INVESTMENT MONITOR

Climate Solutions and Cleantech:

Building a Greener Indo-Pacific Region Through Foreign Direct Investment

FEBRUARY 2024

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Canada's Indo-Pacific Strategy (IPS), launched in 2022, identifies clean technology and renewable energy as priority sectors for economic collaboration between Canada and Asia. The strategy envisions Canada as a responsible and reliable partner to the region in boosting energy security, and one that is committed to building a sustainable and green future. The Canadian government has allocated more than C\$16M as part of the Advancing International Clean Technology Demonstration in the Indo-Pacific initiative to support the commercial activities of Canadian small and medium clean technology companies in the Indo-Pacific. By doing so, Canadian companies will be well-positioned to integrate into the regional supply chains.

The clean technology sector will also benefit from Canada's Expanding Natural Resource Ties with the Indo-Pacific Region funding, with more than C\$13.5M allocated over the next five years to help Canada expand its trade in the natural resources sector, which includes critical minerals that are essential inputs for clean technologies, including solar panels and electric vehicles (EVs). These initiatives will support trade and investment partnerships in clean technologies between Canada and the region, including in renewable energy and EVs.

The renewable energy sector is a key subset of the <u>clean technology sector</u> and encompasses goods and services that remediate or prevent environmental damage, reduce pollution, or increase energy efficiency. This report focuses on investments in renewable energy and EVs. In our analysis, renewable energy includes solar, wind, geothermal, hydropower, and bioenergy plants and supporting products. EV investments include battery production, production plants, and EV showrooms. Our analysis is based on data from 2003 to the third quarter of 2023. It illustrates historical trends and assesses recent developments in two-way national and subnational investment in renewables and EVs between Canada and Asia.

Key Takeaways

NATIONAL

- Two-way investment between Canada and the Asia Pacific in the renewables sector from 2003 to 2022 reached C\$29B, with Canadian outward investment accounting for 70% of that investment.
- 2. In EVs, two-way investment reached almost C\$5B, with Asian economies accounting for 64% of that investment.
- 3. Australia, Japan, and South Korea were Canada's top two-way partners in renewable energy, accounting for 73% of total two-way FDI in this sector. South Korea is now Canada's largest investment partner in EVs, accounting for 90% of two-way FDI.
- 4. China, which used to be the main destination of Canadian investment in renewables and EVs until 2009, has slowly slipped in the rankings, with Australia, Taiwan, and India emerging as top recipients of Canadian investment in renewables and EVs in the region in the last five years, signalling investment diversification.

SUBNATIONAL

- In Canada, Ontario, British Columbia, and Alberta — in that order — were the largest recipients of Asia Pacific investment in renewables and EVs from 2003 to 2022. Ontario attracted almost 90% of this investment (C\$10.4B), nearly half of it in the last four years.
- Three Australian states New South Wales,
 Western Australia, and Queensland —

accounted for one-quarter of Canadian investment in renewable energy and EVs in the region. Taiwan's Changhua County and the Indian state of Maharashtra ranked as the secondand third-largest recipients of Canadian FDI from 2003 to 2022, respectively.

EMERGING INVESTMENT TRENDS

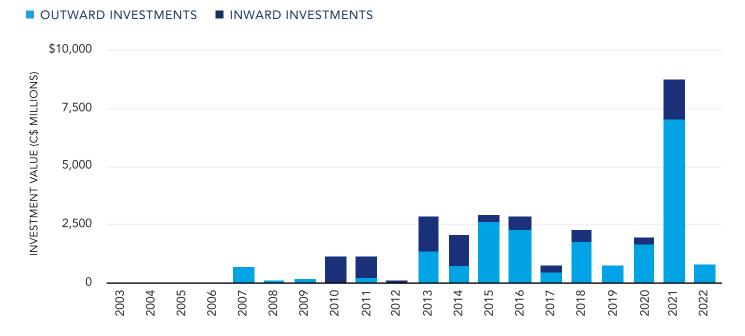
- State-owned enterprises (SOEs) have expanded their investments in renewable energy projects, with Canadian SOEs, all of which were pension funds, accounting for 74% of two-way investment in renewables between Canada and Asia from 2003 to 2022.
- 2. As countries pursue net zero targets, we expect a rise in two-way investment in renewables. Canadian pension funds, which lead Canadian investment in Asia's renewables, are expected to become significant investors in the region's clean technology projects. Canada's federal and provincial clean technology policies are anticipated to encourage investment from Asia's renewable companies.
- 3. Investment in the EV sector between Canada and the Asia Pacific economies is also projected to grow. Canadian automotive companies like Magna International are already benefiting from Asia Pacific's drive to adopt EVs. Similarly, Canada's ambitious target of 100% zero emissions in Canadian vehicle sales by 2035 has attracted large investments from Asia's leading automotive companies, such as Honda, Toyota, and VinFast, with these investments projected to increase.

