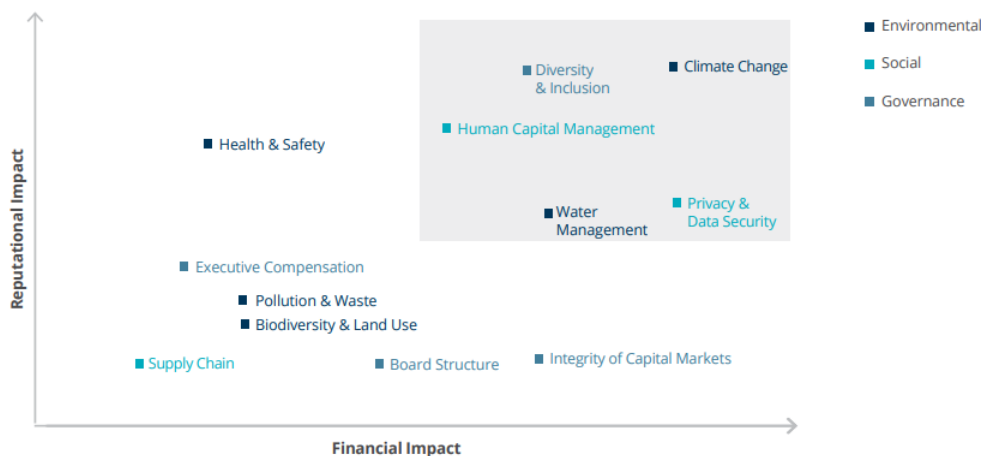
⁹⁸ Two Economies Collide. [op. cit.](#), p. 101.

⁹⁹ Rockefeller Brothers Fund. [Investing in our mission](#). May 2020, p. 29.

¹⁰⁰ [Trustee Act, RSBC 1996, C464](#).

Evidence exists that BCI acknowledges climate risk is material and financial. In its ESG materiality assessment, BCI ranks climate risk as a major ESG risk with maximum potential financial impact.

Figure 2: BCI ESG Materiality Assessment



Source: BCI 2021 ESG Annual report.

In its net-zero statement, BCI asserts that “climate change may impair the ability of long-term investors to meet their financial requirements over a longer time horizon.”¹⁰¹ It also states that “climate change is recognized as a key financial risk by governments and regulators ... It is imperative to BCI acting in clients best financial interest to consider this systemic financial risk across all time horizons.”¹⁰² Lastly, BCI measures the potential financial impact of climate risk on the value of its investment portfolio and states that more than \$11 billion of its client’s assets would be lost in an adverse climate scenario of 2°C.

In light of these sobering financial risks, action is required.

BCTPP fiduciaries are obligated to consider whether the portfolio, as currently constituted, is adequately protected from these risks. As noted above, BCI has not developed a systematic understanding of the carbon exposure levels of BCTFF or its other funds. Some preliminary steps have been taken, but more is needed to fully understand the problem.

If the portfolio is not adequately protected, then the BCTPP fiduciaries must take steps to rectify the problem.¹⁰³

¹⁰¹ BCI. [Climate Action Plan](#), 2022, p. 4.

¹⁰² *Ibid.*

¹⁰³ This is an essential undertaking, as fiduciaries who act in contravention of the duty of care and prudence can be found liable for losses and associated damages. See: Center for International Environmental Law. Trillion Dollar Transformation: [Fiduciary Duty, Divestment and Fossil Fuels](#), December 2016.

The current measures taken by BCI, while commendable, are insufficient given the degree and severity of the risks. A prudent fiduciary should push for:

- 1) Rapid decarbonization of the existing BCTPP investment portfolio; and
- 2) Exclusion of new investment in fossil fuel reserves and infrastructure.

