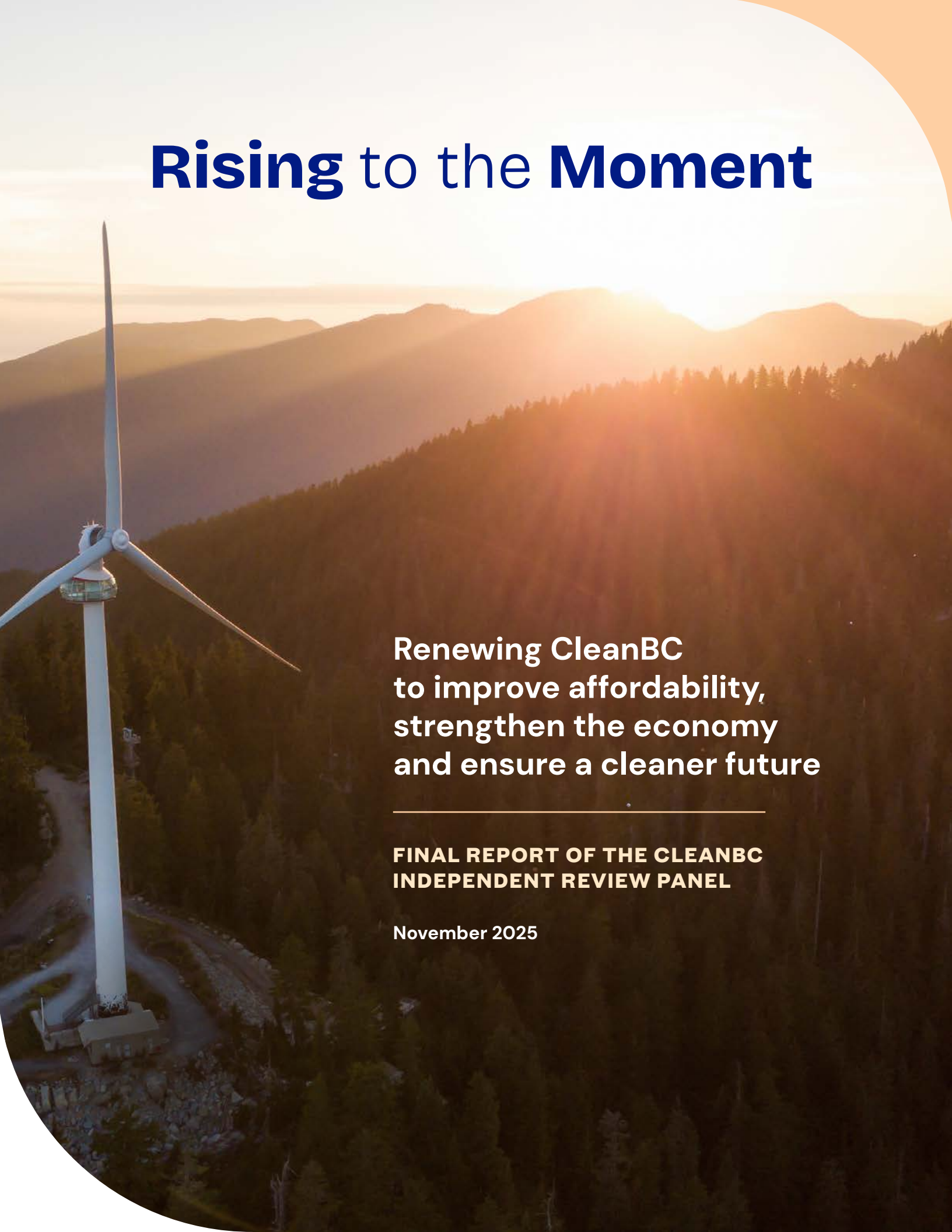
Rising to the **Moment**



Renewing CleanBC to improve affordability, strengthen the economy and ensure a cleaner future

FINAL REPORT OF THE CLEANBC INDEPENDENT REVIEW PANEL

November 2025

Table of **Contents**


Prince George

Appendices

Message from the **Panel**

Climate change is defining a new era of both challenges and opportunities, both globally and here in British Columbia.

The climate era is influencing geopolitics and pressuring powerful economies, impacting food prices, driving migration and conflict, and increasingly surfacing in the daily lives and routines of individual British Columbians. We are currently grappling with a range of profound challenges—stubborn inflation, job insecurity, uncertain access to health care, and affordability, to name just a few. For vast numbers of us, these issues are very real and personal. And climate change is exacerbating them all.

At the same time, clean energy, and the technologies that efficiently put it to work, have never been more affordable and accessible. The transition is accelerating in countries around the world, fuelled by investment that now sees $2 invested in clean energy for every $1 in fossil fuels. And evidence of its co-benefits—new jobs, healthier communities, and energy security—is amassing by the day.

To rise to this moment, the Province of British Columbia and its agencies must respond in a manner that reflects the scale of both the challenge and the opportunity.

First, the province must limit harm by reducing climate pollution and embracing clean energy solutions and new economic opportunities—CleanBC's original mandate. But it must also prepare for the inevitable impacts now baked into the system, and protect people when disaster strikes. This report reviews Clean BC's original mitigation mandate, as directed. However, faced with the current circumstances, we urge the BC Government to adopt this broader approach of climate safety.

As each of us have long worked to inform and inspire Canadian climate and energy policy, we felt honoured to be invited to lead this process. For six months we engaged and learned from First Nations, Indigenous leaders, local governments, and a diverse array of stakeholders from every corner of the province. We listened, assessed policies and programs, and reflected on the promise, progress, and lessons learned from the government's implementation of CleanBC to date.

East Kootenays

We are grateful for the contributions of many First Nations to this review. While an independent advisory panel does not have the formal obligations of Crown governments, we have attempted to honour the spirit of UNDRIP and the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA). It is our assumption that the BC Government will approach the implementation of our recommendations within the context of its commitments to reconciliation.

CleanBC has built important momentum, enabling many industries, businesses, and individuals to adopt new technologies, find efficiencies, and reduce climate pollution. At the same time, we are obliged to read the room. As economic and geopolitical turmoil continues to drag on, a profound sense of unease is almost palpable across British Columbia. In the current zeitgeist, almost nothing feels like a sure thing.

Still, people want to act. A large and growing population of citizens are now acutely aware of their own contributions to climate change, and would like to embrace solutions, but remain held back by structural barriers. They need and deserve continuing and strengthened support to do so.

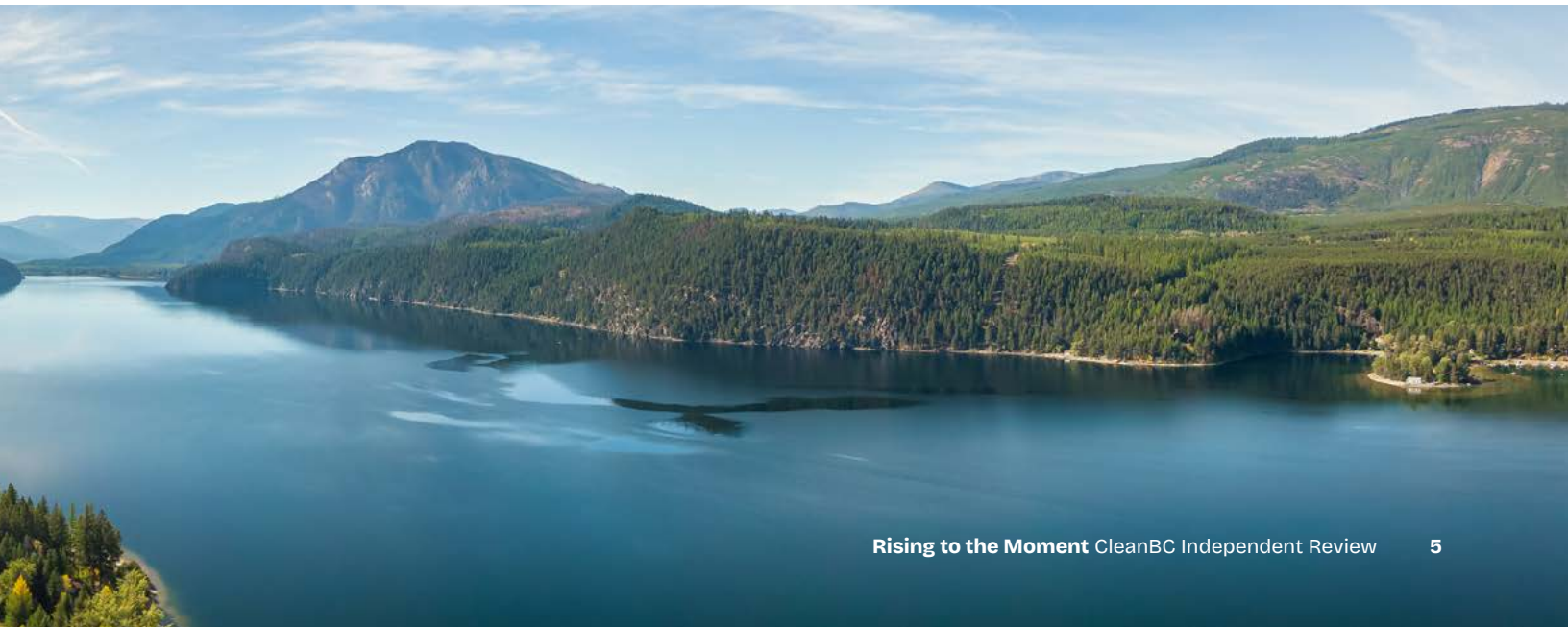
In preparing this review, we have tried to acknowledge and reconcile these tensions between opportunity and challenge, risk and reward, and the imperative for support versus the challenge of competing priorities.

In the pages that follow, we offer the government a set of seven practical and actionable priorities, supported by more specific recommendations—in turn informed by broad and diverse input and lessons learned. We sought out actions that would build on progress, fill gaps, and advance other provincial priorities including affordability, economic security, innovation, and growth.

Taken together, we believe our recommendations will renew and reinvigorate CleanBC, and in doing so empower all British Columbians to create a better, stronger, and safer future in this new climate era.

Merran Smith & Dan Woynillowicz

We feel fortunate to have undertaken this important work where we reside on the traditional territories of the Lekwungen peoples, and the Songhess, Esquimalt and W̱SÁNEĆ peoples whose historical relationships to the land continue to this day.



Squamish

Executive Summary

CleanBC is, for the most part, working. Its policies and programs are measurably reducing climate pollution while creating jobs, improving community health, and lowering everyday costs for British Columbians. Yet, despite these successes, the plan is not yet reaching its full potential. The government now has an opportunity to adjust and close gaps in CleanBC—improving outcomes for all—while acknowledging current challenges.

British Columbians have experienced a great deal of upheaval since 2018, when the government first launched CleanBC. For starters, we began feeling the impacts of climate change first-hand—and at an unprecedented scale. From the deadly heat dome, to wildfires, to supersized atmospheric rivers and flooding, climate events have taken lives and livelihoods, and hurt local economies. The province has since spent billions of dollars rebuilding infrastructure and pursuing a range of actions designed to help keep British Columbians safe.

The province has also faced major global disruptions—the pandemic, wars in Europe and the Middle East, volatile oil and gas prices, and, most recently, President Trump's tariffs. Each has driven up the cost of living, from energy and food prices to insurance premiums, while further pressuring already-strained public services.

Lesser known but of significant importance, the global transition to clean energy has rapidly accelerated. Each year, investors now move twice as much capital into clean energy companies and projects than they do to those focused on oil, gas, and coal. The global market for internal-combustion-engine vehicles has peaked and declined, supplanted by electric vehicles, and in the first half of 2025 renewable resources replaced coal as the world's leading source of electricity generation. Wind and solar not only met growing power demand, but also drove a slight decline in gas and coal reliance. Relative to when CleanBC was first being developed, mature, market-tested climate solutions are now broadly available, and are steadily growing more efficient and cost-competitive with each passing day.

British Columbia is exceptionally well-positioned for the clean energy transition. Our province has an abundance of the critical metals and minerals needed to manufacture solar panels, wind turbines, EV batteries, and the transmission lines that are helping electrify the economy. B.C. also produces low-carbon building materials, from lower-carbon cement to mass timber, which are needed for new homes and other buildings both here and abroad. And we have plentiful clean and renewable resources—including wind, solar, water, and geothermal—that can complement our hydropower-rich electricity system. British Columbian innovators and entrepreneurs also punch above their weight; in the past decade, a growing and highly competitive community of clean energy and climate tech companies have set up shop here.

British Columbia can leverage these competitive assets to more robustly participate in the clean energy transition. We can develop climate solutions to use here at home and export to the world—spurring more good jobs and driving sustainable economic growth—and a renewed CleanBC can clearly tie this all together.

The Province of British Columbia has also taken significant steps down the path of Indigenous reconciliation since launching CleanBC.

Specifically the government has passed the co-developed *Declaration on the Rights of Indigenous Peoples Act* (DRIPA) and is strengthening approaches to Indigenous consultation and engagement. First Nations are actively contributing to CleanBC's success in their communities—by replacing diesel generators with local clean power, for example—and by participating as equity partners in all 10 of the renewable energy projects awarded contracts in BC Hydro's 2024 call for power.

Which brings us back to the larger picture. **While CleanBC has lowered climate pollution in some sectors, the province will fall well short of its 2030 climate change target.**

There are a variety of reasons for this. The province experienced rapid economic and population growth while households grappled with soaring costs. In the face of new economic uncertainty and political headwinds, the government has not been able to proceed with a number of CleanBC's planned policies.

In launching CleanBC, the government of the day rightly recognized that the threat of climate change demanded a rigorous response. But the plan aimed too high. Achieving its 2030 target would have required a near-seamless execution of policies and programs, ideal economic conditions, and complete consensus between stakeholders. And even then, it would have needed a healthy dose of good luck.

As noted above, CleanBC has led to meaningful progress; many of the plan's policies and programs are transforming the market as British Columbians choose new cleaner options and businesses and workers respond to deliver and service them. Thanks to CleanBC, hundreds of thousands of residents and scores of businesses are installing heat pumps and switching to electric vehicles (EVs). EV sales are on track to meet the plan's projected adoption levels, and in 2022, for the first time ever, the province's heating equipment distributors imported more residential heat pumps than natural gas furnaces.

Transportation fuels are getting cleaner, buildings are becoming healthier and more resilient, methane emissions from oil and gas are falling, and our industries are well-positioned to compete for investment and in markets that value clean, efficient production. But there's room to improve and fill outstanding gaps, to do more in some areas—and ease off in others.

However, the government's current pursuit of increased gas production and new LNG export opportunities threatens to set back progress. These activities create jobs and economic benefits, but also add significant new sources of climate pollution that stand to all-but wipe out hard-fought gains in other sectors. Prospects for the sector also face significant uncertainty thanks to surging global supply and uncertain demand, while many of its anticipated customers pursue cleaner and more affordable options that would strengthen their energy security by reducing their reliance on imported fuels. Although expanded gas and LNG development holds the promise of new jobs and government revenue, it also carries opportunity costs for other industrial sectors, such as critical minerals mining. These sectors would also need significant quantities of clean electricity, skilled labour, and provincial policy and fiscal support—and a dominant focus on LNG risks limiting their opportunities.

Greater public consensus on the future of the province's economy is needed, and while this is beyond the scope of our review, we suggest the government address this by, for example, convening a Citizens Assembly on Building a Sustainable Economy in B.C.

A confluence of acute challenges—persistent inflation, affordability, escalating addiction- and mental-health-driven street disorder, and the economic fall-out of tariffs, amongst others—have undeniably pushed public concern about climate change lower down the priority list. Given these exceptionally complex and challenging times, all orders of government may be tempted to quietly slide climate action to the back burner.

> "The message of the IPCC and climate science is not, and never was, "1.5°C or bust." It is that "every action counts." The more that the world can do to reduce emissions, the less the planet will warm, and the less that people will suffer. That means the record-breaking temperatures and devastating extreme weather events are incentives to take action, not to throw up our hands."
>
> —**Dr. Simon Donner**, IPCC climate scientist, UBC professor, and co-chair of the federal Net Zero Advisory Board[1]

But given the global indicators we outline in this review, such a retreat would not serve the province's interests. British Columbians remain worried about the impacts of climate change on ecosystems and wildlife, community health, and the economy. They are increasingly aware of CleanBC and up to speed on practical solutions that not only cut climate pollution but that also provide a range of other benefits—from lower energy costs, to new jobs and economic opportunities, to healthier communities. British Columbians continue to expect their provincial government to lead on climate and the clean energy transition.

What's needed is a renewal of CleanBC, not a retreat.

Provincial, First Nation, local and regional governments, stakeholders, and citizens have learned a great deal about what is, and is not, working with CleanBC, and their feedback has directly informed this review and its recommendations.

At its highest level, CleanBC's shortcomings must be resolved, and critical gaps filled. Its success depends on affordable, reliable, and abundant supplies of clean energy—electricity, renewable natural gas, and liquid biofuels—with efficiency and electrification serving as pillars of the province's clean energy system.

British Columbians can then harness this clean energy to efficiently heat homes and other buildings, and power transportation and industries. For citizens and businesses, the clean choice must be the easy choice: They need affordable access to efficient technologies like heat pumps and EVs, and support for energy upgrades that cut both climate pollution and energy bills.

1. Source

The government can continue pursuing a number of clear policy pathways to reduce climate pollution from transportation, buildings, and industry. Some policies can be strengthened, others could be calibrated to ensure they are realistic, fair, and flexible—while mindful of the challenges and opportunities in varying sectors and regions. The government can also pursue fiscally prudent approaches to funding, for example, by re-investing all government and public sector organization revenues generated by climate policy back into climate solutions.