At the National Level

From 2003 to 2022, two-way investment between Canada and the Asia Pacific was C\$29B in renewables and around C\$5B in EVs. Renewables accounted for around 5%, and EVs less than 1% of Canada's total two-way investment with the region, which amounted to around C\$595B.

- During this period, Canadian investment in Asia's renewable energy sector reached around C\$20.6B (70% of two-way FDI in renewables), compared to around C\$8.6B (30% of two-way FDI in renewables) from Asian investors in Canada.
- During the same period, Canada's EV sector attracted more than C\$3.1B in investment (around 64% of two-way EV investment) from the region, compared to around C\$1.8B invested by Canadians in Asia's EV sector (or 36% of two-way EV investment).
- Two-way investment in renewables has experienced short bursts of growth throughout the past two decades, peaking in 2022 with an increase in Canadian investment (Figure 1). One possible factor is the deregulation of utilities in the region to favour renewable energy, which encourages the development of new and smart energy infrastructure.

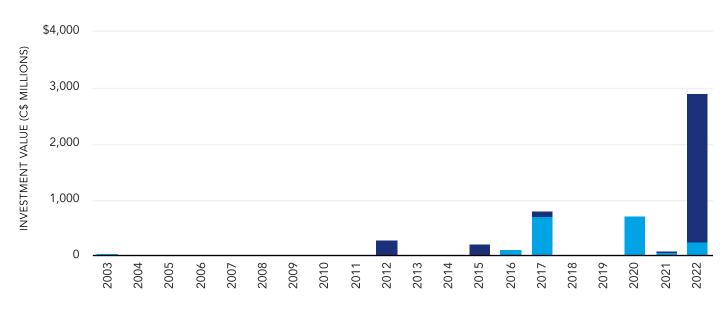
Figure 1: Canada-Asia Two-Way Investment in Renewable Energy, 2003-2022



 Two-way investment in EVs has grown more sporadically, peaking in 2022, and is driven by Asian investment in Canada's EV sector (Figure 2). Canadian investors also made significant investments in the Asia's EV sector in 2017 and 2020. Possible factors contributing to the growth in Asian investments in Canada's EV sector in 2022 include government incentives, such as the <u>zero-emission vehicle incentive</u>, for Canadians to buy battery electric and long-range hybrid vehicles.

Figure 2: Canada-Asia Two-Way Investment in EVs, 2003-2022





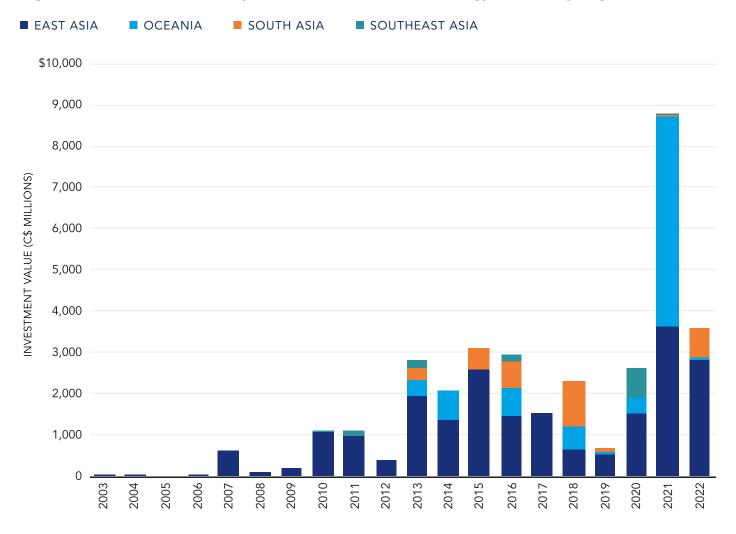
Source: APF Canada Investment Monitor, fDi Markets (accessed December 2023)

REGIONAL INVESTMENT TIES AND TRENDS

There was a marked shift in Canada's top regional partners in renewable energy and EVs from 2003-2022. As Figure 3 shows, two-way investment between Canada and East Asia, which includes mainland China, Hong Kong, Japan, and South Korea, has been the most consistent.