Fiduciaries also have a duty to act impartially in the interest of both current and future beneficiaries. Because more risks associated with climate change will crystallize in the future, fiduciaries must take a long-term view in their assessments. Trustees who neglect to consider future beneficiaries and focus only on the ability of the plan to meet its near-term obligations could violate the duty of impartiality.¹⁰⁴

In relation to an observed reduction in its climate VAR from 6.4 percent in 2018 to 5.2 percent in 2021, BCI states:

“[T]he reduction of climate risk over time is primarily attributed to a decrease in the portfolio weights in Canadian and global equities with high climate change transition-risk exposure. This is driven by client-asset allocation decisions to reduce exposure to Canadian equities, changing valuations in the energy sector, and active investment decisions that reduced the overall portfolio exposure to more climate-sensitive assets.”¹⁰⁵

This statement affirms the link between fossil fuel divestment and climate risk mitigation. BCI acknowledges that asset allocation decisions and shifting of capital from high-carbon-exposed assets and funds is a direct way to protect the portfolio from potential losses. While BCTPP trustees may be insulated from damages due to fiduciary liability insurance policies,¹⁰⁶ they remain exposed to reputational risks as well as any other court-ordered remedy.¹⁰⁷ Trustees should not simply place blind faith in customary institutions but must think independently and individually. Although some of the risks associated with climate change are systemic and cannot reasonably be eliminated by asset re-allocation, trustees who continue to allocate assets to vulnerable sectors expose the portfolio to additional risk and quantifiable losses.

¹⁰⁴ *Ibid.*

¹⁰⁵ BCI. [2022 ESG Annual Report](#). 2022, p. 17.

¹⁰⁶ BCTPP. Restated [Joint Trust Agreement](#), June 28, 2021, Article 9.

¹⁰⁷ It is uncommon for boards of directors to be held liable for losses beyond the protections afforded by traditional insurance instruments. In some situations, courts have pierced the protections and found directors liable. See: New York Times, [10 Ex-Directors for WorldCom to pay millions](#). July 6, 2005.

V. A Potential Pathway to Divestment

Members of BCTF have requested that the BCTF board and BCI provide a pathway to a divested portfolio as part of the board's overall climate action plan.¹⁰⁸ The divestment or exclusion of fossil fuels as an investment option is a critical element to a successful plan, since it is an action to address financial risk. Such action is within the board's authority and does not depend on the uncertain outcome of companies with varying levels of commitments to climate change.

As BCI has noted, the trend toward greater concern about climate-oriented investments is already moving fund managers toward transition planning and more emphasis on sustainable investments. The BCTF has requested a plan to increase fund exposure to new sustainable investments. A well-crafted plan can also meet the needs of other groups of beneficiaries currently served by BCI.¹⁰⁹ The suggested strategy is a method BCI and its other partner/clients can adopt to prepare for the energy transition.



The divestment or exclusion of fossil fuels as an investment option is a critical element to a successful plan.

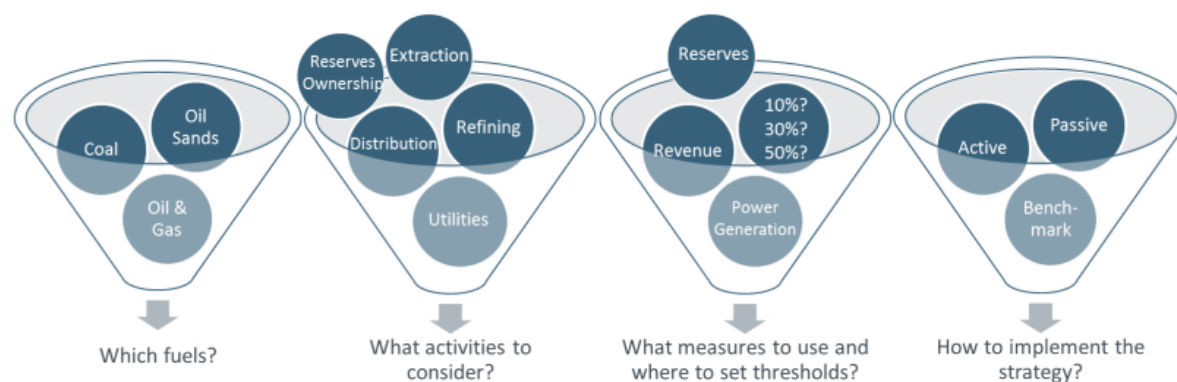
Effective transition planning should include a systematic mechanism that optimizes protective measures to reduce the risk of loss from an overconcentration of fossil fuel holdings. BCI's next steps should be to make available an expansion of investment choices to all members of the pool—including options to decarbonize each asset class of the portfolio. The approach would address the near-term request from BCTF and also would be consistent with BCI's transition goals and the strategic direction of the pools.