To ensure British Columbia continues to seize the opportunities and benefits of the clean energy transition, while doing its part to cut climate pollution and improve resilience, **we recommend the government immediately advance seven priorities for action, which we further detail in the pages that follow. Our comprehensive advice is detailed in *Appendix A* and *Appendix B*.**

SEVEN PRIORITIES FOR PROVINCIAL ACTION

1. **Accelerate clean electricity production and electrification as the foundation of energy security and economic growth**
2. **Make it easier for British Columbians to cut energy bills and climate pollution**
3. **Leverage B.C's clean energy advantage to create more jobs in the energy transition**
4. **Support B.C.'s industries to become cleaner and more competitive**
5. **Increase production of clean, made-in-B.C biofuels and renewable natural gas**
6. **Deepen partnerships with First Nations and local governments**
7. **Focus on delivering effective, achievable and fiscally responsible outcomes**

The success of these next steps will depend on upholding DRIPA, continued support for innovation in clean energy and climate technologies, building up a skilled workforce, and investing in the province's youth. Similarly, the government must continue its ongoing collaboration with local and regional governments, experts, businesses, and other stakeholders. Finally, the government must acknowledge that its climate, economic, and energy ambitions are tightly interconnected and ensure that these strategies are linked, and their delivery effectively integrated.

A renewed CleanBC should be guided by eight principles: Protect affordability; Ensure economic competitiveness; Establish policy certainty and predictability; Align with UNDRIP and DRIPA; Recognize regional differences; Recycle carbon revenue into climate solutions; Embrace innovation and new technology; and Set ambitious but achievable targets.
A new approach would set and steward updated climate pollution goals and other tangible progress indicators. **The government should set ambitious but achievable new targets for climate pollution reduction, efficiency, clean energy use, and electrification, with greater transparency and accountability for results, and using relevant progress indicators.**

Climate change isn't just an environmental problem. It threatens affordability and food security, introduces new health risks, impacts both the economy and the government's fiscal position, and jeopardizes geopolitical stability. By cutting climate pollution and capitalizing on the opportunities of the clean energy transition, CleanBC directly contributes to making our province safer, stronger, and more resilient.

In a recent speech on climate change and the energy transition, Premier Eby said, "It's time for all of us to double down on our work. Just because it gets more challenging doesn't mean it's any less important. And in fact, if anything, it's more important than ever." This succinctly echoes what we heard from British Columbians while compiling this review.

As many households struggle with the cost of living, and as many businesses face uncertain economic prospects, a CleanBC renewal can provide a clear path to improved affordability, healthier communities, economic growth, clean energy abundance, and climate security.

About the Independent Review

In May 2025, the Province of British Columbia launched the Independent Review of CleanBC as a "review of CleanBC programs to ensure they are effectively reducing emissions, while making life more affordable and supporting a strong economy." The government initially committed to the review in the 2024 Cooperation and Responsible Government Accord it had signed with the BC Green Caucus and updated in March 2025, and commissioned it as directed in the terms of reference.

To orient our review, we were briefed and we received Title and Rights holders and stakeholder feedback and advice on CleanBC's 75 policies and programs (*Appendix C*), as well as associated government spending (*Appendix D*). We acknowledge that First Nations are Title and Rights Holders and not stakeholders, and our use of the word stakeholders is distinct from First Nations Title and Rights Holders throughout this document.

The scope of the review included extensive stakeholder, Indigenous, and public engagement. The government's announcement of this review generated interest from industry associations and businesses, Indigenous leaders and First Nations, local and regional governments, labour, health associations, academic experts, and environmental and civil society organizations, among others.

Over the course of the review we met with 157 organizations in 41 engagement sessions, received 279 written submissions from 232 different organizations and 47 members of the public and/or experts, and received 2,650 public engagement survey forms.

Reconciliation and CleanBC

The Province launched CleanBC in 2018, prior to the co-development of the *Declaration on the Rights of Indigenous Peoples Act* (DRIPA). First Nations believe the government did not engage them sufficiently on the original plan's development and that it must go further in meeting its obligations as the initiative is renewed.

According to many First Nations, the climate crisis requires a whole-of-government response—one that cuts across ministries and sectors, rather than operating in silos. It must align with First Nations' rights and title, reflect Indigenous worldviews, natural laws, and ways of knowing, and recognize the interconnectedness of people, lands, waters, and wildlife. Taking this approach is not only good policy; it is part of implementing the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) and DRIPA here in B.C.

Wildfires in B.C.

B.C.'s wildfires are increasing in frequency and severity with wildfire-related emissions exceeding the province's total emissions during a bad fire year. While the province currently doesn't manage the forest landscape to prevent wildfire emissions, opportunities exist to mitigate wildfire emissions and warrant further exploration.

Port Alice

A Changing Context

Costs are mounting as climate impacts hit home

It wasn't that long ago that scientists would reference climate change impacts using the future tense. That no longer applies—especially here in British Columbia, where residents are experiencing severe climate impacts much earlier than initially anticipated.[2]

For many, 2021's lethal summer heat dome—which claimed the lives of 619 people—ushered in a new climate era. That year's wildfire season proved similarly devastating, burning 0.9 million hectares, more than five times the average area burned each year, with more than half on the timber-harvesting land base.[3] A few months later, an atmospheric river slammed the province, unleashing devastating floods and landslides that killed six people and caused billions in damage. Scientists analyzing these events subsequently concluded that the heat dome would have been virtually impossible without climate change, and it increased the likelihood of the powerful atmospheric river by at least 60%.[4,5] Analysts pegged the compound cost of these climate change-fuelled disasters between $10.6 and $17.1 billion, equivalent to 3.1 to 4.9% of provincial GDP, with insurance covering only 5 to 8% of the damage.[6]

And 2021 wasn't a one-off. Each year since, climate change has exacerbated severe weather events and disasters. From heat waves in 2022 and 2024, to 2023's record-breaking wildfires, unnatural disasters have threatened lives and livelihoods, and exacted a heavy price from residents, our economy, and the provincial treasury.[7,8,9]

The costs of climate change are also coming home, as impacted individuals, communities, and businesses clean-up and re-build—often with support from the provincial and federal governments to the tune of billions of dollars—and as all British Columbians experience decreased productivity, rising insurance rates, and higher food costs.[10,11,12]

In summary, climate change is no longer a distant risk. It is a clear and present danger to the economy, visible in multi-billion-dollar disaster years, rising infrastructure costs, and recurring hits to trade, tourism, agriculture, and forestry. Even if only from an economic risk management perspective, renewed public investments in both climate mitigation and resilience make sense.

2 Climate change is hitting the planet faster than scientists originally thought. Jeff Tollefson. Nature. February 28, 2022.

3 Impacts of 2021 Fires on Forests and Timber Supply in British Columbia. Ministry of Forests. April 2022.

4 Rapid attribution analysis of the extraordinary heat wave on the Pacific coast of the US and Canada in June 2021. Sjouke Y. Phillip et al., Earth System Dynamics. December 8, 2022.

5 Human influence on the 2021 British Columbia floods. Gillet et al.Weather and Climate Extremes Volume 36, June 2022.

6 A Climate Reckoning: The economic costs of BC's extreme weather in 2021. Marc Lee and Ben Parfitt. November 2022.

7 How climate change warped B.C.'s weather this fall. S. Labbe. North Shore News. November 3, 2022.

8 Drivers and Impacts of the Record-Breaking 2023 Wildfire Season in Canada. Jain, P., Barber, Q.E., Taylor, S.W. et al. Nature Communications. 15, 6764 (2024).

9 Extreme weather attribution. Government of Canada.

10 Environmental damage is hurting both our health and wealth. C. Caron. Globe and Mail. August 20, 2025.

11 How much home insurance rates are up in 2025. Insurance Institute.

12 'Years of struggle': How B.C.'s climate change is affecting the way we grow our food. Joanne Sasvari. Vancouver Sun. June 25, 2024.

The global transition to clean energy is taking off

While severe climate impacts have arrived earlier than anticipated, on a brighter note, private-sector innovators have rapidly commercialized many of the clean-energy technologies and systems that will be critical to addressing the challenge.

The year 2024 proved a record-breaker for both global temperatures and clean energy progress.[13] Clean energy producers brought an unprecedented 585 gigawatts (GW) of renewable power online, accounting for nearly all (92.5%) new power capacity globally.[14] For the first time, clean sources generated more than 40% of global electricity, with renewables contributing 32%.[15]

And worldwide investment in the clean-energy transition crested USD$2 trillion, doubling the amount invested in fossil fuels.[16]

Thanks in large part to enabling policy, over the past decades the cost of renewable energy and batteries has sharply declined (*Figure 1*) while innovation has continued to improve the performance of both (*Figure 2*). Since 2021, solar photovoltaics (PV) and wind have come out on top as the cheapest source of new utility-scale electricity generation in most markets around the world.[17]

Figure 1: Costs of solar PV modules, installed wind, and battery cells 1980–2020[18]

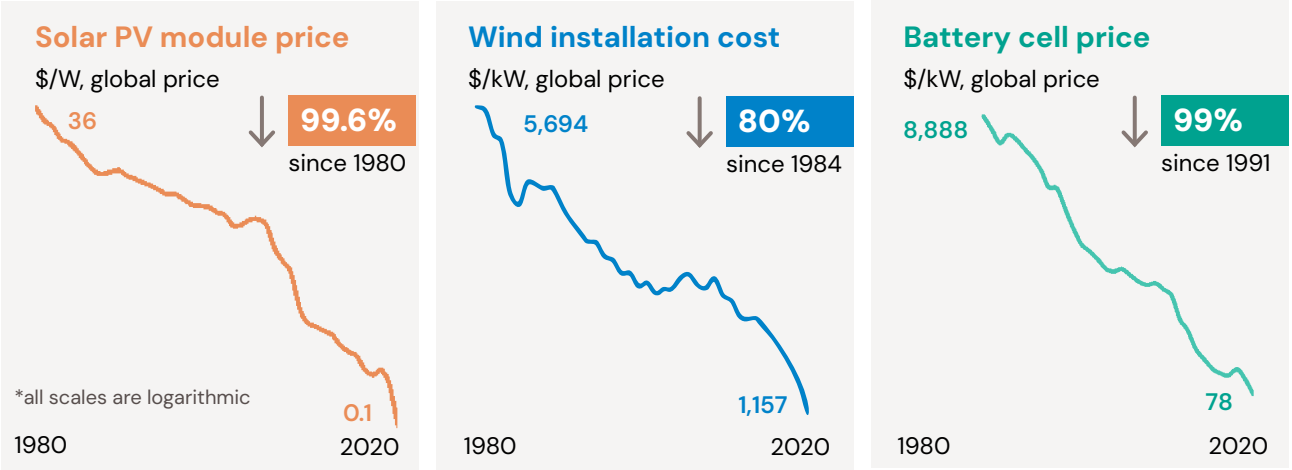
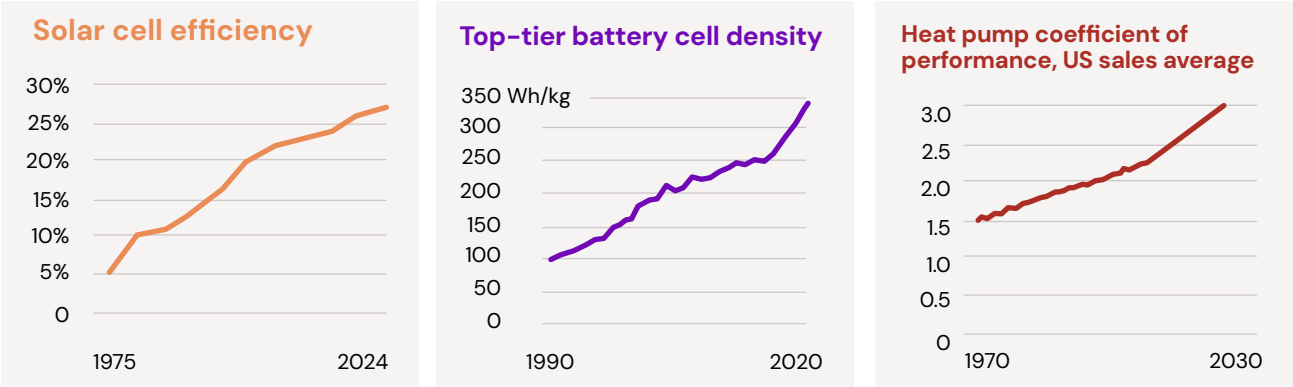


Figure 2: Innovation is continuously improving the performance of solar, batteries, and heat pumps[19]



13 WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level. World Meteorological Organization. January 10, 2025.

14 Renewable Capacity Statistics 2025 (March edition). IRENA. 2025.

15 Global Electricity Review 2025. Graham, E., Fulghum, N. & Altieri, K. 2025.

16 World Energy Investment 2025. International Energy Association. 2025.

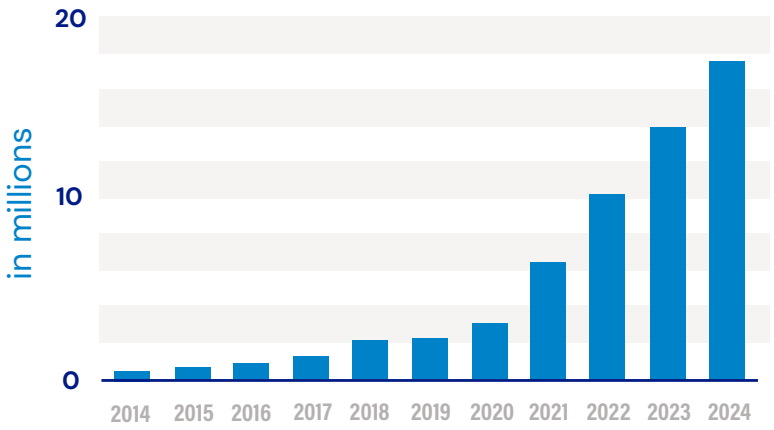
17 World Energy Outlook. International Energy Association. 2021.

18 The Electrotech Revolution. Ember. 2025.

19 The Electrotech Revolution. Ember. 2025.

Falling battery prices and continuing improvements have prompted manufacturers to offer more affordable EVs that can go further on a single charge, and charge more quickly.[20] As a result, their sales continue to climb in markets around the world (*Figure 3*). By the end of 2024 there were nearly 40 million passenger EVs on the road, displacing 1.3 million barrels of oil per day. To put that into context, that amount approximates the annual oil demand of Japan's entire transportation sector.[21] EV sales are at a record high, while sales of gasoline and diesel vehicles have continued to decline since their peak in 2018.[22]

Figure 3: Global electric car sales, 2014–2024[23]



Heat pumps are also playing a leading role in the global transition to secure and sustainable building heat and domestic hot water. [24,25] In 2021, they served about 10% of global space heating needs, and their pace of installation has been steadily growing. Heat pumps are three to five times more energy efficient than gas furnaces, and global sales have steadily ticked upwards over the past decade. As with renewable energy and battery technologies, their performance continues to improve—especially those designed to work in colder climates.[26,27]

Heat pump image source: BC Hydro

20 The sales-weighted average range of battery electric cars grew by nearly 75% between 2015 and 2023. Global EV Outlook 2024. International Energy Agency.

21 Global EV Outlook 2025. International Energy Agency.

22 Global EV Outlook 2025. International Energy Agency.

23 Global EV Outlook 2025. International Energy Agency.

24 A heat pump uses technology similar to that found in a refrigerator or an air conditioner, but in reverse, extracting heat from the air or ground and transferring it to where it's needed. Unlike a gas furnace, which provides heat, and an air conditioner, which provides cooling, heat pumps do both singlehandedly.

25 The Future of Heat Pumps. International Energy Agency. November 2022.

26 The Future of Heat Pumps. International Energy Agency. November 2022.

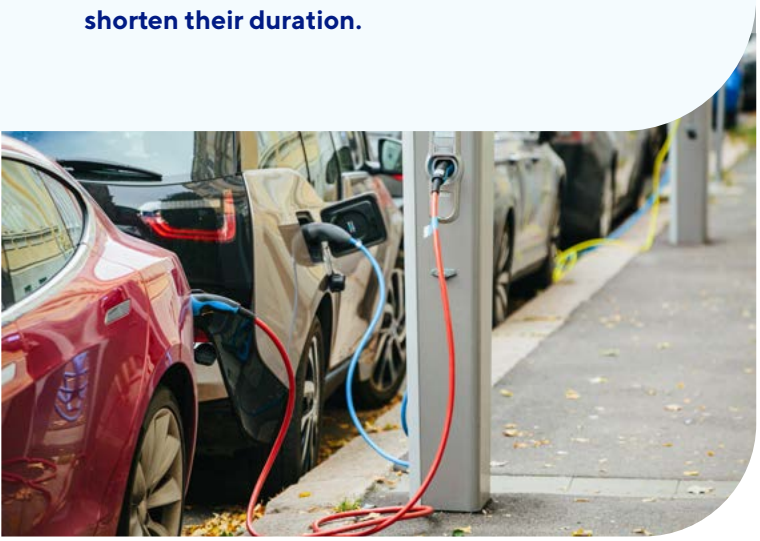
27 Ferguson, A. & Sager, J. (2022). Cold-climate air source heat pumps: assessing cost-effectiveness, energy savings and greenhouse gas emission reductions in Canadian homes. Natural Resources Canada.

Energy security is driving countries towards renewable power and electrification

As global priorities have shifted in response to the economic upheaval precipitated by President Trump's tariffs, the energy and economic security benefits of locally produced clean energy—reducing reliance on fossil fuel imports—and electrification (EVs, heat pumps, etc.) have emerged as the primary driver of clean energy investment.[28, 29] This is especially the case in the Global South, where energy demand is growing fastest.[30]

British Columbians can strengthen their energy security by reducing their reliance on imported oil and refined petroleum products—mostly used for transportation—and natural gas. While natural gas is produced here in B.C., global commodity markets determine its price, which inherently creates significant volatility.

At the same time, we must be mindful of how the energy security imperative is shaping choices in the markets that the province is targeting for LNG exports, which may limit our prospects or shorten their duration.