- Between 2003 and 2010, there were only four
 Asian investors in this sector: Japan, South Korea,
 Singapore, and Australia (in order from largest to
 smallest based on the value invested). In 2011,
 mainland China made its first investment and
 quickly became the third-largest Asian investor in
 Canada's renewable energy sector.
- However, between 2019 and 2022, mainland
 China's investment in renewables and EVs dropped
 significantly; meanwhile, investment from South
 Korea, Australia, and India ticked up. Investment from
 South Korea and Australia in EVs and renewables in
 Canada has been particularly notable over the last five
 years, representing around 57% and 30%, respectively,
 of total inward investment in these sectors.

Figure 3: Canada-Asia Two-Way Investment in Renewable Energy and EVs by Region, 2003-2022



Source: APF Canada Investment Monitor, fDi Markets (accessed December 2023)

- Up until 2009, Canada's overseas investment focused predominantly on China's renewables and EV markets.
 As other countries became more prominent players in these clean technology sectors, mainland China's prominence in Canada's investment mix dropped.
- Since 2013, Canadian companies have focused more heavily on opportunities in Australia, Japan, India,

Taiwan, and South Korea (in order from largest to smallest amount of Canadian FDI received). In the past five years, the destinations for Canadian investment have diversified. The top recipients are Australia, which received C\$4.6B, followed by Taiwan, which received around C\$3B, and India, which received C\$2B.

TOP PARTNER COUNTRIES

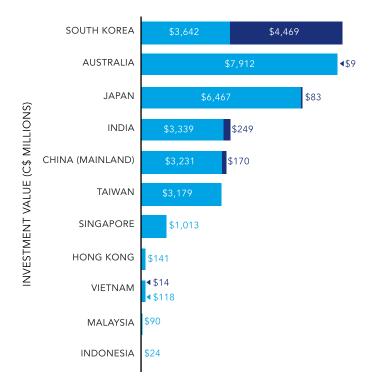
Australia, Japan, South Korea, and India (in order from largest to smallest in two-way FDI) were Canada's top two-way partners in renewable energy (Figure 4), making up 73% of total two-way FDI in this sector. In the EV sector, South Korea, India, mainland China, and Japan were, in that order, Canada's largest two-way FDI partners, with South Korea accounting for 90% of two-way FDI in EVs.

- South Korea is the top Asian investor in Canadian renewable energy and EVs, investing C\$3.5B and C\$3.1B in these sectors, respectively, from 2003 to 2022. These investments are considerably larger than those of the next-largest investors — more than twice as much as mainland China and over 37 times more than Japan.
- South Korea is also the largest recipient in Asia
 of Canadian investment in EVs, receiving around
 C\$1.4B from 2003 to 2022. However, South Korea
 is only the seventh-largest recipient of Canadian
 investment in Asia's renewable energy sector,
 receiving around C\$131M.
- Australia, Canada's leading partner in renewable energy, is the largest recipient of Canadian renewable energy investment. It received around C\$6.4B between 2003 and 2022 and is the fourthlargest investor in Canadian renewables, investing C\$1.5B over this period.
- Japan and India, Canada's third- and fourth-largest partners in two-way FDI in EVs and renewables, are the second- and third-largest recipients of Canadian investment in these sectors, receiving C\$4.9B and C\$3.3B in renewable energy over the same period. Japan was also a significant investor in Canada; it was the second-largest investor in Canada's EVs (with C\$82M invested from 2003 to 2022) and the third-largest investor in Canada's renewable energy sector (with C\$1.6B invested over the same period).
- While mainland China received the majority of Canada's early investment, it has been surpassed by Taiwan, which has received almost C\$3.2B in renewable energy investments from Canada over the

Figure 4: Canada's Top Asia Pacific Partners in Renewable Energy and EVs, 2003-2022

■ RENEWABLE ENERGY INVESTMENT

■ EV INVESTMENT



- past six years. In contrast, mainland China received just over C\$2M during the same period.
- Based on preliminary Investment Monitor data for the first three quarters of 2023, diversification to South and Southeast Asia is expected to continue.
 For example, Canadians invested nearly half a billion dollars in India's solar sector during this period.