Institutional asset managers worldwide are increasingly implementing a variety of divestment strategies and incorporating low-carbon, decarbonized and fossil-free funds in their portfolio mix. Managers are able to take advantage of a wide variety of stock, bond, real estate and asset strategies that have assisted over 1,500 divested funds with assets under management of \$40 trillion¹¹⁰ Such financial products are offered by most major investment houses.

¹⁰⁸ BCTF. [2022 Reports and Resolutions](#). March 22, 2022, p. 29.

¹⁰⁹ BCI. [Who we are - our clients](#). Accessed March 13, 2023.

¹¹⁰ [Global Fossil Fuel Divestment Commitment Database](#). Viewed January 28, 2023.

Figure 3: Considerations in Establishing a Fossil Fuel Divestment Strategy

Source: MSCI.

BCI's efforts to reduce its operational emissions and use carbon offsets for unabated emissions to achieve net zero represents some progress,¹¹¹ but its unwillingness to offer clients the option to eliminate or reduce the carbon footprint of their portfolios is a gap in establishing an effective shareholder response to climate change. As noted above, the BCTF has passed resolutions supporting investment strategies that systematically mitigate the risk of holding fossil fuel investments.¹¹² Also, third-party organizations have contributed to the investment policy discourse, raising important issues that help clarify strategic directions.¹¹³

BCI's portfolio of pooled funds, as currently constituted, provide clients only limited alternatives to achieve climate objectives on their own. If trustees decide to back calls for systematic decarbonization initiatives, BCI is not yet in a position to offer a seamless means for the resulting guidelines to be implemented.

In an earlier report on divestment, IEEFA noted the emergence of two energy economies—one based on traditional energy derived from fossils, and the other a modern economy based on sustainability, innovation and respect for climate realities.¹¹⁴ These broad macroeconomic analytical conclusions lend themselves to the creation of a re-aligned series of pension options for British Columbia. Under this rubric, BCI would expand its fund offerings and introduce a new line of sustainable pooled funds that run parallel to and complement the existing menu of options for equities, bonds, real estate, private equity and alternative investments. The new set of funds would provide trustees with alternatives, allowing each union or employee association to tackle climate risk in line with their fiduciary obligations, investment philosophies, current asset allocation strategies and return targets. The variety of approaches and indexes / benchmarks now available on the market,

¹¹¹ BCI. [2022 ESG Annual Report](#). 2022, p. 52.

¹¹² BCTF [Divest Now, British Columbia teachers urge teachers union to honor divestment resolution ahead of BCTF executive meeting](#). November 17, 2022. Also see: BCTF. [2022 Reports and Resolutions](#). March 22, 2022, p. 29.

¹¹³ UBCM. [Re-Examining Municipal Pension Plan Divestment](#). 2020.

¹¹⁴ Two Economies Collide. [op. cit.](#), p. 1.

plus BCI's growing staff competencies, give it wide latitude to construct a dynamic portfolio that is prepared to meet the challenges of the energy transition.

MSCI, a leading global provider of indexes and portfolio analytical tools, outlines four general approaches to portfolio construction for institutional fossil fuel/carbon divestment.¹¹⁵ The approaches are summarized in Table 4 below:

Table 4: Options for Reducing Portfolio Fossil Fuel Exposure

	Divestment	Low Carbon	Carbon Tilt	Thematic
Approach	Exclude from portfolio any company with identifiable fossil reserves in oil, oil & gas exploration, coal & consumable fuels industry	Exclude biggest reserve owners - up to a certain % of index. Additionally, exclude largest carbon emitters, up to certain % of index	No exclusions. Tilt portfolio with higher weights to companies/entities with stronger performance on carbon/climate strategy and disclosure. And vice versa.	No exclusion. Include only companies/entities that derive at least a certain percentage of revenue from environmentally beneficial products or services.

Source: MSCI.

Table 5 juxtaposes BCI's existing pooled funds with potential fossil fuel-free benchmarks. As noted above in the CALSTRS example, "sustainable" indexes are mature and have reached levels where returns are stable, capacity to absorb institutional capital is reliable, and portfolios are aligned to produced lower emissions. These considerations provide more options for fund managers and boards as they look forward at the energy transition.

¹¹⁵ MSCI. [Options for Reducing Fossil Fuel Exposure](#), January 2014.