As President Trump attempts to pull the U.S. away from clean energy, a combination of state policies and compelling economics mean the energy transition will nonetheless continue south of our border, albeit more slowly.[31]

Meanwhile, the rest of the world is not tapping the brakes. In the first half of 2025, global solar and wind power generation outpaced electricity demand and—for the first time on record—generated more power than coal.[32] The IEA's medium-term market forecast envisions global renewable power capacity increasing by 2030 by an amount that roughly approximates today's combined power-generation capacity of China, the European Union, and Japan.[33] Meanwhile, on a global basis, motorists purchased 9.1 million EVs in the first half of 2025—a 24% year-over-year increase.[34] The IEA forecasts EV sales will reach 20 million by the end of this year, representing more than one-quarter of cars sold worldwide.[35]

In short, the global energy transition continues apace. It is no longer a question of whether or not it will happen, but rather how quickly—and which economies will come out on top.

28 Cheng, J., Tong, D., Zhao, H. et al. Trade risks to energy security in net-zero emissions energy scenarios. Nat. Clim. Chang. 15, 505–513 (2025).

29 See Carlyle Group, The New Joule Order. March 2025.

30 Powering Up the Global South: The Cleantech Path to Growth. Vikram Singh. RMI. 2024.

31 Renewables 2025: Analysis and forecasts to 2030. International Energy Agency. 2025.

32 Global Electricity Mid-Year Insights 2025. Ember. October 7, 2025.

33 Global Electricity Mid-Year Insights 2025. Ember. October 7, 2025.

34 Global EV sales over 9 million in first half of 2025, growing by 28%. Rho Motion. July 15, 2025.

35 Global EV Outlook 2025. International Energy Agency. 2025.

B.C. is making progress but falling short of targets

The world has changed a great deal since 2018, when the province launched CleanBC. The long list of disruptions includes a pandemic and resulting inflation, volatile oil and gas prices, and, most recently, President Trump's tariffs. At the same time, the province experienced rapid economic and population growth. These circumstances, coupled with the government's decision to defer some elements of the CleanBC plan, have limited progress on climate pollution.

The government's most recent *Climate Change Accountability Report* spells it out. The good news is that climate pollution has trended downward when measured per unit of GDP and per capita (*Figure 4*). However, the overall picture is disappointing. When the province models the outcome of the policies and programs it has implemented to date, emissions decline 20% below 2007 levels. This suggests British Columbia will achieve just half of its 2030 GHG reduction target (*Figure 5*). [36]

Figure 4:
Net GHG emissions per unit of GDP, and per capita [37]

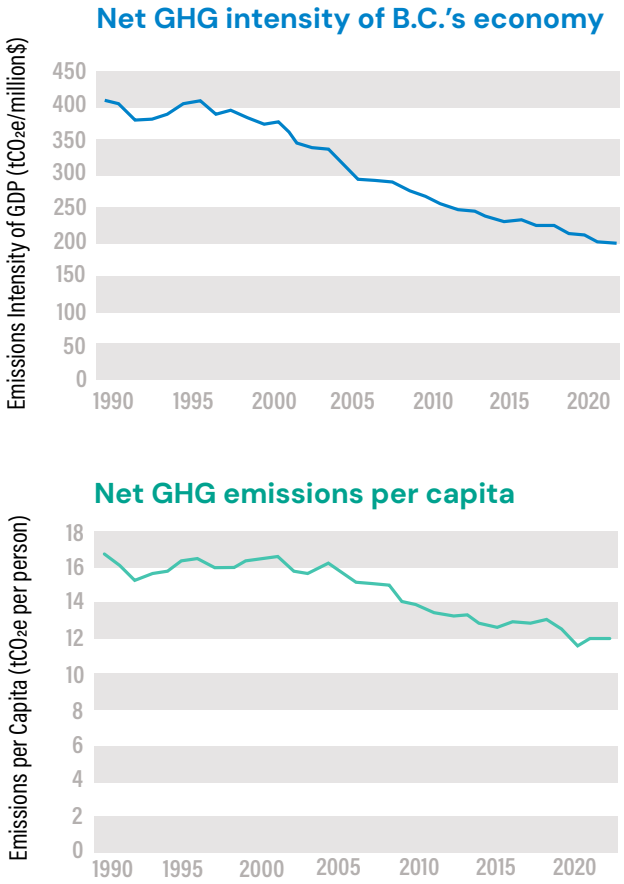
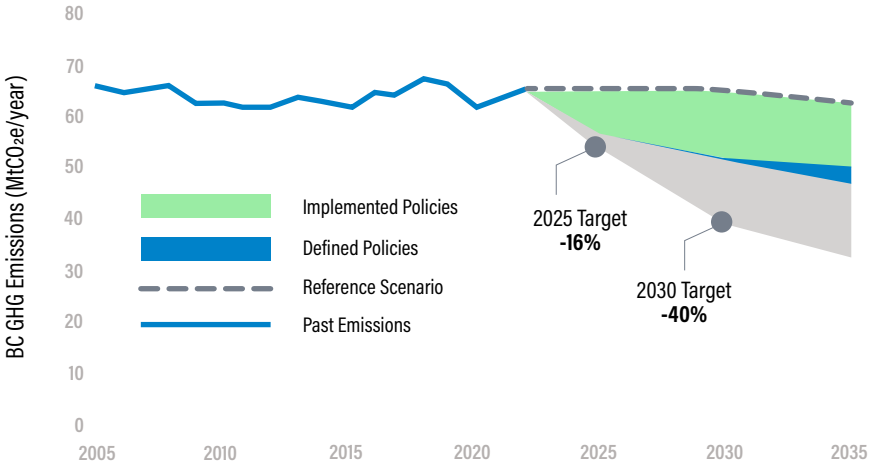


Figure 5:
Projected progress towards B.C's climate targets[38]



36 Climate Change Accountability Report. Province of British Columbia. April 2025.

37 Climate Change Accountability Report. Province of British Columbia. April 2025.

38 Climate Change Accountability Report 2024. Province of British Columbia. April 2025.

What We Heard and Learned

Cross-cutting themes from stakeholder feedback

As we listened to stakeholders via roundtables and meetings, and reviewed hundreds of written submissions, we identified a number of cross-cutting themes. We recommend government keep these themes in mind when considering new and updated CleanBC policies and programs. We unpack each of these themes in greater detail in *Appendix E*.

Predictability and durability increases certainty, with room for flexibility:

With respect to both policies and programs, stakeholders emphasized the degree to which predictability and durability drive investment decisions and adoption of solutions. At the same time, they recognized the importance of flexibility. The government can and should correct its course in response to new information, first-hand experience, or a shift in the overall context—while staying committed to the overarching direction.

Regional building considerations deserve more attention:

B.C. is a big and diverse province, especially when it comes to seasonal weather. It can be harder or more expensive for builders and developers to meet energy and climate goals in colder regions. The province can improve fairness in building performance regulations by acknowledging these differences and introducing greater regional flexibility.

Consumer rebates play a critical role in driving adoption of clean solutions:

Rebates and incentives lower up-front cost barriers, and can help speed up market transformation. If designed carefully, they can help residents lower their energy bills and improve comfort, grow clean-economy jobs and investment, and advance equity. The province can fund them by transparently recycling any revenue from climate policies—such as industrial carbon pricing, or BC Hydro's sale of clean-fuel credits—directly back into climate and affordability programs.

B.C should lean into its leading climate and clean tech sector:

B.C has emerged as a national and even global leader that punches above its weight in climate and clean energy technology innovation. Maintaining this leadership will require continued investment in infrastructure and innovation (with a focus on leveraging public dollars to secure private dollars), and policy-driven market signals. Predictable capital pathways, including government's role in supporting them, are needed—from company formation through scale-up—to build and retain the next generation of companies, jobs, and industrial capacity.

CleanBC is driving job creation, but the plan to train and transition workers remains outstanding:

Stakeholders flagged a disconnect between CleanBC's rhetoric on job creation and follow-through investments in workforce development,

including training and transition. The province risks a scenario in which skilled labour availability curtails progress in installing clean technologies, and building the infrastructure and clean electricity supply needed to increasingly electrify transportation, buildings, and industry.

Overly ambitious targets can be counterproductive:

Unrealistic targets can backfire—resulting in policies that are too costly, too unpopular to sustain, or that provoke a strong negative response from citizens or impacted businesses. Examples include CleanBC's overall 2030 target, those for reducing natural gas utility emissions and light-duty vehicle-kilometres travelled (VKT), and the 2030 EV sales target. Further, carbon pollution reductions are reported two years after the fact, and as such are a lagging policy and program success indicator. As an alternate approach, the government could track both leading (e.g. adoption rates of EVs and heat pumps) and lagging (climate pollution) indicators.

Government needs to improve internal coordination and communications:

Stakeholders told us the government is falling short on internal coordination and external communications. Recognizing CleanBC requires an "all of government" effort, they said government must embed climate action and the energy transition into its other priorities, including jobs and skills training, economic growth, affordability, health care, and community safety. This will require the government to use new approaches to understand the fiscal costs of climate change and the societal cost of climate pollution. The province can do more to explain how CleanBC policies also help solve many of the other issues confronting our communities today (affordability, health, jobs and economic growth etc.), as well as more actively countering mis- and disinformation.

Building electricity supply and infrastructure proactively to meet growing demand

Building electricity supply and infrastructure proactively to meet growing demand – The New York State Public Service Commission recently approved a long-term proactive planning framework for the state's major electric utilities that essentially turns the traditional electricity planning approach on its head. It enables utilities to assess the infrastructure they will need to support broad electrification, and identify the most cost-effective up-front investments that will minimize ratepayer impacts while supporting policy goals. The regulator conceded that this proactive planning process is now necessary to ensure the grid will be up to the task of serving the state's future needs. [39]

39 Commission Advances New Proactive Grid Planning Proceeding to Prepare New York's Electric Grid for Building and Vehicle Electrification. New York State Public Service Commission. September 28, 2025.

BC Hydro is on track to meet 2030 electricity demand

BC Hydro estimates that electricity demand will increase 15% by 2030 compared to 2021. To meet this need, BC Hydro has added or is adding the following resources:

- **Site C is delivering 1,230 MW of capacity (greater than the expected 1,100 MW)**
- **BC Hydro's 2024 Call for Power resulted in 10 new renewable energy projects—primarily wind, with one solar project—that will generate approximately 4,830 GWh annually, enough to power half a million new homes**
- **Efficiency measures will save 2,000 GWh of electricity annually, enough to power 200,000 homes**
- **These actions will add 19% new supply to the province's electrical grid. Beyond 2030, the province's second clean power call will add another 5,000 GWh/year, and additional calls are anticipated.**

What the **energy transition** means for **B.C.'s energy system**

All stakeholders consistently agreed that achieving CleanBC targets would require a significant ramp-up in clean-energy supplies—electricity, biofuels, RNG, and hydrogen. Yet the government has not delivered a corresponding plan to ensure it arrives when and where it's needed. A backgrounder describing B.C's energy system and its transition to cleaner energy can be found in *Appendix F*.

1. B.C.'s clean electricity supply needs to keep pace — that requires a shift in planning and procurement

Participants noted that the government did not provide BC Hydro with sufficient direction or clarity on the required pace and scale of new electricity supply and associated distribution-system upgrades. This contributed to the current situation in which the utility is now perceived to be playing catch-up and is rapidly procuring new resources, allowing it to meet forecast needs to 2030.

Numerous stakeholders emphasized that, while BC Hydro has made great strides in recent years, it will need to deepen and accelerate its efforts to expand and modernize the province's electricity system. As noted in *Powering our Future: B.C.'s Clean Energy Strategy*, research from public and private organizations alike suggest that B.C.'s electricity use "will likely double from current levels in order to keep up with population and economic growth, transition from fossil fuels, and achieve net zero emissions by 2050."

Given the long timelines inherent in developing new supply and transmission, some stakeholders noted that the province and the energy regulator must allow BC Hydro to build more proactively—i.e. to the "high load scenario" of its integrated resource plans. This would ensure electricity availability does not constrain economic development and electrification.

2. Clarity is needed on the transition to renewable and low carbon gases

And what about gas utilities? Other than demand-side management measures, biomethane, or renewable natural gas (RNG), offers the most obvious and readily available mechanism to reduce climate pollution.

Numerous Canadian assessments project that, while total gas use will decline in the wake of rising heat pump adoption, gas systems will continue to play a role supplying dual-fuel heat pumps.[40] But if gas utilities are to align with a net-zero pathway, their pipes will need to be shipping RNG.[41]

That's why CleanBC directed gas suppliers to ensure their fuel contained at least 15% RNG by 2030, a directive reaffirmed in the CleanBC Roadmap to 2030. While the government has enabled FortisBC—the province's largest gas utility—to both acquire and produce RNG, it has yet to establish a regulatory requirement.

The volume of RNG that FortisBC sources within the province for its customers remains limited. As a result, the company uses a "book and claim" approach which involves acquiring the environmental attributes of RNG produced elsewhere in Canada and the United States.[42] Some experts have expressed concern about the potential for gas sector actors to double-count these credits. They point out that in-province companies only filled 14 to 17% of

---

40 For example, see Heat Exchange: How today's policies will drive or delay Canada's transition to clean, reliable heat for buildings. Canadian Climate Institute. 2024.

41 Charting Space Heating Futures: Toward a Blend of Electrification and Renewable Gas. IESVic Energy Brief. Knittel, T.; Wild, P.; Rowe, A. 2025.

42 In light of concern about this practice, the BCUC has initiated a Review of Renewable Natural Gas Definition and Accounting that aims to "examine the BCUC's definition of renewable natural gas and the sufficiency of mechanisms for ensuring that greenhouse gas emissions associated with biomethane purchased from projects located outside of B.C. are properly accounted for."

What's the role for hydrogen in B.C?

Stakeholders noted that the province should consider revisiting its B.C. Hydrogen Strategy released in 2021. They suggested that technology and market prospects for domestic hydrogen production and use—and potential exports—have significantly dimmed, and the strategy should be revised to reflect current knowledge. For example, battery electric vehicles (BEVs) long ago eclipsed passenger hydrogen fuel cell electric vehicles (FCEVs) and while hydrogen may play a role in other vehicle classes, these too are worth revisiting. Similarly, the potential for hydrogen to play a role in building heat is unlikely.[44] A comprehensive expert review of 54 independent studies found none that supported the use of hydrogen for building heat at scale; most concluded that heating with hydrogen is both less efficient and more costly.[45] However, some opportunities remain in delivering zero-carbon industrial heat.[46]

FortisBC's total RNG demand, with the remainder coming from other jurisdictions ; more than two-thirds of the credits originated in the United States.[43] That country recently withdrew from the Paris Agreement, which effectively disallows formal transfers of emission-reduction credits from the U.S. to Canada under Article 6.

3. The electricity and gas systems need to be integrated and optimized for reliability, security and affordability while cutting climate pollution

Peak demand refers to the highest amount of energy that a utility must be prepared to provide at any one time. The condition occurs once a year, and often for just a few days or hours. The province and the BC Utilities Commission (BCUC) require B.C.'s electricity and natural gas utilities be ready to handle their respective peak demand, ensuring they will always meet the province's energy needs.

Today, most of British Columbia's buildings are heated with natural gas. While gas utilities will continue to play an important role through the clean-energy transition, the specifics remain unclear. In the CleanBC Roadmap to 2030, the government committed to driving down gas-sector climate pollution, but four years later it has still yet to develop a policy mechanism that would do so.[47] The resulting uncertainty has challenged the electricity utilities' ability to effectively plan and the BCUC's ability to effectively regulate.

For example, BC Hydro's *Integrated Resource Plan* and FortisBC's *Long-term Gas Resource Plan* are premised upon differing assumptions and, as a result, paint different pictures of the province's energy future and their respective roles within it.

43 B.C. has a math problem with renewable natural gas. Nancy Olewiler, Kathryn Harrison and Kate Harland. Canadian Climate Institute. March 12, 2025.

44 A meta-review of 54 studies on hydrogen heating. J. Rosenow. Cell Reports Sustain, 1 (2024).

45 A meta-review of 54 studies on hydrogen heating. J. Rosenow. Cell Reports Sustain, 1 (2024).

46 For example, see Electrification or Hydrogen? The Challenge of Decarbonizing Industrial (High-Temperature) Process Heat. Leicher, J.; Giese, A.; Wieland, C. 7, 439-456. 2024.

47 The CleanBC Roadmap to 2030 (2021) committed to introduce a GHG emissions cap for natural gas utilities—limiting emissions from gas used in buildings and some industries—set at ~6 Mt CO_2e in 2030 (about 47% below 2007 levels).

Ultimately, both can't be correct, which creates risk and potential future costs for ratepayers.

While the government, BCUC, and electricity and gas utilities have each taken preliminary steps to integrate and align planning efforts across and between the gas and electricity systems, government must now accelerate and formalize these efforts. While the process can be messy at first, an integrated approach to electric and gas distribution system planning could lead to fewer redundant investments, more affordable bills, improved reliability, and more efficient administrative processes.[48]

Meanwhile, an uncertain and unmanaged transition presents a whole range of risks and costs to ratepayers,[49] including potential equity impacts on electric and gas ratepayers. Some noted that the equity issue could be addressed, in part, through a new approach to low income or income-based rate design. The California Public Utilities Commission is currently rolling out income-graduated fixed charges,[50] and its counterparts in Oregon, Illinois, New York, and Colorado are similarly advancing the approach.[51]

Utility demand side management could play an even bigger role

B.C. is the only province to require utilities to consider demand-side management as a resource prior to supply-side investments. While B.C's utility DSM performance compares relatively favourably in Canada, leading American states are consistently achieving savings rates greater than 1% of sales in both categories.