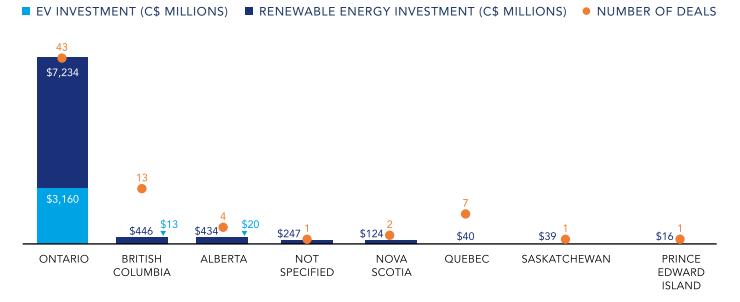
At the Subnational Level

● INWARD FDI:

Ontario was the most attractive province for Asia Pacific investors in renewable energy and EVs, followed by British Columbia and Alberta.

- Between 2003 and 2022, Ontario was the primary recipient of FDI from the Asia Pacific in the renewables and EV sectors, securing approximately C\$10.4B (Figure 5). Renewables accounted for more than half of this investment (C\$7.2B), with the rest going to EVs (around C\$3.2B).
- During this period, Windsor was the largest recipient of Asian investment in Ontario's EVs sector, while Toronto was the largest recipient of Asian investment in the province's renewable energy sector. Windsor attracted a total investment of C\$2.6B in EVs from Seoul-based LG Energy Solutions, which partnered with Stellantis in 2022
- to develop an EV battery manufacturing facility. In contrast, Toronto saw an influx of investment in renewable energy worth C\$2.5B, with more than half of this value (C\$1.5B) coming from Australia-based IFM Investors through its acquisition of a 50% stake in Enwave Energy Corp. in 2021.
- Since the launch of Ontario's Cleantech Strategy in 2018, the province has attracted around C\$4.6B in Asian investment in EVs and renewables in just four years. That is almost one-half of the total investments (C\$10.4B) the province has received in these two sectors over the past two decades.

Figure 5: Asia Pacific Investment in Canadian Renewable Energy and EVs by Province, 2003-2022



- British Columbia was the second-largest recipient of Asian investment from 2003 to 2022, with C\$446M in renewables and C\$13M in EVs, closely followed by Alberta, which received around C\$433M in renewables and C\$20M in EVs.
- In British Columbia, Burnaby secured nearly C\$214M in renewable energy investments, mainly through investment by Chinese SOE Weichai Holding Group Ltd., which acquired a 19.9% stake in Ballard Power Systems for C\$195M in 2018.
- In Alberta, Medicine Hat emerged as a leading recipient of Asian investment in renewable energy from 2003 to 2022 after receiving a substantial investment of C\$241M with Tokyo-based Tokai

- Carbon Co. Ltd.'s acquisition of TransCanada Corporation (Cancarb Limited) in 2014.
- Beyond these three provinces, investments in EVs and renewables in Canada were limited, as illustrated in Figure 5, especially FDI in EVs.
- Looking at Asia's investment in Canada at the provincial level from January to September 2023, Newfoundland and Labrador emerged as the main beneficiary, attracting C\$67.5M to its renewable energy sector. This influx of investment into the province was fuelled entirely by the acquisition of a 20% stake in World Energy GH2, which is based in St. John's, by South Korea's SK ecoplant.

OUTWARD FDI:

Canadian investors have made significant investments in renewable energy projects at the state, provincial, prefectural, metropolitan city levels in Australia, Taiwan, India, and Japan, with two South Korean provinces also securing large investments in EVs from 2003 to 2022.

Three Australian states — New South Wales,
 Western Australia, and Queensland — have become
 major beneficiaries of Canadian investments in
 the renewable energy sector. New South Wales
 received C\$4.3B in Canadian investment between
 2003 and 2022, making it the top recipient among
 the subnational jurisdictions shown in Figure 6.
 The majority of Canadian investment in New South
 Wales went to Sydney, which attracted C\$3.7B

to the renewable energy sector, mainly from the C\$3.5B acquisition of Spark infrastructure, a Sydney-based energy infrastructure company, by the Ontario Teachers' Pension Plan (OTPP) Board and Public Sector Pension Investment Board (PSPIB) in 2021. Western Australia and Queensland received C\$803M and C\$694M in investment, respectively, ranking fifth and ninth among the region's top-10 subnational recipients.