Table 5: A Comparison of BCI's Pooled Funds and Sustainable Investing Benchmarks

Pooled Fund	Fossil Free Benchmark
Bond Funds	FTSE CDN Universe Ex-Fossil Fuels Bond Index
Short Term Bond Fund	
Canadian Universe Bond Fund	
Government Bond Fund	
Corporate Bond Fund	
Principal Credit Fund	
Leveraged Bond Fund	
Equity Funds - Canadian	S&P/TSX Canadian Fossil Free Index
Indexed Canadian Equity Fund	
Canadian Quantitative Active Equity Fund	
Active Canadian Equity Fund	
Active Canadian Small Cap Equity Fund	
Equity Funds - Global	MSCI World Ex-Fossil Fuels Index
Indexed Global Equity Fund	
Global Quantitative ESG Equity Fund	
Global Partnership Fund	
Global Quantitative Active Equity Fund	
Active Global Equity Fund	
Thematic Public Equity Fund	
Indexed US Equity Fund	
Active U.S. Small Cap Equity Fund	
Active European Equity Fund	
Active Asian Equity Fund	
Emerging Market Public Equities	MSCI Emerging Markets Ex-Fossil Fuels Index
Indexed Emerging Markets Equity Fund	
Active Emerging Markets Equity Fund	
Private Market Funds	Custom
Private Equity Funds	
Infrastructure & Renewable Resources Program	
Realpool Program	
Real Estate Debt Funds	Custom
BCI Quadreal Real Estate Debt Program	

Source: IEEFA, BCI.

For public market funds, BCI can choose to either construct an actively managed portfolio modelled after a fossil fuel-free benchmark, or it can choose to passively mirror the index by holding its exact same combination of securities. The latter strategy could be cheaper and could minimize tracking error and risk; an actively managed approach would contribute to management's existing commitment to a more significant role (discussed above).¹¹⁶

MSCI fund performance suggests that the family of decarbonized indexes are sufficiently mature to ensure that a portfolio of these assets will be profitable and will produce significant emissions reductions. According to MSCI's research, a portfolio invested in the MSCI ACWI low-carbon index would experience close to a 76 percent reduction of its carbon footprint relative to the broader index.¹¹⁷ It would not be unreasonable to expect somewhat similar results if BCTPP or other pension clients transfer assets from the current pooled funds into the proposed sustainable ones.¹¹⁸

The proposed introduction of sustainable pooled funds is merely a suggestion of a potential path to decarbonization. Market experience over the last decade provides BCI and board trustees with a number of routes and strategies they could decide to pursue in line with BCI's internal decision-making, capabilities and views on the market. Although fossil fuel divestment strategies may vary according to asset class, fuel type, business activity or other parameters, the goal is a decarbonization of investment holdings and attendant de-risking of the portfolio. The comingling of assets in a pooled fund has its benefits, but the structure should not restrict pension plans that may want to reduce their own carbon footprints proactively. MSCI asserts:

“The move to a net-zero economy ... requires asset managers to adapt their own business models beyond reduction of their own operational footprints; they must formally commit to ambitious goals for greening their investment product offerings.”¹¹⁹

The introduction of a series of fossil-fuel-free alternatives is a step in this direction and a positive sum solution that BCI management and the BCTPP board of trustees should seriously consider.

¹¹⁶ Tracking error refers to the degree by which a fund deviates from the risk and returns of its benchmark index.

¹¹⁷ MSCI. [Portfolio Carbon Footprint Factsheet](#), June 1, 2015.

¹¹⁸ For a clear example of how the existence of these index funds are used by investment funds seeking to implement fossil fuel exit and emission reduction strategies, see: CalSTRS. [Investment Committee Item Number 3a – Open Session](#), August 31, 2022. Also see: CalSTRS. [Item 3a CalSTRS Net Zero Strategy First Year Progress and Planning Update](#), August 31, 2022.

¹¹⁹ MSCI. [The Role of Capital in the Net Zero Revolution](#), Viewed January 12, 2023, p. 5.