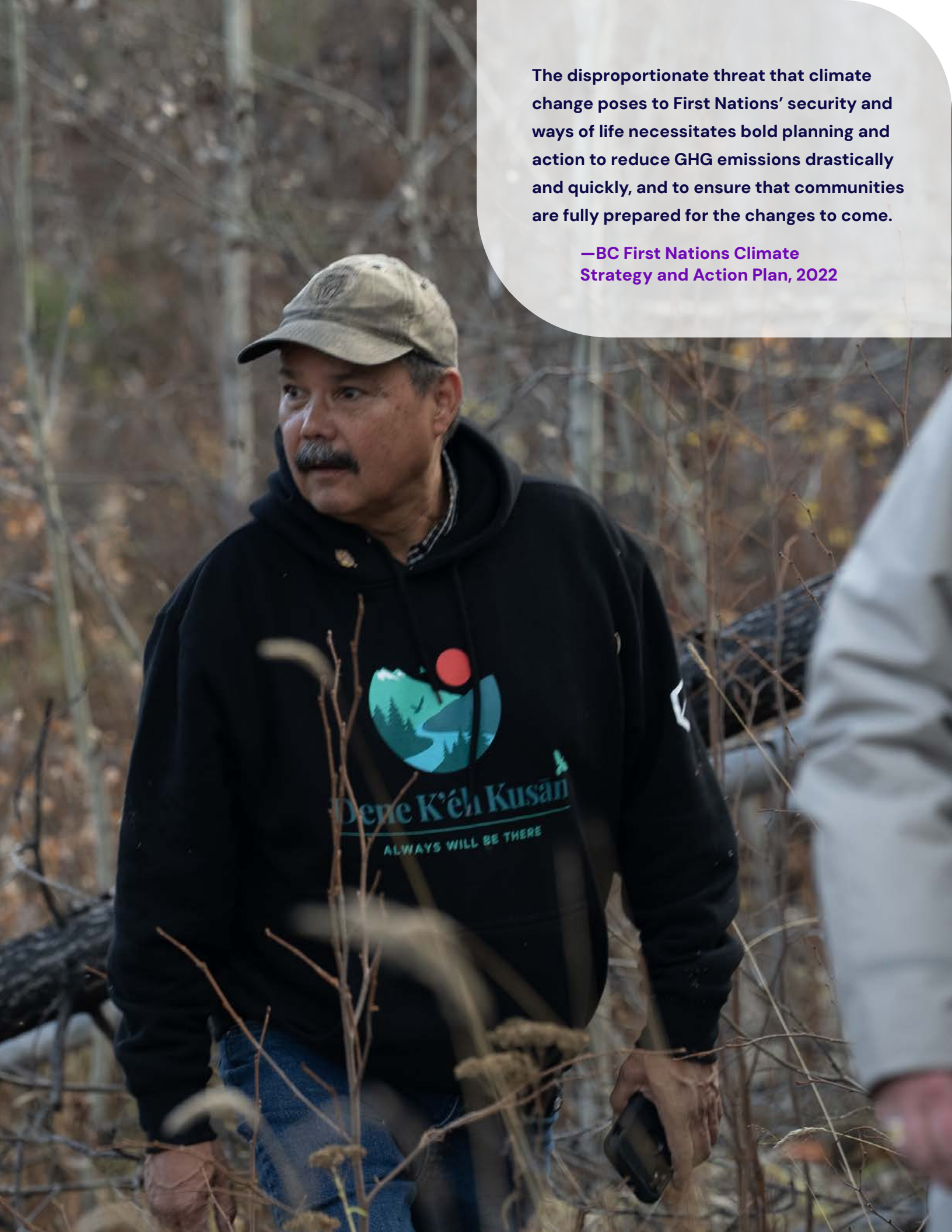
Some stakeholders observed that this is a result of utilities choosing to not target all cost-effective energy efficiency in their resource plans, citing risks of failing to meet targets. They pointed to Massachusetts as an example to follow, where utilities are required to meet energy needs first with "all available" cost-effective options, ahead of supply. Similarly, an Oregon statute requires electric companies to plan for and pursue all available cost-effective efficiency (and demand response), treating it as a resource in integrated resource planning and acquiring it before new generation.

48 Opportunities for Integrating Electric and Gas Planning. Regulatory Assistance Project and Berkley Lab. January 2025.

49 As an example of the cost that can accompany policy uncertainty, in FortisBC's 2022 Generic Cost of Capital proceeding, it argued for an increase on its return on equity given the risk "apparent in the provincial government's recently updated CleanBC Roadmap to 2030," which committed to place a cap on and then reduce utility gas emissions. The BCUC ultimately agreed that FortisBC's "overall business risk has increased since 2016… most significantly attributable to the increase in political risks associated with the Energy Transition" (i.e., transition risk and policy/technology uncertainty) and increased both its deemed equity thickness and return on equity, costs ultimately borne by ratepayers. See Generic Cost of Capital Stage 2 Order Number G-321-24. November 29, 2024. British Columbia Utilities Commission.

50 CPUC Proposal Would Cut the Price of Residential Electricity Under New Billing Structure and Accelerate California's Clean Energy Transition. California Public Utilities Commission. May 9, 2024.

51 See Oregon House Bill 2475, Illinois Updates on Upcoming Low-Income Discount Rates, New York's Energy Affordability Guarantee Pilot Program, and Colorado's Percentage of Income Payment Plans approach, respectively.



The disproportionate threat that climate change poses to First Nations' security and ways of life necessitates bold planning and action to reduce GHG emissions drastically and quickly, and to ensure that communities are fully prepared for the changes to come.

—BC First Nations Climate Strategy and Action Plan, 2022

Indigenous reconciliation, **DRIPA** and **CleanBC**

Climate change is not an abstract concept in British Columbia; it is lived experience. And while all British Columbians will by now have experienced its impacts, the burden on First Nations is particularly heavy. Indigenous people are enduring repeated emergency evacuations, losing homes and community buildings, facing threats to food sources and cultural practices, and even grieving the loss of loved ones. These impacts compound historic inequities and bolster the case for urgent, sustained action.

Many First Nations communities are leading the way. They are advancing clean energy projects, restoring ecosystems, strengthening emergency preparedness, and building local capacity. These initiatives are creating jobs, reducing emissions, and protecting communities. Views differ on the issue of fossil fuel extraction among the 204 First Nations. Some are actively pursuing LNG projects and see them as an opportunity to advance economic reconciliation. Others staunchly oppose the projects—citing their contributions to climate pollution and impacts on the land, water and air.

Contributors to this review cited the Community Energy Diesel Reduction (CEDR) program as an example of positive progress and effective collaboration.[52] Others expressed enthusiastic support for BC Hydro's requirement that projects bidding in new calls for power require Indigenous equity participation. Participants cited the 2024 call for power—which delivered 10 new renewable-energy projects with First Nations asset ownership between 49% and 51%—as a significant success.

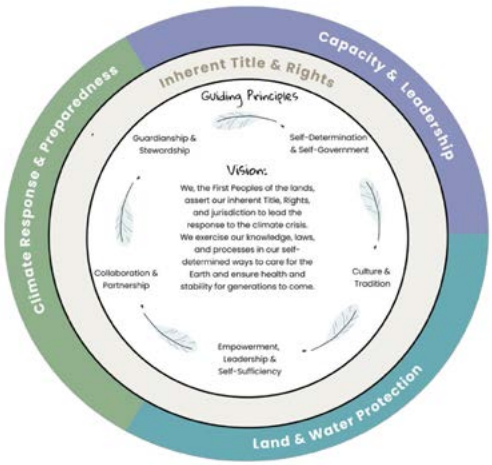
First Nations have been clear that the next phases of CleanBC should be co-developed—designed and delivered together, from the outset, with shared decision-making and accountability.

First Nations have already articulated a path forward for climate leadership. The First Nations Leadership Council created the BC First Nations Climate Strategy and Action Plan, which expresses a shared vision, five guiding principles, and four priority pathways for climate action, alongside climate pollution reduction targets (*Figure 6*). The plan provides a values-based foundation and practical direction for action, centered around resilience, self-determination, and stewardship.

The province has an opportunity to evolve CleanBC into a shared project that fully reflects DRIPA, honours UNDRIP, and is shaped by Indigenous knowledge and leadership. Doing so would make B.C.'s climate plan more just, more effective, and more durable. It would also help distribute the benefits of climate action—healthier communities, good jobs, safer homes, and thriving lands and waters—across the province, especially in the places where climate impacts will hit hardest.

By co-developing the next chapters of CleanBC in partnership with First Nations, B.C. can move faster, go further, and build a climate-safe future rooted in rights, respect, and responsibility.

Figure 6: First Nations Leadership Council vision, principles and priority pathways for climate action



52 Under CEDR $27.3 million committed to 24 remote communities since 2022; ~1 million litres of diesel will be reduced by 2025. See Remote First Nations transitioning from diesel to clean energy, Government of BC. December 2, 2024. BC Hydro has been developing a non-integrated areas strategy to improve access to renewable, reliable and affordable energy. See Non-integrated area community renewable energy projects, BC Hydro.


SIEMENS
energy
HUSKY

Policies and programs: what's working, what's not, and opportunities for improvement

While CleanBC includes 75 policies and programs, there were six that garnered the most significant and substantive feedback, and which collectively cover the largest sources of climate pollution in the province. For each, we document the range of input we received regarding what's working, what's not, and how these policies and programs could be refined and improved.

1. Methane regulations are driving down climate pollution

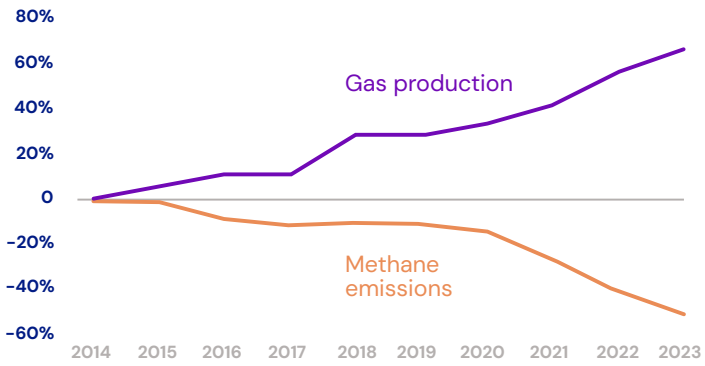
Methane is among the more potent of all the greenhouse gases. Over a 100-year period, its warming potential is at least 28 times that of carbon dioxide. Scientists estimate it is responsible for a staggering 30% of all planetary warming to date.[53]

Recognizing this, the provincial government has long held a target to reduce methane emissions 75 percent below 2014 levels by 2030—and to all-but eliminate them by 2035. It began enforcing methane regulations for the upstream oil and gas sector in 2020 and further tightened them in early 2024.[54]

These regulations are working. Between 2014 and 2023, the industry increased natural gas production by 67%, while cutting associated methane emissions in half (*Figure 7*). Environment and Climate Change Canada estimates the regulations averted the release of 2.85 million tonnes (MT) of methane between 2020 and 2024.[55]

During consultations for this review, stakeholders from multiple sectors pointed to the collaborative process that gave rise to these regulations as an effective model. Because gas producers can sell the methane that would otherwise have been vented or leaked, a considerable share of the cost of reductions pay for themselves. With export customers now beginning to attach value to lower-emissions energy, effective methane regulations can bolster the industry's competitiveness.[56]

Figure 7: Change in B.C.'s annual gas production versus methane emissions



2. Low Carbon Fuel Standard is expanding clean fuel use

Since 2010, B.C.'s Low Carbon Fuel Standard (LCFS) has steadily reduced the carbon intensity of transportation fuels and expanded clean-fuel use (*Figure 8*). The government now targets 1.5 billion litres/year of in-province renewable fuel production by 2030 (supported by the LCFS and

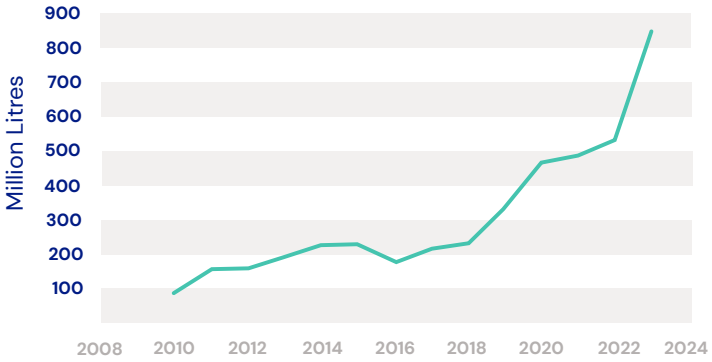
53 Reducing methane emissions. Government of Canada.

54 The BC Energy Regulator's methane framework targets the big emitters: pneumatic devices, equipment leaks, compressor seals, glycol dehydrators, storage tanks, and surface-casing vents, with mandatory reporting and thousands of inspections annually.

55 Canada Gazette Part II, Vol. 154, No. 8 (p.613)

56 Newly adopted European Union methane regulations are a game-changer. Pembina Institute. June 24, 2024.

Figure 8: B.C. renewable diesel consumption



related policies) and requires suppliers to cut fuel carbon intensity 30% below 2010 levels by 2030, alongside minimum renewable-content requirements. As of 2024, it had averted the release of more than 4.9 MT of greenhouse gas emissions that year alone, and more than 27.5 MT in total since 2010.

Year over year, lower carbon fuels are meeting an increasing portion of the province's transportation energy demand; of note, B.C. is amongst Canada's leaders for the proportion of renewable content added to diesel fuel.

In 2024 the scope of the LCFS expanded to include jet fuel, with a target of reducing carbon intensity by 10% by 2030, and renewable blending requirements commencing in 2028. This is an important step towards beginning to decarbonize aviation, and while there are challenges to overcome to scale up sustainable aviation fuel (SAF) production—which will require collaboration with fuel producers, the aviation sector and the federal government—B.C. is well-positioned to lead. The United States Air Force had emerged as an early champion of SAF, but has since backed away under President Trump. However, defense contractors continue to pursue SAF, and the Canadian Forces could play an important role in supporting this nascent sector in B.C.[57]

The LCFS has successfully created market demand for cleaner fuels which is, in turn, driving investment and supporting production jobs in Prince George, Burnaby, and Delta. That said, if the industry is to continue investing in production, it will likely need to see a clear outlook beyond 2030.

3. Cleaner transportation choices are being made, but targets are overly ambitious

British Columbians are choosing different ways to get around, from switching from internal combustion engine (ICE) vehicles to electric vehicles (EVs), to riding public transit, to walking and rolling.

The province has implemented a strong mix of policies and programs to make it easier and more affordable to choose an EV. The Zero Emission Vehicle Act (ZEVA), and its regulations, requires automakers to sell an increasing percentage of EVs on an annual basis. Not only has this increased vehicle supply, model diversity, and competition, it has also provided a clear market signal to EV charging companies.

ZEVA is complemented by consumer education campaigns, rebates (these are currently paused), a former PST exemption for used EVs, and major investments—through BC Hydro—in public and residential charging infrastructure. These efforts have paid dividends. By the end of 2024, there were nearly 195,000 EVs on B.C.'s roads, averting the release of about half a million tonnes of climate pollution each year.[58] EV adoption is growing as planned: By the end of 2025, the province had anticipated its policies would put about 210,000 battery-electric cars on B.C roads (*Figure 9*). It reached that goal six months ahead of schedule.

In 2022, the province significantly improved the equity of its light duty EV purchase incentives by scaling them to income. This helped increase the accessibility of electric cars to lower- and middle-income drivers.

Meanwhile, the province's Go Electric Commercial Vehicle Pilots program and Go Electric Rebates have supported the adoption of commercial ZEVs, including on-road and off-road medium- and heavy-duty trucks, vans, buses, marine vessels, and cargo-handling equipment at ports and airports.

57 Defense Industry Investing In Alternative Aircraft Fuels. National Defense. August 8, 2025.

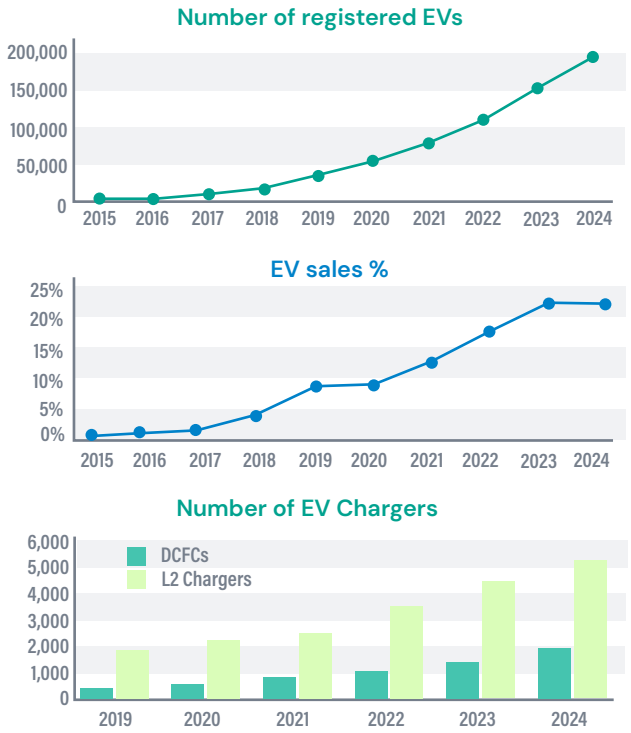
58 This estimate is based on a per vehicle reduction of 2.49 t CO_2e / yr and considers the average mix of battery electric vehicles to plug-in hybrid electric vehicles (~80:20), an average of 15,000 kilometres driven, and an average gasoline vehicle efficiency of 8L/100km, and the emission intensity of B.C.'s electricity grid.

Charging access has also rapidly expanded. By the end of 2024, British Columbians could tap into more than 7,000 public charging ports, and the province had completed its B.C. Electric Highway network of 155 fast-charging sites spaced roughly 150 kilometres apart along all major routes.[59] While this growth is impressive, the ratio of EVs to chargers in the province still lags leading jurisdictions. Amongst EV owners in the province, seven in 10 say they are less than satisfied with the number of public fast chargers available.[60]

However, the persistent price gap between EVs and their gas-fuelled rivals, President Trump's tariffs on the auto sector, and rules restricting imports from abroad (including Chinese EVs), continue to hamper adoption—especially given persistent cost-of-living challenges.Most transportation-sector stakeholders remain bullish on continued EV adoption in B.C. However, they generally agree that the province will not achieve its target of 90% EV sales by 2030, and that it should reset to more achievable targets and additional regulatory flexibilities. Other stakeholders argued against the currently legislated 2035 ban on internal-combustion-engine vehicles, arguing there may still be some places or use cases where they are necessary. Some suggested that the regulation should broaden to include conventional hybrid electric vehicles (HEVs), which are unable to run on battery alone, as a compliance option, while others presented strong counter-arguments.[62]

Review participants also emphasized that a shift to cleaner fuels and EVs will not address the numerous other issues that arise from continued vehicle reliance, including public expenditures on road construction and maintenance, economic impact of time lost to congestion, air and noise pollution, and more.[63] Transportation-sector stakeholders expressed uniform disappointment that the province did not deliver its long-

Figure 9: Recent statistics on EVs in B.C.