Figure 6: Top 10 Asia Pacific States to Receive Canadian Renewable Energy and EV Investment, 2003-2022





- Changhua County in Taiwan secured the secondlargest Canadian investment in the renewable energy sector, amounting to C\$2.9B (Figure 6), primarily driven by significant renewable infrastructure developments in the city of Changhua. More than one-half of this investment came from Caisse de dépôt et placement du Québec (CDPQ), which acquired a 50% stake in 2021 in the Greater Changhua 1 Offshore Wind Farm, for around C\$1.9B.
- Maharashtra, a state in western India, was the third-largest subnational recipient of Canadian investment in renewable energy in the region, with the city of Mumbai receiving around C\$1.1B from 2003 to 2022 from Canadian pension funds. The largest deal was made by CDPQ's subsidiary, CDPQ Infrastructure Asia II Pte. Ltd., which acquired a stake in Apraava Energy Private Ltd. for around C\$673M.
- Between 2003 and 2022, Singapore ranked fourth after securing C\$835M in renewable energy investments from Canadian investors. Notably, C\$626M of this

- amount was from the OTPP Board's 2020 investment in Equis Development Pte. Ltd. (EDL).
- Some Japanese prefectures and South Korean provinces also placed among the top 10. In Japan, Kagoshima and Ibaraki prefectures were the sixthand seventh-largest investment recipients, bringing in C\$763M and C\$751M in Canadian renewable energy investments, respectively. Two South Korean metropolitan cities, Gwangju and Seoul, were the only recipients of Canadian EV investment among the top 10, with the former receiving C\$695M and the latter C\$682M.
- From January 2023 to September 2023, the state of Maharashtra in India became the largest recipient of Canadian investment in renewable energy after Brookfield Technology Partners acquired a controlling stake (worth C\$485M) in Mumbai-based solar-panel maker Clean Max Enviro Energy Solutions Pvt. Ltd.

Sectoral Level and Top Investors

RENEWABLES

More than half of Canada's total investment in the Asia Pacific's renewables sector was made in the last five years, totalling around C\$12B.

- The solar industry accounted for around 48% of Canadian investment in renewable energy. Canadian Solar Inc., the largest Canadian renewable energy investor with over C\$7.1B invested in Asia (Table 1), led the way with big investments, including its C\$694M investment in a 17-megawatt solar plant in Longreach, Australia, in 2016.
- Wind energy accounted for around 17% of outward renewable investments, with Taiwan's Greater Changhua 1 Offshore Wind Farm securing around C\$1.9B investment from CDPQ in 2021.
- Canadian pension funds were three of the top-five largest investors in the renewable energy sector (Table 1). CDPQ was the second largest, investing

- more than C\$3.1B from 2003 to 2022 in Asia's renewables sector.
- The OTPP and PSPIB were the third- and fourthlargest investors in the region's renewable energy sector from 2003 to 2022, with the former investing around C\$2.8B and the latter C\$1.7B. The OTPP and PSPIB made significant investments in Australiabased Spark infrastructure in 2021, at around C\$1.7B each.
- SkyPower, the fifth-largest Canadian investor in the region's renewable energy sector, invested around C\$1.5B in greenfield projects between 2013 and 2016. It developed two solar power projects in India and opened offices in Australia and Singapore.

Meanwhile, Asia Pacific investments in Canada's renewable energy sector were smaller, amounting to C\$8.6B over the past two decades.

- Nearly 47% of Asia's FDI in Canada's renewable energy sector was in wind energy, totalling C\$4.1B, while the solar industry received around 23% of investments, or approximately C\$2B. South Korea's Samsung Renewable Energy Inc. was a major player, with substantial investments in Ontario's wind projects from 2013 to 2016 totalling around C\$2.9B.
- Australia's IFM Investors became the second-largest investor in Canada after its 2021 acquisition of 50% of Toronto-based Enwave Energy Corporation, for C\$1.5B.
- Japan-based Sharp Corporation became the thirdlargest investor through its subsidiary, Recurrent Energy, which invested around C\$1.2B to expand its Ontario operations in 2010 and 2011.
- China Longyuan Power Group Corp., the fourth-largest investor in Canadian renewable energy, invested in three of Ontario's wind projects, for a total of C\$894M. South Korea's Hana Financial Group became the fifth-largest investor in Canadian renewables after acquiring the business and assets related to the Yamaguchi Shin Mine from Canadian Solar Inc. for C\$314M in 2020.