Appendix

Figure A1: S&P 500: Fossil Fuel-free vs. Broad Index



Index Name	Index Level	10 Yr Return Annualized
<ul style="list-style-type: none"> ● S&P 500 Fossil Fuel Free Index Launch Date: Aug 28, 2015 	3,438.41	10.98%
<ul style="list-style-type: none"> ● S&P 500 Launch Date: Mar 04, 1957 	4,060.43	10.45%

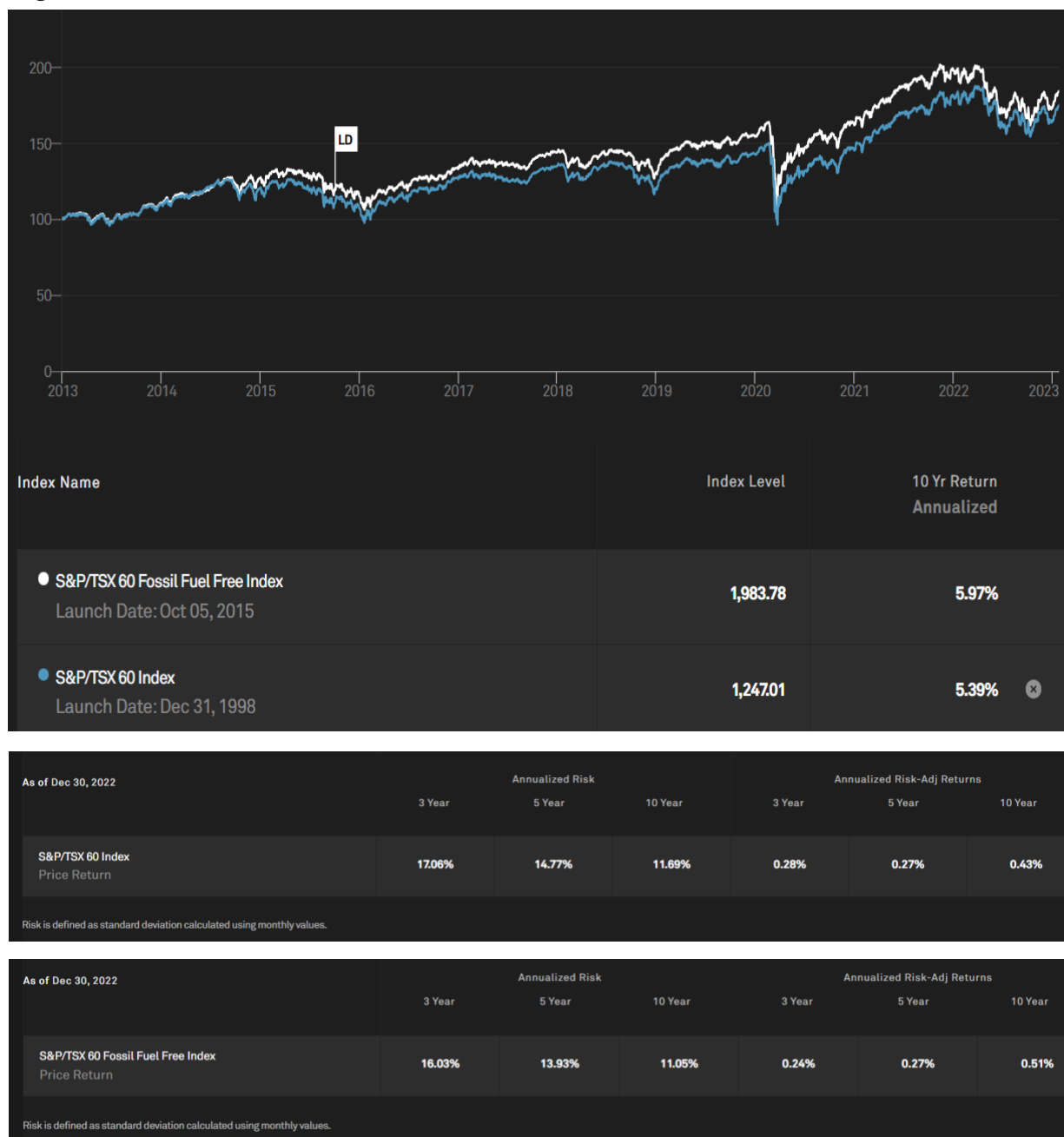
As of Dec 30, 2022	Annualized Risk			Annualized Risk-Adj Returns		
	3 Year	5 Year	10 Year	3 Year	5 Year	10 Year
S&P 500 Price Return	21.15%	18.68%	14.76%	0.28%	0.40%	0.71%

Risk is defined as standard deviation calculated using monthly values.

As of Dec 30, 2022	Annualized Risk			Annualized Risk-Adj Returns		
	3 Year	5 Year	10 Year	3 Year	5 Year	10 Year
S&P 500 Fossil Fuel Free Index Price Return	21.01%	18.62%	14.74%	0.27%	0.41%	0.74%

Risk is defined as standard deviation calculated using monthly values.