Going electric keeps more money in your pocket

An early-2025 survey of more than 5,100 British Columbia EV drivers confirmed what analysts have long suspected: Going electric keeps more money in your pocket. Compared with their previous gasoline vehicles, 97% reported lower fuel costs, while 90% reported reduced maintenance expenses.[61] Eighty-three percent have a charger at home, and most said they drive less than 100 km a day—far below the 400 km+ average range of today's EVs.

59 Zero-Emission Vehicle Update - 2024. Province of British Columbia..

60 Lack of fast and reliable public charging tops the list of challenges for B.C. EV owners, says CAA survey. January 14, 2025.

61 Lack of fast and reliable public charging tops the list of challenges for B.C. EV owners, says CAA survey. January 14, 2025.

62 Numerous stakeholders shared arguments against incorporating conventional hybrid vehicles under Zero Emissions Vehicle Act regulations, including: (i) They're not actually zero-emission. HEVs still burn gasoline on every trip, so tailpipe CO_2, NOx, and PM persist. ZEV rules exist to eliminate tailpipe pollution, not just reduce it; (ii) Only a small, uncertain climate benefit. Typical HEVs cut fuel use approximately 20 to 35% versus comparable ICE cars—helpful, but far short of the deep cuts needed this decade; (iii) Dilution & delay. Giving credits to HEVs lets automakers meet targets without scaling true ZEVs (BEVs/PHEVs), slowing battery supply chains, charging build-out, and learning-curve cost declines; (iv) Muddled market signal. ZEV mandates work because they're simple: sell vehicles with zero exhaust. Counting HEVs blurs that line and risks confusing consumers; and (v) Administrative complexity. You'd need per-model crediting, real-world usage adjustments, and enforcement to avoid gaming—adding cost and controversy for modest gains.

63 Beyond Electric Vehicles: The imperative to think together to reach our transportation and climate goals. Renewable Cities—SFU. 2025.

promised Clean Transportation Action Plan, despite significant consultation.

Review participants flagged a range of encouraging public-transit indicators, including the strong post-pandemic ridership; passenger trips surged 134% to reach 290 million. Transit and school bus fleets are also electrifying, and upgrading depots to support charging infrastructure. However, stakeholders concurred that B.C. is falling short of its public-transit potential, and that BC Transit and TransLink still lack an enhanced and sustainable funding model.

The province is also supporting active transportation through investments that provide cyclists with safe and more direct connections to schools and jobs. In its 2023 budget, the province committed $100 million to fund such active transportation infrastructure over three years.[64] While this represented the province's largest investment of its kind until that point, given active transportation's extensively documented co-benefits, the amount is modest. (To put it into perspective, the funding amounts to 0.2% of the $5 billion the province subsequently directed to widening Highway 1 through the Fraser Valley.[65])

An independent analysis of the province's income-tested e-bike rebate program concluded it generated new (marginal) e-bike purchases and displaced vehicle use. The researchers recommended minor modifications that would improve a future iteration of the program.[66] Beyond reducing climate pollution, active transportation affords significant health benefits; a growing body of evidence suggests the dollar value of public-health gains often exceeds the cost of infrastructure investments. [67]

The CleanBC Roadmap to 2030 update included a target that, by the end of this decade, at least 30% of trips made by British Columbians would be on foot, bike, or transit. While transportation stakeholders lauded that goal, most agreed it was more ambitious than achievable.

Stakeholders broadly agreed that the benefits of shifting travel to transit and active modes extend well beyond reducing climate pollution, and include enhancing affordability, improving economic productivity, and cleaning the air. Recognizing this broad societal value, participants underscored the imperative for a sustainable funding model that would pay for both public transit and active transportation infrastructure. They urged the province to take up this challenge and not narrowly consider these investments as CleanBC line items.

4. Cleaner heat and efficient buildings are cutting bills and pollution

CleanBC targeted climate pollution from buildings—from residential to commercial and institutional—using several different approaches. These include using the Energy Step Code to make new buildings more efficient and the subsequent Zero Carbon Step Code to reduce their carbon footprint. Others include rebates and other support programs (e.g. workforce training) to encourage consumer adoption of electric heat pumps, and a target of 15% renewable natural gas (RNG) by 2030.

B.C.'s Energy Step Code[68] allows local governments to set energy-efficiency requirements for new buildings that exceed those set out in the base building code. It provides a step-by-step path to reach the province's target of 100% net-zero energy–ready construction by 2032. Each "step" represents a higher level of energy efficiency performance that building inspectors confirm via models and tests.

64 "Backgrounder: Advancing B.C.'s strong, sustainable economy." Budget 2023 takes action on issues that matter most. Government of BC. February 28, 2023.

65 "New Highway 1 investment will get people home sooner." Government of BC. August 14, 2024.

66 Travel, Environmental, and Equity Impacts of Income-Conditioned E-Bike Rebates in British Columbia. Polikakhina, P., Hassanpour, A., Yu, K., Winters, M., Bigazzi, A., 2025.

67 An economic analysis of the health-related benefits associated with bicycle infrastructure investment in three Canadian cities. Whitehurst DGT, DeVries DN, Fuller D, Winters M. PLoS ONE 16(2): e0246419. 2021.

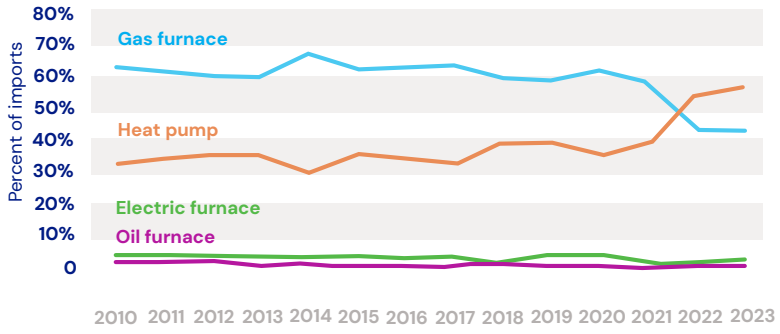
68 BC Energy Step Code. Government of BC.

Local governments can choose which step to require in their building bylaws, and on what timeline, allowing builders and communities to improve efficiency gradually while gaining experience with new materials, technologies, and techniques. Stakeholders broadly agreed it was affordable and effective through the so-called Lower Steps. However, many said that the Upper Steps for homes—and similar smaller and simpler buildings—introduce significant additional costs that outweigh the benefits.

B.C.'s Zero Carbon Step Code,[69] a sibling regulation, allows local governments to set limits on the climate pollution that new buildings may produce. It complements the Energy Step Code by targeting emissions rather than just energy efficiency. The regulation outlines four tiers, each requiring progressively lower greenhouse gas emissions, leading to the government's ultimate goal that all new buildings must produce zero operational climate pollution by 2030. We heard that a diversity of stakeholders, including many builders, support the Zero Carbon Step Code. It is seen as affordable, effective, and achievable, up to and including its top tier.

CleanBC policies and associated incentive programs have also steadily increased heat-pump adoption. The 2021 heat dome and increasingly frequent extreme heat events have spurred homeowner interest in active cooling, which heat pumps provide. Between 2017 and 2022, the number of heat-pump equipped B.C. households increased by approximately 80% from an estimated 142,000 to 254,000 units. And in 2022 and 2023, for the first time, distributors brought in more heat pumps than natural-gas furnaces, signaling a pronounced market shift (*Figure 10*).[70]

Figure 10: B.C. shipment data: residential forced air heating equipment



In 2024, the Zero Emissions Innovation Centre surveyed British Columbia builders to better understand their views of the increased energy and carbon requirements in jurisdictions using the Energy Step Code and Zero Carbon Step Code.

Eighty-one percent of respondents said they were already meeting elevated carbon and energy efficiency requirements, and were very confident that their companies would be able to meet the province's target that all new buildings must achieve zero operational climate pollution by 2030.

Survey respondents also stated that energy and emissions requirements do not significantly increase the costs to develop new housing, nor do they materially affect the speed of housing development.

Further, 85% of respondents indicated they foresee either a major or moderate increase in market demand for climate-friendly, energy-efficient homes with better indoor air quality by 2030.

Heat pumps are a bone fide CleanBC success story: Thanks to recent incentives, including support for lower-income households, roughly 13% of the province's homes now use them.[71] Further, until recently, many B.C. households also helped finance their heat pump purchases via the federal government's Canada Greener Homes program.

While this province has made great progress, other leaders show what's possible: Adoption rates in Atlantic Canada range between 20 and 30%, and heat pumps are the mainstream choice

69 Zero Carbon Step Code. Government of BC.

70 Powering Our Future: BC's Clean Energy Strategy. Government of BC. June 2024

71 Powering Our Future: BC's Clean Energy Strategy. Government of BC. June 2024

Heat pump rebates are playing a big role helping drive adoption

CleanBC's Energy Savings Program covers a large share of costs for switching to heat pumps (often up to ~$19k–$24.5k for income-qualified households in single-family homes, including related electrical work). Amounts vary by income, heating fuel, and system type. Numerous stakeholders noted the importance of sustaining rebates to continue to make it easier for households to adopt heat pumps—reducing climate pollution and, in many cases, energy bills—and continue to drive market transformation. The government's recent development of an incentive providing up to $5,000 toward high-performance electric heat pumps for strata/rental suites in multi-unit residential buildings (MURBs) was seen as filling what had been a significant gap.

in Norway (~63%) and Finland (~52%). B.C. is on the right track, and with sustained policy certainty, targeted incentive offerings, and continued scaling, it can close the gap and lock in cleaner, more affordable heating for more British Columbians.

Also on the buildings front, the CleanBC Roadmap to 2030 referenced the province's intention to develop a Highest Efficiency Equipment Standard (HEES).[72] As proposed, the rule would require any new or replacement space- and water-heating equipment sold and installed in B.C. to be at least 100% efficient. The government consulted stakeholders on HEES, but has yet to finalize it.

In practice, HEES would make electric resistance heaters and heat pumps the default options; conventional gas and oil furnaces, boilers, and many commercial rooftop units would no longer be available. However, hybrid systems (e.g., an electric heat pump with limited gas backup) and gas absorption heat pumps would still be allowed, provided they met the efficiency threshold. Whereas the step codes work to transform the market towards cleaner and more efficient heating in new buildings, the HEES regulation would address equipment in existing buildings. It would not force building owners to replace existing and functioning fossil fuel equipment, but rather require its replacement with a cleaner option at its end of life.

Some building-sector stakeholders were mistakenly under the impression that HEES would require buildings to disconnect existing homes and buildings from the gas system. In fact, as proposed, the policy would primarily target space and water heating equipment. It would not impact gas cooking appliances, barbecues, and decorative fireplaces.

Review participants broadly identified HEES as a critically important policy that should be finalized in short order, complemented by continued and targeted incentives and rebates to drive market transformation in heat and hot water systems, develop the workforce, and drive adoption.

All building-sector stakeholders emphasized the continued importance of rebates, incentives and other forms of support, and broadly agreed that such incentives must be predictable, accessible, and available for diverse building types.

72 Highest Efficiency Equipment Standards—Regulatory Consultation. Government of BC. December 22, 2023.

5. The price on industrial carbon pollution is working and protecting competitiveness

Since April 2024, the Output Based Pricing System (OBPS) has priced the portion of a given industrial facility's emissions that exceed a specific output-based limit.[73]

The OBPS replaced the CleanBC Industrial Incentive Program and, to align the province's system with the federal government's backstop, follows the federal carbon-price path. [74] Companies that produce one of a range of products subject to the regulation, for example, cement and aluminum, at facilities that emit at least 10,000 tonnes of carbon pollution per year, must participate in OBPS. The output based approach reduces the risk of so-called carbon leakage—that is, the practice of companies relocating their investment and operations to other unregulated jurisdictions—while protecting emissions-intensive, trade-exposed industries. [75]

Industry stakeholders and others recognized the OBPS as an economically efficient regulation because of its focus on lowest-cost abatement. It incentivizes companies to avert their "next tonne" of pollution, so long as doing so remains cheaper than paying the charge. Further, the OBPS is technology neutral and offers flexible compliance options; companies can change processes, switch fuels, invest in more efficient equipment, purchase credits from peers, or, to some extent, access eligible offsets.

Many stakeholders expressed appreciation for the OBPS as a policy tool that will help ensure competitiveness while preserving access to what will increasingly be critical markets. Many of Canada's largest trading partners are steadily building clean economies (*Figure 11*), and some are advancing carbon border adjustment mechanisms. By driving low-carbon competitiveness, B.C.'s industrial carbon pricing system is ensuring those economies will remain open to our businesses. [76]

How industrial carbon pricing works in B.C.

Under B.C.'s industrial carbon-pricing system, the province assigns each individual facility an emissions limit based on the quantity of climate pollution it produces and the average emissions intensity of the product in question.

Companies that emit less climate pollution than their facility limit earn credits for each tonne they avoid, which they can then either bank or sell. Should a company exceed its allowance at a given facility, it must pay the carbon price on that amount, or cover it with a limited number of credits or offsets.

The government gradually tightens the standard by 1% per year, encouraging continuous improvement. It also steps up the carbon price each year, from$80 per tonne in 2024 rising to$170 per tonne in 2030.

The B.C. Carbon Registry tracks all credits and offsets, ensuring transparency and accountability.

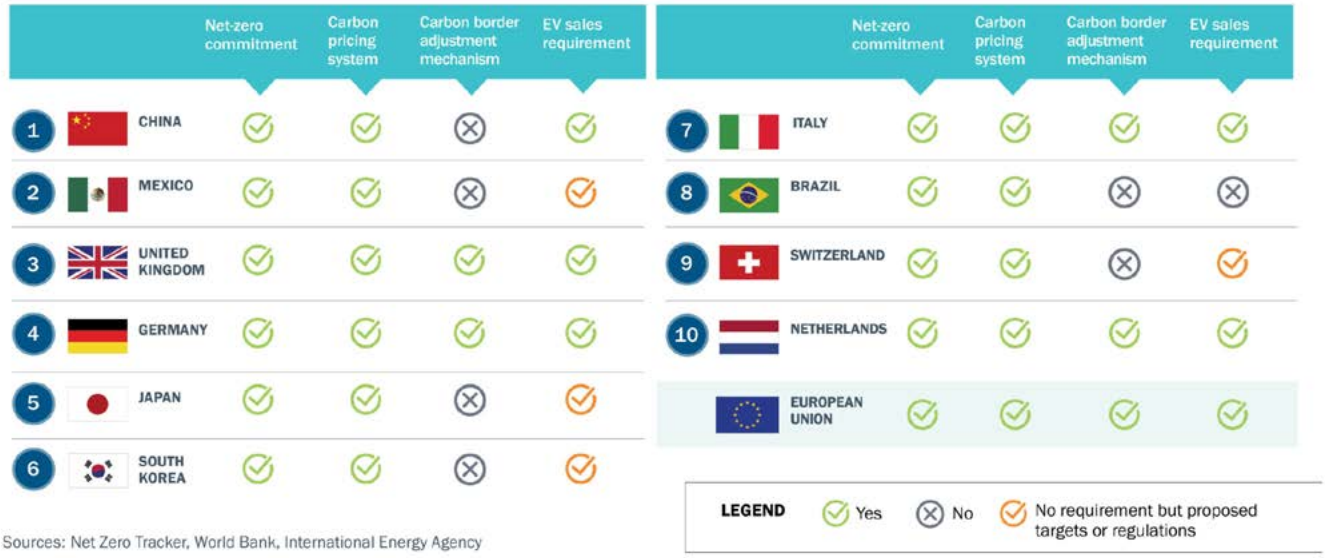
73 B.C. Output-Based Pricing System. Government of BC.

74 Following engagement with provinces, territories and Indigenous leaders, the federal government's minimum price on carbon pollution will increase by $15 per tonne per year starting in 2023 (from $65/t) through to 2030 (reaching $170/t). See The federal carbon pollution pricing benchmark. Government of Canada.

75 By charging only above a performance-based limit, costs scale with relative emissions intensity—not gross output—so producers that are efficient (or improve) face lower effective costs while still seeing a price signal on the marginal tonne

76 For example, the EU's Carbon Border Adjustment Mechanism will require importers to report embedded emissions (now) and surrender certificates linked to the EU ETS price (from 2026/2027). Where an equivalent carbon price was already paid abroad, the number of CBAM certificates can be reduced—so having a credible, Measurement, Reporting, and Verification-based pricing system like B.C.'s OBPS (with audited reporting and a recognized carbon price) helps exporters document carbon costs and embedded emissions for EU buyers.

Figure 11: Canada's 10 largest non-US trading partners are building clean economies [77]



Sources: Net Zero Tracker, World Bank, International Energy Agency

Some stakeholders offered industry- or facility-specific suggestions whose detail was deeper than the scope of this review. However, company representatives commended the government's commitment to regularly review its approach to the OBPS while maintaining a predictable and stable signal that allows them to plan and invest in decarbonization. Stakeholders agreed that the province should continue to align with the federal government's pricing schedule and parameters, to preserve a clearly effective and made-in-B.C. system.

6. Local governments are key partners in CleanBC progress

B.C.'s local governments have a long history of partnering with the province on climate action. The 2008 Climate Action Charter first formalized this shared commitment to reducing emissions and achieving carbon neutrality. Today, local governments look to CleanBC when planning and implementing their own climate initiatives.

The province launched the Local Governments Climate Action Program (LGCAP) in 2022 to support climate action initiatives in local governments and Modern Treaty Nations. LGCAP provides funding and guidance to reduce climate pollution and build community resilience. It offers flexible funding, requires annual reporting, and promotes knowledge-sharing between recipients.