Table 1: Top Five Asia Pacific Investors in Canada and Top Five Canadian Investors in the Asia Pacific in **Renewable Energy** (2003-2022)

Asia Pacific's Top Investors in Canada	Country of Origin	Inward Investment 2003-2022	Canada's Top Investor in Asia Pacific	Outward Investment 2003-2022
Samsung Group	South Korea	C\$2.9B	Canadian Solar Inc (CSI)	C\$7.1B
IFM Investors	Australia	C\$1.5B	Caisse de dépôt et placement du Québec	C\$3.1B
Sharp Corp.	Japan	C\$1.2B	Ontario Teachers' Pension Plan Board	C\$2.8B
China Longyuan Power Group Corp. Ltd.	China	C\$894M	Public Sector Pension Investment Board	C\$1.8B
Hana Financial Group	South Korea	C\$314M	SkyPower	C\$1.5B

ELECTRIC VEHICLES

The EV industry is still at a nascent stage. However, there has been an increase in Canadian investment in the Asia Pacific's EV industry, with 54% of Canadian investments being made in the last five years alone.

- Among Canadian outward investments in the EV sector in Asia, approximately 88% was in auto parts and battery manufacturing. The remaining 12% went to research and development. The main destinations for these investments were mainland China, India, and South Korea.
- Magna International is the largest Canadian investor in Asia's EV sector, with more than C\$930M invested from 2003 to the present (Table 2). Magna has significantly strengthened its presence in the sector through consecutive investments in recent years, with its largest investment (worth around C\$682M)
- in 2020 to acquire a 49% stake in South Korea's LG Electronics Inc.
- Discover Energy Corporation is the second-largest.
 It became one of the top regional investors in
 2017 after acquiring a South Korean battery
 manufacturing facility, iQ Power Asia, for C\$695M.
- Ballard Power Systems, which was the thirdlargest investor in Asia's EV sector, has made one large investment (worth C\$103M) in Yunfu, in China's Guangdong province, in partnership with Guangdong Nation Synergy Hydrogen Power Technology Co. Ltd. in 2016.

 Ontario's eLeapPower opened an engineering centre in Shenzhen, China, in 2021, worth C\$41M, making it Canada's fourth-largest investor in Asian EV market. Following eLeap is Inco Ltd., which invested around C\$18M building a nickel foam plant in Liaoning, China, in 2003.

Since the first Asia Pacific investment in Canada's EV industry in 2012, these investments have grown steadily, now totalling more than C\$3.2B.

- Over the years, South Korea has made significant investments in Canada's EV sector, with LG,
 Hyundai, and Samsung Group ranking among the top-three investors (Table 2).
- LG Energy Solution, Canada's largest investor in EVs, entered the market in 2022 after establishing a joint venture with Stellantis N.V. Investing around C\$2.6B, LG will contribute to building Canada's first large-scale domestic manufacturing facility for EV batteries.
- Hyundai, the second-largest investor in Canada, made two significant investments in the Canadian EV industry. Its largest investment came through its subsidiary, Heavy Industries Co., which partnered with Ontario's Magna E-Car System to establish

- a battery manufacturing facility in 2012, with Hyundai contributing C\$260M.
- The third-largest investor in Canada, Samsung SDI Co. Ltd., a prominent South Korean conglomerate, acquired Magna International's battery pack business in 2015 for C\$188M.
- Canada's EV industry also attracted Japanese investment, with Mitsui High-tec and Hanwa Co. securing the fourth and fifth spots among the topfive Asian investors in Canada's EV sector. In 2017, Mitsui High-tec invested around C\$63M in a plant in Brantford, Ontario, that specializes in motor cores for electric and hybrid vehicles. That same year, Hanwa Co. acquired a stake in Calgary's Bacanora Minerals Ltd. for C\$20M.

Table 2: Top Five Asia Pacific Investors in Canada and Top Five Canadian Investors in Asia in the **EV Sector** (2003-2022).

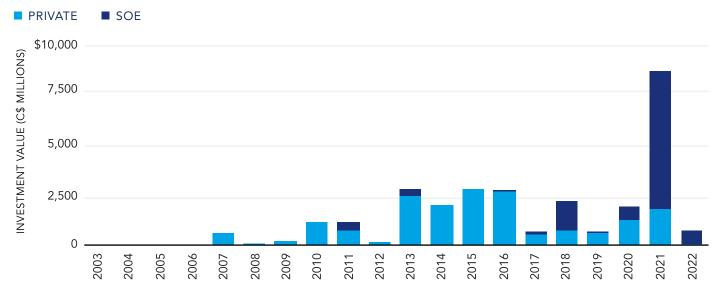
Asia Pacific's Top Investors in Canada	Country of Origin	Inward Investment 2003-2022	Canada's Top Investor in Asia Pacific	Outward Investment 2003-2022
LG Corp.	South Korea	C\$2.6B	Magna International	C\$930M
Hyundai	South Korea	C\$273M	Discover Energy Corp	C\$695M
Samsung Group	South Korea	C\$188M	Ballard Power Systems	C\$103M
Mitsui High-tec	Japan	C\$63M	eLeapPower	C\$41M
Hanwa Co. Ltd.	Japan	C\$20M	Inco Limited	C\$18M

STATE-OWNED ENTERPRISES

State-owned enterprises (SOEs) are becoming more involved in financing renewable energy projects, with investment values peaking in 2021 (Figure 7).