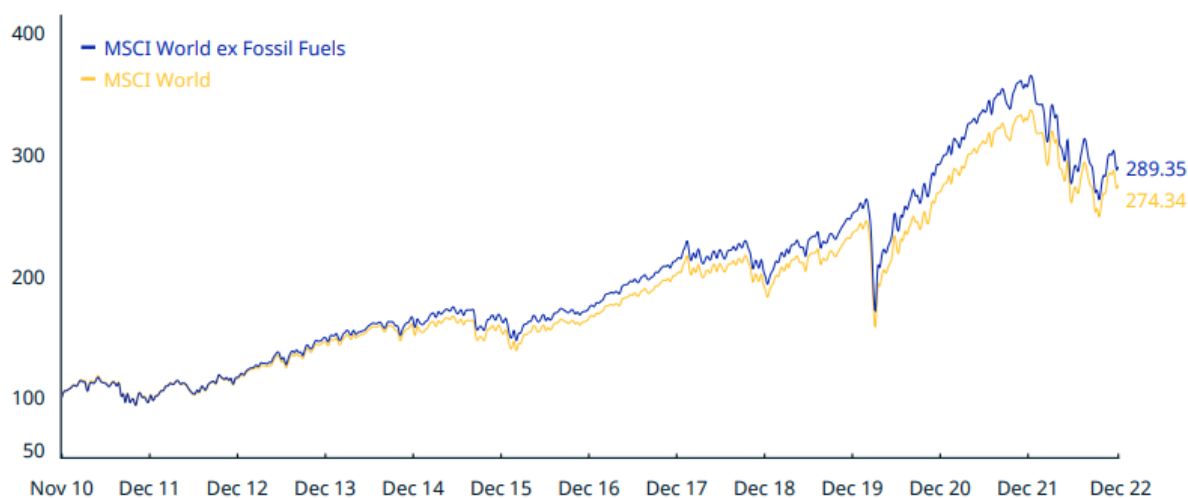
Figure A2: S&P/TSX 60 – Fossil-free vs. Broad Index



Source: S&P.

Figure A3: MSCI World – Fossil Free vs. Broad Index

CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD) (NOV 2010 – DEC 2022)



INDEX PERFORMANCE – NET RETURNS (%) (DEC 30, 2022)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			
					3 Yr	5 Yr	10 Yr	Since Nov 30, 2010
MSCI World ex Fossil Fuels	-4.37	9.11	-20.38	-20.38	4.52	6.11	9.33	9.19
MSCI World	-4.25	9.77	-18.14	-18.14	4.94	6.14	8.85	8.71

INDEX RISK AND RETURN CHARACTERISTICS (NOV 30, 2010 – DEC 30, 2022)

	Beta	Tracking Error (%)	Turnover (%) ¹	ANNUALIZED STD DEV (%) ²			SHARPE RATIO ^{2,3}			
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr	Since Nov 30, 2010
MSCI World ex Fossil Fuels	0.99	0.95	2.36	20.62	18.01	14.45	0.28	0.35	0.63	0.63
MSCI World	1.00	0.00	2.14	20.72	18.09	14.52	0.30	0.35	0.60	0.59

Source: MSCI.