Some local government representatives said they appreciated the province's flexibility on how they may use LGCAP funds, which they said affords them opportunities to pursue more impactful policies and projects. However, others requested greater clarity from the province on how it prefers they put the funds to work. Local governments and other stakeholders expressed a strong desire to continue partnering with the provincial government on CleanBC, building on efforts and successes to date.

To further support local government efforts, participants broadly agreed that the province could improve coordination and data between ministries, Crown corporations, and local governments. Access to localized data is especially important to guide planning, prioritize investments, and track outcomes.

77 The World Next Door. Clean Energy Canada. April 2025.

Kelowna


RF05
SHELL

Squaring the circle of **LNG expansion** with climate security and economic diversification

In October 2018, just two months before the government released CleanBC, LNG Canada formally committed to move forward with Phase 1 of its Kitimat export terminal project. Two additional LNG projects have since followed suit: Woodfibre LNG, in Howe Sound near Squamish (April 2022), and Cedar LNG, also in Kitimat (June 2024).

Meanwhile, the province's Environmental Assessment Office has approved the proposed Ksi Lisims project; that facility's backers await a final investment decision, as do the partners seeking to advance a second phase of LNG Canada. And in the Lower Mainland, regulators continue to scrutinize the various components of FortisBC's Tilbury Phase 2 LNG expansion.

Should all of these proposed projects come to pass, they would collectively attract tens of billions of investment and would represent one of the largest waves of private investment in B.C's history. They promise thousands of jobs, new training opportunities, and long-term operational revenues for northern and coastal communities, including Indigenous partners with equity stakes. For the provincial government, with the appropriate policy framework, they offer potential near-term fiscal benefits and export revenues that can strengthen the province's economic base. They would also increase upstream gas production in the Northeast, and pipeline capacity to move the fuel to the Northwest Coast (See *Appendix G*).

Views among First Nations on LNG projects differ, with some actively pursuing facilities to advance economic reconciliation, and others staunchly opposed in light of their serious climate and environmental impacts.

Pro-LNG sector stakeholders highlighted the benefits that would arise from construction and operational jobs, local and regional economic benefits in the Northeast and Northwest, and increased provincial revenues. Other stakeholders challenged the predicted scale or even likelihood of economic benefits and public revenues, noting the volatility of gas prices and the magnitude of government support that would be needed to ensure the economic competitiveness of made-in-B.C. LNG.[78] The reliance on pre-fabricated steel modules made in Asia was also noted as reducing the jobs and benefits to B.C and Canada.[79]

On the one hand, some stakeholders noted that, relative to LNG produced in other markets, B.C.'s facilities would produce lower-carbon fuel—thereby offering a net climate benefit. But others noted that the industry would significantly increase this province's climate pollution (*Figure 12*), and that natural gas, whether liquified, or not, is a fossil fuel that, when combusted, releases climate pollution. Relative to competing energy sources, including renewables (e.g. hydro, solar, wind, etc.), geothermal, and nuclear, it is a high-carbon fuel.

Those championing LNG exports argue that they would displace coal-fired power in other markets, and that Canada may be able to secure emission reduction credits from those countries under Article 6 of the Paris Agreement.[80] However, most experts have concluded that any such drive to "offset" domestic emissions from LNG and gas production is unlikely to pan out as hoped.[81,82,83]

78 If current policies remain unchanged, by 2031, total federal and provincial support provided to the LNG sector will amount to $3.93 billion. See Launching a Loss: An inventory of government support for British Columbia liquefied natural gas. IISD. September 2025.

79 For example, LNG Canada sourced 192 modules from China for Phase 1 and Cedar LNG intends to source its floating LNG vessel from South Korea.

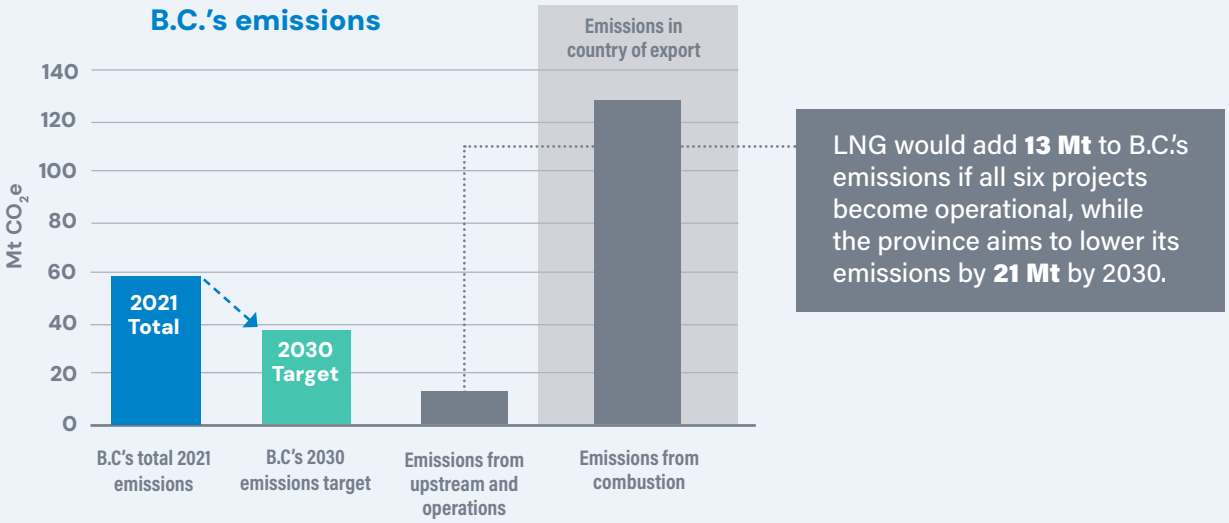
80 The Missing Article: How to get Canada back in the game on Article 6. Public Policy Forum. November 30, 2023.

81 Western Canadian Gas Exports: Opportunities and Risks in a Low-carbon World. Robert J. Johnston for First Nations Climate Initiative (FNCI). November 2023.

82 The inescapable math of emissions, LNG, and international trade. Canadian Climate Institute. June 5, 2024.

83 Credit Check Should Canada get climate credit for its liquefied natural gas exports? IISD. October 2024.

Figure 12: LNG and natural gas climate pollution in context, from production, transport and liquefaction in B.C. through end use combustion in export markets[88]



Projected LNG emissions assume full electrification of all terminals except LNG Canada Phase 1, plus partial electrification of upstream natural gas production. The degree of upstream electrification and associated emissions assumes all of B.C.'s proposed LNG projects to become operational by 2030 and allow the province to achieve its CleanBC 2030 target.

Keeping climate pollution from the natural gas and LNG sector as low as possible requires significant electrification, and doing so across all the proposed developments would consume staggering quantities of the province's clean electricity (see sidebar). This could in turn drive sizable opportunity costs, as the sector would compete with the other needs, such as critical-minerals mining and the electrification of transportation and building heat.

Stakeholders agreed that the province is well-endowed with clean-electricity resources, as well as a skilled workforce, efficient capital markets, predictable regulatory regimes, and secure property rights. But, they noted, it will be challenged to support every economic opportunity, especially in the near-term. And they are concerned that the government appears to be tackling the associated trade-offs and opportunity costs on an ad-hoc basis, through one-off decisions, rather than via a clear economic strategy or industrial policies that inform government (and BC Hydro) planning, fiscal and other policies, and prioritization.

Can electrification square the circle of LNG growth and climate targets?

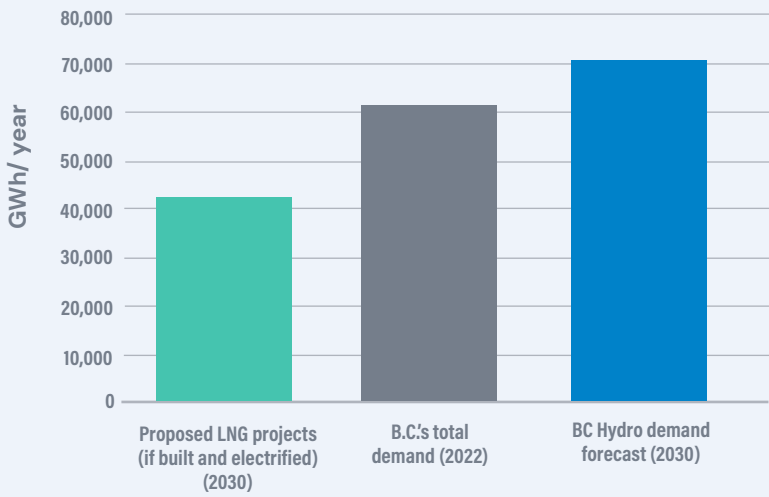
Compared with that produced by most other jurisdictions, B.C. produces natural gas with relatively lower carbon emissions. This is due to inherently lower carbon dioxide concentrations in the gas resource, combined with strong regulations that deter fugitive methane emissions and encourage the industry to electrify its production.[84] The lower carbon intensity of B.C. gas continues up the value chain to LNG exports, where both electrified (Cedar, Woodfibre) and non-electrified (LNG Canada) facilities either are, or would be, among the cleanest in the world.[85]

The province accounted for the emissions from LNG Canada Phase 1 and Woodfibre LNG in CleanBC's overall 2030 target, as well as its oil and gas sector-specific targets. But any additional LNG plants—and the upstream gas production and midstream gas transmission required to supply them—would add significantly to B.C.'s total emissions, unless their proponents build them to be net zero for Scope 1 (direct GHG emissions from operations) and Scope 2 (indirect emissions for the energy a facility buys) emissions.

Recognizing this, in March 2023, the province announced an Energy Action Framework that required all proposed LNG facilities in, or entering, the environmental assessment (EA) process to provide a credible plan to achieve net zero by 2030.[86] In March 2025, however, the government softened this requirement and now only asks developers to ensure their proposed facilities would be net-zero "ready" by 2030.[87]

Achieving net-zero emissions, or even being prepared to do so, would compel proponents to electrify nearly all aspects of their supply chains. However,British Columbia does not have sufficient electricity supply to enable them to do so. A recent estimate of the electricity needed to fully electrify all proposed LNG terminals except LNG Canada Phase 1—and partly electrify upstream gas production—concludes that the industry would need 40,000 GWh/year. To put that into perspective, that quantity of power roughly matches the output of 7.5 Site C dams (*Figure 13*).[88]

Figure 13: Electricity requirements to electrify LNG and some upstream gas production [89]



84 Decarbonizing British Columbia's Upstream Natural Gas. Pembina Institute. February 2025.

85 B.C. to have world's cleanest LNG facilities. Government of BC. October 20, 2014.

86 New energy action framework to cap emissions, electrify the clean economy. Government of B.C. March 14, 2023.

87 See the letter from the Minister of Energy and Climate Solutions to the Chief Executive Assessment Officer of the B.C. Environmental Assessment Office.

88 An Uncertain Future. Clean Energy Canada. March 2024.

89 An Uncertain Future. Clean Energy Canada. March 2024.

While some stakeholders pointed to bullish LNG demand forecasts, B.C.'s competitiveness, and the aforementioned climate benefits,[90] others pointed to significant uncertainty about demand in B.C.'s target markets for LNG, [91,92,93] alignment with a net zero future,[94] and B.C's relative competitiveness as an LNG exporter.[95] In the near term, an LNG supply glut, expected to persist through 2030, could push the commodity's prices to their lowest since Russia invaded Ukraine, sparking an energy crisis.[96] This uncertainty amplifies concerns about the opportunity costs of an aggressive LNG development push.

British Columbia is attempting to simultaneously meet ambitious climate targets and advance LNG and gas development. While current policy tools support reducing the gas sector's GHG intensity, the pace and scale of incremental climate pollution from new LNG projects, and increased gas production and transportation to supply them, would negate reductions from other sectors. Further, unlike Norway, for example, this province lacks a mechanism to ensure new fossil fuel investments contribute to clean technology growth, economic diversification, and long-term competitiveness in a low-carbon world.

The government must acknowledge that its climate, economic, and energy ambitions are tightly interconnected, and it must link these strategies and effectively integrate their delivery.

90 For example, see Exporting Canadian LNG to the World: A Practical Solution for Reducing GHG Emissions. Elmira Aliakbari and Julio Mejía, Fraser Institute. 2025.

91 For example, see Pipeline Availability Limits on the Feasibility of Global Coal-to-Gas Switching in the Power Sector. Yang, S., Hastings-Simon, S. & Ravikumar, A. P. Environ. Sci. Technol. 56, 14734–14742 (2022).

92 Banking on LNG exports is a high-risk gamble for Canada's future growth. Michael Sambasivam. Policy Options. April 23, 2025.

93 Western Canadian Gas Exports: Opportunities and Risks in a Low-carbon World. Robert J. Johnston for First Nations Climate Initiative (FNCI). November 2023.

94 For example, see Global liquefied natural gas expansion exceeds demand for coal-to-gas switching in paris compliant pathways. Shuting Yang et al 2022 Environ. Res. Lett. 17

95 For example, see Turning Tides: The economic risks of B.C.'s LNG expansion in a changing energy market. Maeve O'Connor, Carbon Tracker. October 2024.

96 Global LNG Market Faces Looming Supply Glut After Years of Scarcity. Shiryaevskaya, Anna, Ruth Liao, and Stephen Stapczynski. Bloomberg. September 7, 2025.


Teck

Principles to Guide B.C.'s Next Steps

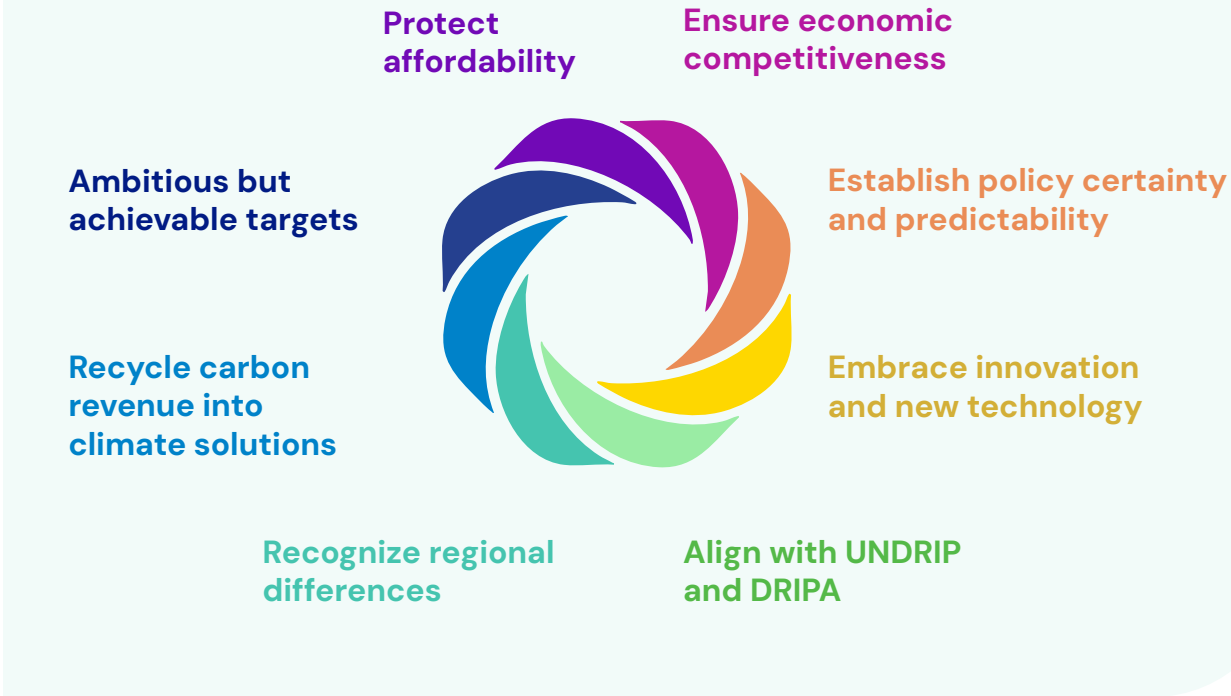
While a confluence of acute challenges—affordability, growing street disorder, and tariff chaos, to name just a few—has pushed public concern about climate change lower down the priority list, British Columbians nonetheless remain concerned. They are also increasingly aware of CleanBC, as well as the solutions and opportunities that can both cut climate pollution and deliver other benefits to them and their communities—from lower energy costs to new jobs and economic opportunities, to healthier communities. Looking ahead, **British Columbians continue to expect leadership on climate and the clean energy transition from the provincial government.**

What's needed is a renewal of CleanBC, not a retreat.

It is worth reiterating that government must **ensure that any next steps in CleanBC-related legislation, regulations, policies, and/or programs align with its commitment to the UN Declaration on the Rights of Indigenous People and its obligations under the Declaration on the Rights of Indigenous Peoples Act (DRIPA).**

With these principles as a touchstone, the following section outlines recommended priorities for government action.

Renewing CleanBC should be guided by eight principles:



Priorities for Action

The B.C. government has made meaningful progress in delivering the policies and programs set out in CleanBC and the *Roadmap to 2030*. These efforts have provided valuable lessons—both from successes and from areas that fell short—and the remaining gaps are now well understood.

What follows are our priority recommendations: 7 priorities and 31 specific actions that outline practical next steps, tailored to B.C.'s current political, economic, and fiscal realities. Detailed advice to deliver on these Priorities for Action in *Appendix A*.

1 Accelerate clean electricity production and electrification as the foundation of energy security and economic growth

a. Ensure British Columbia's residents, businesses, and industries continue to have ready access to a sufficient supply of clean and reliable electricity.

b. Empower the BC Utilities Commission (BCUC) to more directly support CleanBC objectives through its role as a regulator of electricity and gas utilities.

c. Protect ratepayers by supporting an orderly transition for gas utilities as demand for their product declines.

d. Recognize electrification's broad economic and societal benefits by investing directly in the sustained buildout of the electricity system.

e. Set targets and track progress towards increased electrification of B.C.'s energy use.