- From 2003 to 2022, SOEs invested around C\$10.9B (37%) in the renewables sector, compared to around C\$18.4B (63%) in investment made by private enterprises in this sector over the same period.
- The majority of the SOE investment (74%) was made by Canadian SOEs, led by the CDPQ, the OTPP Board, and the PSPIB. CDPQ led the group with more than C\$3.1B across projects in India, Japan, and Taiwan, with the largest deal (an acquisition of shares in India's Apraava Energy) worth more than C\$562M in April 2018. OTTP made three significant regional acquisitions by co-investing with partners, including PPSIB, to acquire Spark Infrastructure for approximately C\$1.7B in 2021, and co-investing around C\$600M in Equis Development Pte. Ltd. in 2020.
- Accounting for around 26% of total investment in renewable energy, Asian SOEs have acquired several Canadian renewable energy companies and projects. Australia-based IFM Investors joined efforts with OTPP to acquire Toronto-based Enwave Energy Corporation, an energy services provider, for around C\$1.5B in 2021. China-based China Longyuan Power Group Corp. Ltd. made a series of investments totalling around C\$650M in wind-power projects in Ontario. The third-largest SOE investor, Shenzhen Energy Nanjing Holding Co. Ltd., based in Nanjing, China, acquired two solar plants from a subsidiary of Canadian Solar, CSI New Energy Holding Co. Ltd., in 2017 for around C\$200M.
- SOEs have not yet invested in Canadian EVs; all FDI in EVs between Canada and Asia has been by private enterprises.

Figure 7: State-Owned Investors in Renewable Energy, 2003-2022



Looking Ahead: Canada-Asia Pacific Outlook for Renewable Energy and Electric Vehicles in 2024

From January to October 2023, two-way Canada-Asia Pacific FDI in renewable energy and EVs stood at around C\$570M, not including several major deals with undisclosed values. The majority of this investment (around 85%, or C\$485M) was from a single Canadian investment, by Brookfield Technology Partners, in Mumbai-based CleanMax Enviro Energy Solutions.

Investment in clean technology is projected to grow as Canada and economies in Asia seek new solutions to climate change. Canadian businesses will benefit from a receptive audience in the EV and renewable energy sectors as the region's economies seek to meet their carbon-neutrality targets and procure secure energy supplies. Similarly, Asian economies will benefit from investing in Canada's renewable energy sector, with its Canadian expertise and advancements in clean technologies.

(INWARD INVESTMENT IN RENEWABLES AND EVS

Canada's renewable energy sector has the potential to attract more investment across a variety of projects, with South Korean companies taking the lead in 2023. Our data indicate that SK ecoplant, a subsidiary of South Korean SK Group and one of the world's largest sustainable infrastructure companies, made multiple acquisitions in Canada in 2023. SK ecoplant made its first overseas investment in a Canadian green hydrogen ("wind-to-green hydrogen") project in Newfoundland and Labrador, and did so in partnership with World Energy GH2. The project will be operational in 2025-26. We expect that Canadian federal and provincial policies promoting clean technology will encourage more Asia Pacific investment in Canadian renewables projects.

Canadian companies will benefit from the Asia Pacific's drive to adopt EVs.

Innovative Canadian companies in the EV space have a growing opportunity to integrate within regional and national EV initiatives in Asia. Regional associations like the Association of Southeast Asian Nations (ASEAN) have begun developing domestic EV industries and regional EV ecosystems. Individual ASEAN economies have also announced plans to promote EV adoption.

China has long been leading the global EV race. In 2023, <u>Southeast Asian economies</u>, including Indonesia and Thailand, developed comprehensive policies to attract investment in the EV sector. Similarly, Japan and South Korea continue to build up their EV sectors and have indicated interest in co-developing Canada's EV industry.