Table A1: Summary of Pooled Fund Audited Financial Statements Disclosures

Public Equity	Total	Sector Breakdown	Weighting	Utilities	Material	Maturation (Yes or No)	Remarks
Active Canadian Equity Fund	3,828,422	Yes	208,403	296,797	187,734	N/A	
Active Canadian Small Cap Equity Fund	1,545,845	Yes	268,502	-	48,086	N/A	
Canadian Quantitative Active Equity Fund	1,195,626	Yes	150,125	48,684	140,762	N/A	
Indexed Canadian Equity Fund	4,323,812	Yes	564,253	196,158	496,399	N/A	
Active U.S Small Cap Equity Fund	2,533,567	Yes	-	15,304	86,600	N/A	
Active Global Equity Fund	2,585,263	Yes	21,290	61,001	59,031	N/A	
Global Quantitative Active Equity Fund	328,409	Yes	11,006	7,602	10,747	N/A	
Indexed Global Equity Fund 1	8,522,036	Yes	235,203	229,952	336,770	N/A	
Active Emerging Markets Equity Fund	6,876,438	Yes	451,122	147,741	594,597	N/A	
Indexed Emerging Markets Equity Fund	7,819,544	Yes	434,786	185,160	672,041	N/A	
Thematic Public Equity Fund	6,385,606	Yes		356,706	278,320	N/A	
Global Quantitative ESG Equity Fund	6,010,550	Yes	195,294	183,855	278,850	N/A	
Indexed Global Equity Fund 2	119,110	Yes	3,281	3,208	4,715	N/A	
	52,074,228	-	2,543,265	1,732,168	3,194,652		
Fixed Income							
Canadian Money Market Fund ST1	1,597,082	No				Yes	< 15 days
Canadian Money Market Fund ST2	4,190,459	No				Yes	< 15 months
US Dollar Money Market Fund ST3 (USD)	2,934,778	No				Yes	< 45 days
CDOR 1 Floating Rate Fund	14,110,133	No				Yes	< 5 years
CDOR 2 Floating Rate Fund	5,816,021	No				Yes	< 5 years
CDOR 3 Floating Rate Fund	6,192,869	No				Yes	< 5 years
CDOR 4 Floating Rate Fund	571,382	No				Yes	< 5 Years
Short term Bond fund	940,822	No				Yes	< 5 years
Canadian Universe Bond Fund	12,158,352	No				Yes	< 1-30+ Years
Corporate Bond Fund	13,483,060	No				Yes	< 1-30+ Years
Leveraged Bond Fund	990,468	No				Yes	< 1-30+ Years
Government Bond fund	12,099,906	N/A					< 1-30+ Years
	75,085,332						
Mixed Asset Class							
Global Partnership Fund	4,597,998	listed segment (51.2%)	90,121	88,165	129,027	N/A	
	4,597,998						
Infrastructure renewable							
Bolsena Fund	11,803,694	Listed segment (82.5%)	1,371	7,526,258		N/A	
Bolsena (Australia) Fund	1,369,251	Yes		488,174		N/A	
Bolsena (Public) Fund	316,807	Yes		38,495		N/A	
Renewable Resources Investment Fund	780	No				N/A	
	13,490,532	-	1,371	8,052,927	-	-	
Private Debt							
Principal Credit Fund	7,515,927	listed segment (56.5%)	303,105.00		331,036.00	Yes	<17 YEARS
	7,515,927						
Private Equity							
Private placement 1997	1,091	No				N/A	
2001 Private Placement Fund	286	No				N/A	
2003 Private Placement Fund	1,597	Yes				N/A	
2004 Private Placement Fund	668	No					
2005 Private Placement Fund	4,219	No					
2006 Private Placement Fund	14,419	No					
2007 Private Placement Fund	2,588	No				N/A	
2008 Private Placement Fund	134,039	listed segment (86.6%)	No	no	no		
2009 Private Placement Fund	143,913	only for listed segment (20%)					
2010 Private Placement Fund	67,165	only for listed segment (0.9%)					
2011 Private Placement Fund	336,667	only for listed segment (0.3%)					
2012 Private Placement Fund	78,550	No					
2013 Private Placement Fund	857,156	only for listed segment (2%)					
2014 Private Placement Fund	635,454	only for listed segment (13.2%)					
2015 Private Placement Fund	931,981	only for listed segment (0.3%)					
2016 Private Placement Fund	4,666,854	only for listed segment (17.9%)					
2017 Private Placement Fund	3,622,353	only for listed segment (48.4%)					
2018 Private Placement Fund	3,386,580	only for listed segment (49%)					
2019 Private Placement Fund	3,863,770	only for listed segment (40.9%)					
2020 Private Placement Fund	1,763,543	only for listed segment (78.8%)					
2021 Private Placement Fund	770,076	only for listed segment (38.3%)					
	21,282,969						
Real Estate							
Quadreal MultiAsset Realty	2,183,338	N/A				N/A	Real Estate Fund
Quadreal Real Estate Debt	6,020,903	N/A				N/A	Real Estate Fund
Real Pool Global	1,812,387	N/A				N/A	Real Estate Fund
Real Pool Global Mexico	231,414	N/A				N/A	Real Estate Fund
Park Pool	1,698,804	N/A				N/A	Real Estate Fund

Source: Pooled Fund Audited Financial Statements, compiled by IEEFA.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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