2 Make it easier for British Columbians to cut energy bills and climate pollution

a. Make it easier for British Columbians to buy and charge an EV, while setting a more achievable EV sales target for 2030 and removing the 2035 ban on combustion vehicles.

b. Renew and expand programs that support British Columbians' ability to affordably choose clean and efficient heating and cooling equipment.

c. Introduce affordability and regional flexibilities to the Energy Step Code and Zero Carbon Step Code for new buildings, while simplifying timelines and continuing to support early local government leadership.

d. Maximize energy affordability while minimizing energy waste by ensuring all available heating, cooling, and hot water equipment is at least 100% efficient.

3 Leverage B.C's clean energy advantage to create more jobs in the energy transition

a. Ensure we have the domestic workforce trained and ready to meet CleanBC policy-driven investment and economic growth.

b. Build on B.C.'s current capacity and competitiveness in climate tech and clean energy and materials innovation.

c. Support B.C. youth engagement and employment by increasing and sustaining support for the B.C. Youth Climate Corps.

d. Develop a Clean Economy Diversification Fund using a set percentage of annual natural gas royalty revenues.

4 Support B.C.'s industries to become cleaner and more competitive

a. Build on the core strengths of B.C.'s industrial output-based performance system (OBPS) and extend its time horizon through at least 2040.

b. Recycle 100% of industrial carbon pricing (OBPS) revenue into climate pollution reduction programs.

c. Require a deeper reduction of oil- and gas-sector methane emissions.

d. Complete the development of net zero requirements for new industrial activity and extend its coverage to include additional activities.

e. Do not proceed with the development of an oil and gas emissions cap recognizing the overlap with OBPS, methane regulations and net zero requirements for new industry.

5 Increase production of clean, made-in-B.C. biofuels and renewable natural gas

a. Ensure a growing supply of clean fuels to meet continued demand for liquid fuels for internal combustion vehicles, marine, rail and aviation.

b. Ensure a growing supply of renewable and low carbon gas recognizing its role in decarbonizing the utility gas system, which will continue to play an important role in the province's energy system.

6 Deepen partnerships with First Nations and local governments

a. Co-develop a process to align CleanBC implementation with the UN Declaration, as required by DRIPA and continue the work toward reconciliation.

b. Continue to support local governments as key partners and contributors to CleanBC's success.

7 Focus on delivering effective, achievable and fiscally responsible outcomes

a. Drive all-of-government CleanBC delivery and effective integration with other government priorities and their policies and programs.

b. Commit to 100% recycling of any climate policy-related public/Crown revenues back into climate programs.

c. Undertake an analysis of the fiscal implications of a changing climate and provincial actions to achieve net zero.

d. Incorporate the societal cost of damages from climate pollution into the economic analysis of government and Crown corporation plans, policies and programs to better inform decision-making.

e. Shift program spending to appropriate Ministries and phase out Carbon Neutral Government.

f. Revise legislated emission targets using a new approach to set ambitious but achievable near-term climate change targets on the path to net zero by 2050, and complement these by tracking and reporting on a broader range of indicators of progress.

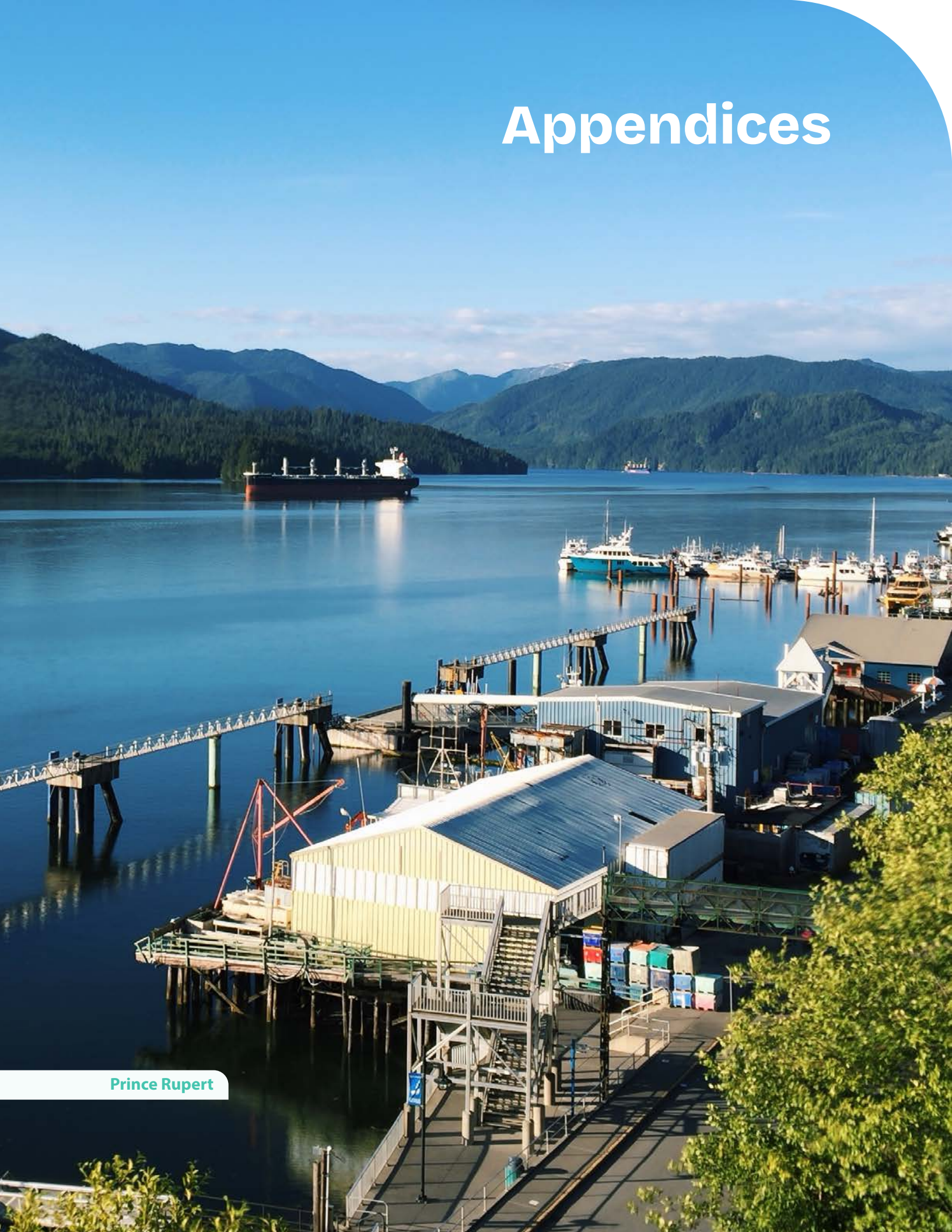
g. Establish an expert Climate Solutions Council tasked with providing independent accountability reporting and advice.

h. To allow for a clearer picture of the progress and challenges being encountered by each economic sector in reducing emissions, adopt a more transparent approach to projecting anticipated progress toward legislated emissions targets in the annual Climate Change Accountability Report.

i. Create a platform for the government to more closely and effectively collaborate with B.C.-based academic experts on the development, implementation and evaluation of CleanBC policies and programs.

j. Greater public consensus on the future of the province's economy is warranted, and while this is beyond the scope of our review, we suggest the government could do so by convening a Citizens Assembly on Building a Sustainable Economy in B.C.

Appendices



Prince Rupert

APPENDIX A:

Detailed Advice to Deliver on the Priorities for Action

1. Accelerate clean electricity production and electrification as the foundation of energy security and economic growth

a. Ensure British Columbia's, residents, businesses, and industries continue to have ready access to a sufficient supply of clean and reliable electricity.

We recommend the government:

i. Work with BC Hydro and FortisBC (electricity) to develop and track progress against utility electrification targets for residential, commercial and industrial customer groups that increase steadily to 2030 and to 2035.[97] These targets should guide rate design offerings, capital planning in transmission, storage and distribution, and the scale and cadence of additional clean electricity and capacity procurement over the next decade and onto a trajectory to achieve net zero by 2050. (Timeline: by end of 2026)

ii. Reaffirm B.C.'s clean electricity requirement (100% clean by 2030) and clarify whether—and if so, under what conditions or performance standards—abated[98] gas-fired power is considered a "clean or renewable resource" under the Clean Energy Act.[99] (Timeline: by end of 2026)

iii. Work with BC Hydro to undertake and publish analyses of the potential future role of batteries (short and long duration), nuclear technology, offshore wind, pumped storage, and deep geothermal in B.C.'s electricity system, considering dispatchability, costs, risks, safety and reliability. (Timeline: start in early 2026 and deliver on a rolling basis)

iv. Establish an electricity allocation framework that ensures (i) sufficient electricity to support policy-driven fuel-switching in existing industries, buildings and from EV adoption, (ii) prioritizes industrial allocation to sectors and activities that maximize economic benefits, provincial revenues, and are net zero-aligned.[100] (Timeline: by mid-2026)

v. Work with BC Hydro, FortisBC and the BCUC to undertake a distributed energy resource (DER) potential study (Timeline: by end of 2026), followed by a roadmap and implementation plan.[101]

vi. Convene BC Hydro, FortisBC, local governments and developers to advance opportunities to reduce the costs and timelines for electrical service connections.

b. Empower the BC Utilities Commission (BCUC) to more directly support CleanBC objectives through its role as a regulator of electricity and gas utilities.

We recommend the government:

i. Review and amend, as necessary, the Utilities Commission Act to (i) ensure BCUC decisions are consistent with CleanBC policies and targets, and (ii) empower BCUC to allow electric utilities to acquire additional energy,

97 In BC Hydro's case, they should be included and tracked in BC Hydro's service plan.

98 i.e. gas fired power with post-combustion carbon capture and storage.

99 We further recommend that a resource should only be deemed clean or renewable if it achieves its prescribed performance standard from the start of operations (i.e. cannot be "carbon capture ready").

100 i.e. will remain competitive as markets trend towards net zero by mid-century.

101 This can be informed by the approach taken by Ontario's Independent Electricity System Operator and Ontario Energy Board.

capacity and transmission more proactively,[102] and (iii) enable the BCUC to consider and implement low income or income-based rates for energy utility customers. (Timeline: end of 2026)

ii. Direct and empower the BCUC to advance integration of gas and electricity resource planning to optimize for emission reductions at lowest cost to ratepayers across both electricity and gas systems and ensure economically efficient compliance with provincial policies and regulations. (Timeline: end of 2026)

iii. Direct the BCUC and utilaities to prioritize energy efficiency in resource planning.[103]

c. Protect ratepayers by supporting an orderly transition for gas utilities as demand for their product declines.

We recommend the government:

i. Provide clarity and opportunities for the evolution of gas utilities in a low-carbon future by directing the BCUC to:

- Review and align its Utility System Extension Test Guidelines as committed in its decision on FortisBC's 2022 Long-term Gas Resource Plan, to appropriately manage risk to ratepayers[104] (Timeline: by end of 2026), and
- Revisit the Retail Markets Downstream of the Utility Meter Guidelines[105] with the intention of establishing opportunities for gas utilities to earn a regulated return on investment by, for example, leasing smart electric hot water tanks, heat pumps, batteries etc. to customers.[106] (Timeline: by end of 2027)

d. Recognize electrification's broad economic and societal benefits by investing directly in the sustained buildout of the electricity system.

We recommend the government:

i. Work with BC Hydro to develop a fair and responsible pathway to enable taxpayers to defray some costs that would otherwise be carried solely by ratepayers. This should include exploring opportunities for First Nations participation and federal government support. (Timeline: by end of 2026)

e. (e) Set targets and track progress towards increased electrification of B.C.'s energy use.

We recommend the government:

i. Establish recurring three-year targets for steadily increasing the share of electricity in B.C.'s overall energy use, and report annually on progress. Also consider setting targets and tracking by sector or sub-sector. Direct BC Hydro to incorporate these targets in its service plan. (Timeline: mid-2026)

---

102 Given the timelines required to develop new supply and transmission electric utilities must be allowed to build more proactively—i.e. to the high load scenario of resource plans—to ensure availability of electricity is not a constraint on economic development and electrification to support emission reduction. For example, in New York the State Public Service Commission has approved "the long-term proactive planning framework submitted by the state's major electric utilities that will enable the utilities to identify the grid needs driven by electrification for which proactive investment would improve cost-effectiveness, minimize ratepayer impacts, and support policy outcomes. The Commission determined that a proactive planning process is necessary to ensure the grid is ready for the future needs of the state's utility customers, and the infrastructure is developed in the most cost effective and timely manner."

103 In Massachusetts, by law, utilities must meet energy needs first with "all available" cost-effective efficiency and demand reduction, ahead of supply. In Oregon, statute requires electric companies to plan for and pursue all available cost-effective efficiency (and demand response), treating it as a resource in integrated resource planning and acquiring it before new generation.

104 "The Panel notes that FEI's existing main extension test predates the energy transition and does not consider BC's energy objectives. Given this and FEI's stated strategy to move down the diversified energy pathway and significantly decarbonize its system, the Panel sees merit in considering BC's energy objectives and decarbonization in the main extension test in the future. Even though at the moment, FEI is unable to determine to what extent the cost of RNG, hydrogen, or societal cost should be included in the MX test, the Panel believes that in the future it would be prudent to evaluate the merit of incorporating such costs, as well as BC's energy objectives and other implications of the energy transition in FEI's main extension policy. Accordingly, the Panel recommends the BCUC review FEI's main extension policy." BCUC Decision and Order G-78-24, March 20, 2024.

105 Retail Markets Downstream of the Utility Meter Guidelines

106 For example, in 2022 Vermont's gas utility launched an electric appliance leasing program for heat pump water heaters, and in 2023 extended it to centrally ducted heat pumps, for which customers pay a monthly fee. Using its existing technician staff, customers are offered installation scheduling and around-the-clock service. Just as it does for gas pipeline investments, Vermont regulators allow the utility to earn a regulated rate of return on equipment purchase for the program.

2. Make it easier for British Columbians to cut energy bills and climate pollution

a. Renew and expand opportunities for British Columbians to choose clean and efficient heating and cooling equipment by ensuring such systems remain available and affordable.

We recommend the government:

i. Continue offering the Better Homes and Better Buildings incentives to support consumer adoption of clean heating/cooling technology and efficiency upgrades, which will drive continued market transformation. These can be funded by recycling 100% of a modest increase to the Clean Energy Levy (about the cost of a coffee per month) on utility gas bills. (Timeline: by mid-2026)

ii. Consider a Property Assessed Clean Energy (PACE) program for commercial buildings, and explore other opportunities to enable affordable financing of residential clean energy and efficiency upgrades. (Timeline: end of 2027)

b. Introduce affordability and regional flexibilities to the Energy Step Code and Zero Carbon Step Code for new buildings, while simplifying timelines and continuing to support early local government leadership.

We recommend the government:

i. Amend the Energy Step Code to remove the net-zero energy-ready step (Step 5 for Part 9 and Step 4 for Part 3 buildings) given the scale of additional cost versus benefit.

ii. Amend the Zero Carbon Step Code to achieve Strong Performance (EL3) in 2027 and Zero Carbon Performance (EL4) in 2030 for climate zones 4 and 5, and Strong Performance (EL3) in climate zones 6-8 in 2030.

iii. Push the timeline for implementation of Step 4 (for Part 9 buildings) and Step 3 for (Part 3 buildings) requirements—which would achieve ~20% better building efficiency[107] per the Energy Step Code—to 2030 in the base B.C. Building Code.

iv. For both Codes, continue to allow local governments to move faster, while encouraging regional coordination.

c. Maximize energy affordability while minimizing energy waste by ensuring all available heating, cooling, and hot water equipment is at least 100% efficient.

We recommend the government:

i. Phase-in a provincial requirement that permanently installed new air-conditioning systems in Part 9 buildings must be able to provide both low-carbon heating and cooling through amendments to the B.C Building Code[108] and the Energy Efficiency Standards Regulation.[109] (Timeline: end of 2026)

ii. Develop and implement the Highest Efficiency Equipment Standard (HEES) to require all new space and water heating equipment sold and installed in B.C. to be at least 100% efficient by the early 2030's, while providing flexibility for climate zones 6-8 and harder-to-electrify market segments. (Timeline: end of 2026)

d. (d) Make it easier for British Columbians to buy and charge an EV, while setting a more achievable EV sales target for 2030 and removing the 2035 ban on combustion vehicles.

We recommend the government:

i. Direct BC Hydro to recycle 100% of revenues earned from selling residential EV charging LCFS credits into transportation-related electrification incentive programs (e.g. e-bike and/or EV rebates, charger rebates, service

107 Relative to the 2024 B.C Building Code, or 40% better than the 2018 base B.C. Building Code.

108 serving a dwelling must be reversible (heat mode) and meet minimum efficiency ratings

109 Set a point-of-sale requirement that residential "central air conditioner" classes ≤ a defined capacity are reversible (i.e., heat pumps). This prevents non-compliant equipment from being sold or installed.

upgrades for MURBs). Rebate programs should be stable and predictable, with a clearly scheduled phase out. (Timeline: by mid-2026)

ii. Continue with made-in-B.C targets under the Zero Emission Vehicle Act, while changing the 2030 target to 50-60%[110] and eliminating the 2035 ban on internal combustion vehicles and replacing it with a 90% target. Do not amend the Act to include conventional hybrid vehicles. (Timeline: by mid-2026)

iii. Add regulatory compliance flexibilities under the Zero Emission Vehicle Act that enhance consumer affordability and access to charging. (Timeline: by mid-2026)

iv. Phase in medium and heavy-duty vehicle (MD/HDV) sales requirements incrementally—by vehicle class—in coordination and alignment with other major markets. As a first step, establish a sales requirement for delivery vehicles (targeting a specific weight class and fleet size), recognizing the availability of cost-effective vehicles in this market segment. (Timeline: by end of 2027)

v. Develop requirements for 100% EV readiness for residential parking at new and substantially upgraded buildings, and improved EV-readiness at M/HDV commercial loading bays. (Timeline: by end of 2026)

3. Leverage B.C's clean energy advantage to create more jobs in the energy transition

a. Ensure we have the domestic workforce trained and ready to meet CleanBC policy-driven market growth.