OUTWARD INVESTMENT IN RENEWABLE AND EV PROJECTS

Canadian pension funds may play a greater role in supporting clean technology projects in the Asia Pacific. Canadian pension funds have committed to increasing their investment in sustainable projects. They were also identified as a primary driver of investment in ASEAN economies in a recently Signed Joint Leaders' Statement on ASEAN-Canada Strategic Partnerships. In light of these developments, we anticipate an increase in renewable energy investments by pension funds in ASEAN economies. Such investment comes at a critical time, as the ASEAN region is one of the regions most affected by climate change. Climate challenges are compounded by rapid economic and population growth in much of the region. In such an environment, renewable energy use may not be keeping pace with the needs of local economies.

Following our <u>previous analysis</u>, new developments in Canada's EV sector, such as the national target of 100% zero-emissions in Canadian vehicle sales by 2035, have attracted Asian investors, including VinFast, Honda, and

Toyota. VinFast, a Vietnamese EV manufacturer, has actively expanded in Canada's EV market by opening <u>several locations</u> in British Columbia and Ontario. Another deal to watch in the coming years is Taipei-based E-One Moli, which will build a lithium-ion battery plant <u>worth C\$1.05B</u> in Maple Ridge, British Columbia. Honda Global is also considering a <u>C\$18.4B investment</u> in the plant.

Conclusion

Renewable energy and EVs are an important bellwether subset of the larger clean technology sector, which is becoming an increasingly prominent component of Canada's collaboration across the Indo-Pacific region. Past investment trends indicate that the Canadian EV sector is attracting leading EV manufacturers to set up shop in Canada, while Asia's renewable energy sector is attracting significant investments from Canada's pension funds and private firms, such as Canadian Solar.

There remain, however, substantial untapped opportunities in Asia's EV sector, which is growing at a fast pace and represents lucrative investment opportunities for Canadian auto manufacturers. Magna International, Canada's leading automotive supplier, has been leading the charge, actively seeking regional opportunities and opening a new engineering centre, focusing on the development of software for EVs, in Bangalore, India, in 2022. Similarly, Canada's renewables sector is also expected to bring new investment from Asia with green hydrogen, as indicated by a recent investment from SK ecoplant, and attract investment attention through the innovative renewable energy solutions being developed in Canada.

Due to the importance of clean technology in Canada's relations with the region, it will be one of the core themes of the Asia Pacific Foundation of Canada's Canada-in-Asia Conferences 2024 (CIAC2024), taking place February 26 to 29, 2024. CIAC 2024: Climate Solutions will be held February 27-29 immediately following CIAC 2024: Agri-food. The Climate Solutions component of CIAC2024 will bring together experts, investors, policymakers, researchers, business leaders, and innovators across Asia and Canada to exchange perspectives, knowledge, and ideas to create collaborative partnerships in clean technologies. As climate change disproportionately impacts the Asia Pacific region, the conference seeks to provide an opportunity for future collaborations in clean technology sectors on both sides of the Pacific.

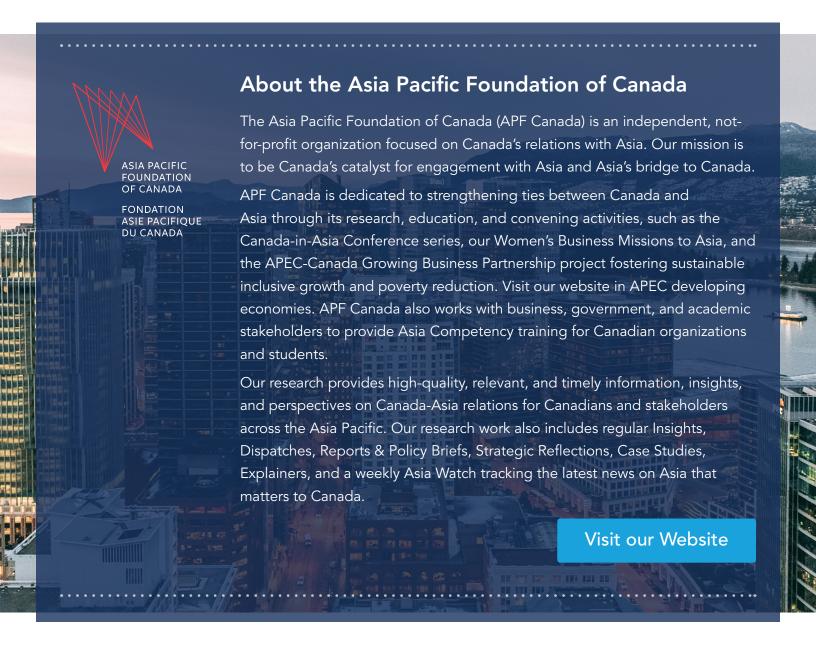
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