We recommend the government:

i. Align labour market outlooks with workforce development plans and provide sufficient support for associated training requirements. (Timeline: end of 2026)

b. Build on B.C.'s current capacity and competitiveness in climate tech and clean energy and materials innovation.

We recommend the government:

i. Require government procurement of made-in-B.C. low-carbon materials and clean energy technologies.

ii. Continue to advance and resource its climate tech strategy to deliver a coordinated platform[111] that supports innovators from early-stage through global scale, ensuring B.C. builds the companies that cut pollution and compete internationally.

iii. Position B.C. to unlock greater federal clean technology investment through strategic co-investment.[112]

c. Support B.C. youth engagement and employment by increasing and sustaining support for the B.C. Youth Climate Corps.

We recommend the government (Timeline: Budget 2026):

i. Include support for both the Youth Climate Corps' climate action trades and community resilience programming.

ii. Pursue federal government support recognizing the clear alignment of the Youth Climate Corps mandate with multiple federal priorities, including youth employment, climate action and community resilience.

d. Develop a Clean Economy Diversification Fund using a set percentage of annual natural gas royalty revenues.

We recommend the government (Timeline: Budget 2026):

i. Strategically deploy this fund to support growth and worker and youth participation in a diverse, innovative clean economy that

110 The determination of the precise target should be informed by market analysis and the extent of compliance flexibilities available under the regulation.

111 Including but not limited to InnovateBC, NorthX, the Clean Industry Fund, and InBC.

112 Federal programs are increasingly prioritizing jurisdictions that demonstrate provincial commitment. By reinforcing B.C.'s leadership with targeted capital, the province can attract larger federal contributions, strengthen competitiveness, and translate innovation into jobs and long-term economic growth and emissions reductions.

seizes opportunities to attract investment in clean energy, climate tech, manufacturing, critical mineral mines and processing, and other low-carbon and energy transition opportunities.

4. Support B.C.'s industries to become cleaner and more competitive

a. Build on the core strengths of B.C.'s industrial output-based performance system (OBPS) and extend its time horizon through at least 2040.

We recommend the government:

i. Use the annual review of the OBPS to manage the risk of credit over supply by strengthening performance standards through more stringent reduction factors and/or more stringent tightening rates and looser credit usage limits, while maintaining low average costs for industry to protect their competitiveness. (Timeline: annually)

ii. Increase the transparency of the system by reporting credit market data at least quarterly. (Timeline: by mid-2026)

iii. Review the treatment of carbon capture, use and storage (CCUS) under the OBPS to ensure B.C. is competitive in attracting capital to CCUS projects. (Timeline: by end of 2026)

iv. (iv) Drive the federal government to efficiently determine and define its industrial carbon price schedule to 2040, and align B.C.'s price schedule accordingly. (Timeline: by mid-2026)

v. (v) Advocate for the establishment of federal border carbon adjustments to protect the competitiveness of Canadian industries. (Timeline: ongoing)

b. Recycle 100% of industrial carbon pricing (OBPS) revenue into climate pollution reduction programs.

We recommend the government:

i. Commit to and transparently report on OBPS revenue recycling into climate pollution reduction programs, including but not limited to the Clean Industry Fund and investment in clean energy and climate tech development.

c. Require a deeper reduction of oil- and gas-sector methane emissions.

We recommend the government:

i. Amend regulations to require an 80% reduction by 2030, and near-zero by 2035. (Timeline: by mid-2026)

d. Complete the development of net zero requirements for new industrial activity and extend its coverage to include additional activities.

We recommend the government:

i. Extend the net zero requirement to new activities that do not trigger an environmental assessment—notably the expansion of gas production and pipelines—using the Greenhouse Gas Industrial Reporting and Control Act (GGIRCA). (Timeline: end of 2026)

e. Not proceed with the development of an oil and gas emissions cap recognizing the overlap with OBPS, methane regulations and net zero requirements for new industry.

5. Increase production of clean, made-in-B.C biofuels and renewable natural gas

a. Ensure a growing supply of clean fuels to meet continued demand for liquid fuels for internal combustion vehicles, marine, rail and aviation.

We recommend the government:

i. Continue to increase the availability of cleaner transportation fuels by considering a strengthening of the 2030 low carbon fuel standard (LCFS) target (Timeline: end of 2026), and by extending targets to at least 2040. (Timeline: by end of 2027)

ii. Develop an LCFS mechanism to incentivize private investment in the EV fast charging network. (Timeline: by end of 2027)

iii. Set post-2030 LCFS targets for jet fuel in a manner that supports domestic SAF production. (Timeline: by end of 2026)

iv. Convene a task force with the federal government and industry partners to identify and advance the top opportunities for domestic renewable fuels production and government procurement (e.g. air force procurement of locally produced SAF). (Timeline: by end of 2026)

b. Ensure a growing supply of renewable and low carbon gas recognizing its role in decarbonizing the utility gas system, which will continue to play an important role in the province's energy system.

We recommend the government:

i. Establish a regulatory requirement for gas utilities[113] to achieve an increasing blend rate of renewable natural gas, with targets for 2030 and 2035, and consider prescribing a growing share of made-in-B.C RNG.[114, 115] The same requirement should apply to gas marketers, which rely on the utility gas distribution system to transport gas. (Timeline: by end of 2027)

ii. Support the development and implementation of the Canadian Low Emissions Energy Registry (or similar) to provide confidence in the integrity of inter-provincial "book and claim" RNG credits.[116] (Timeline: ongoing)

iii. Phase out "book and claim" RNG credits originating in the United States, recognizing the American withdrawal from the Paris Agreement prevents formal credit transfer under Article 6. (Timeline: by end of 2026)

iv. To inform the above, update the findings of the B.C Renewable and Low-Carbon Gas Supply Potential Study with updated technology assessment, economics and feedstock availability (including competing demand), as a resource for future BCUC and other decision-making processes. Similarly, review and update the B.C. Hydrogen Strategy based on current analyses of market potential (domestic and export) to inform policy-making and program design. (Timeline: by end of 2026)[117]

6. Deepen partnerships with First Nations and local governments

a. Align CleanBC implementation with the UN Declaration, as required by DRIPA and continue the work toward reconciliation

i. Co-develop a clear, collaborative and resourced governance process to guide CleanBC policy and program development and implementation with First Nations title and rights holders, that aligns with the UN Declaration on the Rights of Indigenous People as required by DRIPA. (Timeline: by mid-2026)

ii. Establish and resource a one-window B.C. First Nations Climate Action Fund[118] to support First Nations led planning, capacity building and action. (Timeline: by end of 2026)

iii. Work collaboratively to build long-term climate capacity within First Nations to effectively respond to the climate emergency through both mitigation and adaptation. (Timeline: ongoing)

iv. Renew and sustain support for the existing B.C. Indigenous Clean Energy Initiative (BCICEI) program streams. (Budget 2026)

113 This requirement could be limited to utilities of a minimum size.

114 Should a made-in-B.C requirement be included, consider allowing a premium on top of the price threshold under the Greenhouse Gas Reduction Regulation.

115 This could be extended to require minimum levels of Indigenous participation, as required in BC Hydro's Calls for Power.

116 How and whether to pursue this should be informed by the BCUC recommendations arising from its current Review of Renewable Natural Gas Definition and Accounting.

117 Particular attention should be paid to evolving knowledge regarding its limited prospects for heating buildings and some transportation applications.

118 Consider modeling this Fund on the successful design of the Community Energy Diesel Reduction program.

v. Continue to support diesel reduction in remote First Nation communities[119] by working with them and BC Hydro to determine a feasible diesel reduction target for 2030 that will drive continued investment in clean and renewable alternatives, including renewable diesel. (Budget 2026)

b. Continue to support local governments as key partners and contributors to CleanBC's success.

i. Extend funding for the Local Government Climate Action Program (LGCAP) and continue collaboration.

ii. Equip local governments with a roadmap of CleanBC priorities—including examples that are mindful of the unique needs and opportunities of different regions of the province—for LGCAP funding.

iii. Continue to work with local governments, utilities and others to improve the timeliness and predictability, granularity and sector coverage of the Community Energy and Emissions Inventory (CEEI).

iv. Require regulated utilities and Crown corporations to share more detailed data with local governments, such as for building energy use and vehicles, to support effective policy making and program development.

7. Focus on delivering effective, achievable and fiscally responsible outcomes

a. Drive all-of-government CleanBC delivery and effective integration with other government priorities and their policies and programs.

We recommend the government:

i. Use the Premier's office to ensure the dots are connected between economy, affordability, energy security and climate change and ensure effective and efficient integration and delivery across ministries. (Timeline: ongoing)

ii. Establish a Cabinet committee on Economy, Energy and Climate Change to ensure alignment and integration of economic, energy security and CleanBC objectives. (Timeline: early 2026)

b. Commit to 100% recycling of any climate policy-related public/Crown revenues back into climate programs.

We recommend the government (as noted in sections above):

i. Recycle 100% of a modest increase to the Clean Energy Levy (about the cost of a coffee per month) on utility gas bills into funding Better Homes and Better Buildings incentive. (Timeline: by mid-2026)

ii. Direct BC Hydro to recycle 100% of revenues earned from selling residential EV charging LCFS credits into EV-related incentive programs (e.g. e-bike and/or EV rebates, charger rebates, service upgrades for MURBs). Rebate programs should be stable and predictable, with a clearly scheduled phase out. (Timeline: by mid-2026)

iii. Recycle 100% of OBPS revenue into climate pollution reduction programs, including but not limited to the Clean Industry Fund and investment in clean energy and climate tech development.

c. Undertake an analysis of the fiscal implications of a changing climate and provincial actions to achieve net zero.

We recommend the government:

i. Direct the Ministry of Finance to estimate the fiscal costs of meeting the government's net zero commitments and of climate change-related damage to B.C.'s economy, modelled off the recent analysis undertaken by the UK Office of Budget Responsibility. (Timeline: by early-2027)

119 This can be continued through the Community Energy Diesel Reduction program.

d. Incorporate the societal cost of damages from climate pollution into the economic analysis of government and Crown corporation plans, policies and programs to better inform decision-making.

We recommend the government:

i. Adopt the federal social cost of carbon[120]—an estimate of the incremental damages from climate pollution—into Treasury Board decision-making, the Business Economic Implications Framework (BEIF), and application of relevant regulations[121] by the government and other regulatory agencies.[122] (Timeline: by end of 2026)

e. Shift program spending to appropriate Ministries and phase out the Carbon Neutral Government.

We recommend the government:

i. Develop a sustainable funding model—outside the CleanBC funding envelope[123]—to provide a permanent solution to ensure sustainable funding to support investments in increased active transportation and public transit use. (Timeline: by Budget 2027)

ii. Remove the obligation for public sector organizations to be carbon neutral—and the provincial government's acquisition of offsets to do so—while maintaining the requirement for PSOs to determine and publish its annual greenhouse gas emissions. (Timeline: by end of 2026).

iii. Review and determine whether to discontinue, or shift to appropriate Ministries, funding programs that are not core to CleanBC emission reduction priorities, such as the CleanBC Forest Bioeconomy and Agriculture, Aquaculture and Fisheries programs. (Timeline: by Budget 2027)

f. Revise legislated emission targets using a new approach to set ambitious but achievable near-term climate change targets on the path to net zero by 2050, and complement these by tracking and reporting on a broader range of indicators of progress.

We recommend the government (Timeline: by end of 2026):

i. Enshrine government's commitment to achieving net zero by 2050 in the Climate Change Accountability Act, including a definition of net zero and a commitment to achieving no less than 80% actual emission reductions (versus nature-based or technology removals).

ii. Replace 2007 with 2005 as the baseline year, thereby aligning with the baseline year used by the federal government.

iii. Remove the obligation to establish sectoral targets.

iv. Replace the 2030 target and add a new target for 2035 to the Act. These targets should be established through a new approach that is informed by:

- A net zero pathways assessment that identifies various pathways to achieving net zero by 2050, as committed in *Powering our Future: B.C.'s Clean Energy Strategy* (2024).
- Emissions projections for industrial projects that have secured regulatory approval (regardless of whether a decision has been made by the proponent to proceed).
- Top-down emissions and economic modeling of the government's committed policies and programs, complemented by a bottom-up analysis that considers energy system change (including supply,

120 See Social Cost of Greenhouse Gas Estimates – Interim Updated Guidance for the Government of Canada.

121 For example the Greenhouse Gas Reduction and Demand Side Measures regulations.

122 This could include, but not be limited to, the Environmental Assessment Office, BCUC, and BC Energy Regulator.

123 Recognizing its contribution towards multiple government objectives in addition to reducing climate pollution—including affordability, health benefits and reduced healthcare costs, and enhanced productivity through reduced congestion—this support should not be considered CleanBC funding, per se, but core support from the Ministries of Transportation and Transit, and Infrastructure.

reliability and affordability), capital stock turnover, and investment and labour requirements.

v. For each economic sector develop a set of progress indicators (see *Appendix B*) that are tracked and reported on at least annually in the Climate Change Accountability report and in an online CleanBC performance dashboard.[124]

g. Establish an expert Climate Solutions Council tasked with providing independent accountability reporting and advice.

We recommend the government:

i. Amend the Climate Change Accountability Act to alter the composition of the Climate Solutions Council such that:

- The Council is composed of experts that are appointed for their knowledge and experience in climate change and energy policy, technology, sociology, communications, business and economics. The Council should be compensated and resourced (with modeling capacity, for example) to undertake its responsibilities.

ii. The Act should also be amended so that the role of the Council focuses on expert advice and government accountability, with responsibilities including:

- At the request of the government, Council members with relevant expertise will provide input and advice on emissions targets and other progress indicators, as well as specific policy and program design.
- On an annual basis, the Council will undertake to independently produce the Climate Change Accountability Report, tracking progress across a range of indicators including but not limited to emission reductions, and providing non-binding recommendations for improved or enhanced delivery and outcomes. The Minister of Energy and Climate Solutions should be obligated to formally respond to these recommendations, and should continue to formally table the accountability report in the legislature.

h. To allow for a clearer picture of the progress and challenges being encountered by each economic sector in reducing emissions, adopt a more transparent approach to projecting anticipated progress toward legislated emissions targets in the annual Climate Change Accountability Report.

i. (i) Include the projected emission trajectories of each economic sector and describe their relative contribution to overall provincial progress (or lack of progress) towards legislated targets.

i. Create a platform for the government to more closely and effectively collaborate with B.C.-based academic experts on the development, implementation and evaluation of CleanBC policies and programs.

i. This platform could be co-developed with the Pacific Institute for Climate Solutions (PICS) to leverage the capacity, insights and expertise of PICS and other applied research groups at B.C's colleges, polytechnic institutes, and universities, and to encourage research that supports innovative climate and clean energy policy and implementation.

j. Greater public consensus on the future of the province's economy is warranted, and while this is beyond the scope of our review, we suggest the government could do so by convening a Citizens Assembly on Building a Sustainable Economy in B.C.

124 For examples, see Quebec's climate action dashboard and the Electrify Britain dashboard.

APPENDIX B:

Proposed CleanBC Progress Indicators

The focus of the annual Climate Change Accountability Report (CCAR) has been the most recent GHG emissions data, and a modeled forecast of progress towards achieving the province's legislated GHG reduction targets. But as noted above, GHG emissions are a lagging indicator; given the inertia in the energy system, deep cuts take time to show up in the charts. This is compounded by a two year lag in emissions data, meaning the story told is always based on a snapshot two years out of date.

To more readily measure and communicate progress, the government might instead place greater emphasis on other progress indicators, such as the rate of clean technology adoption, including EV sales and heat pump installations, and assess progress relative to what was anticipated from related policy measures. Many of these indicators are already tracked and reported in an appendix of the CCAR, but without sufficient context to assess the significance of progress (or lack thereof). Many adjacent co-benefits (such as community health benefits, jobs, investment and other economic indicators) also warrant tracking and reporting.

Informed by stakeholder input on meaningful indicators of progress that can strengthen public communications, we recommend the government consider focusing its tracking and communication on a set of meaningful but relatable indicators, published annually in the CCAR and in an online dashboard (for example, see Electrify Britain).

We recommend the following indicators be considered for annual tracking and reporting:

Clean Buildings

- **Total number of heat pumps installed**
- **Percentage of homes heated with heat pumps vs. gas vs. electric baseboards**
- **Estimated total amount saved from all installed heat pumps in B.C**
- **Energy intensity of residential buildings; commercial buildings; affordable housing**

Clean Transportation

- Total number of registered EVs
- Percentage of light duty vehicle EV sales vs. gas/diesel
- Number of e-bikes sold per year
- Estimated total fuel cost savings from all EVs in operation
- Estimated amount of air pollution prevented by EVs
- Ratio of EVs to public EV chargers
- Renewable fuel production in BC (volume)
- Renewable fuel content in transportation fuels (volume and percentage)
- Annual public transit ridership (total and percentage of travel)
- New active transportation infrastructure (e.g. kilometres of All Ages and Abilities bike lanes)

New Economic Investments

- Total private investment catalyzed in climate tech
- Jobs created in clean tech/clean energy by sector and region
- Number of training seats available in clean energy and electrification
- Export activity from B.C.-based climate and clean energy tech companies
- First Nations partnership and equity participation in B.C.-based clean energy, clean and climate tech companies, and projects

APPENDIX C:

CleanBC Policies

Pathway	#	Action	Target Year (if applicable)	Status
Economy-wide	1	Factor climate considerations into government decision making on capital projects.		Complete
	2	Zero-emission vehicles (ZEVs) account for 100% of LDV public sector acquisitions by 2027.	2027	Ongoing
	3	Require all new public sector buildings align with climate goals beginning with performance standards (2023) and moving to zero-carbon new buildings (2027).	2023 (performance standards) and 2027 (zero-carbon)	Ongoing
	4	Develop and implement a comprehensive strategy to transform existing buildings to low carbon and resiliency standard.	2024	In progress
	5	Implement public awareness and education campaign, including dedicated youth strategy.		In progress
	6	Provide single-window access to all CleanBC incentives and programs.		In progress
	7	Release CPAS.	2022	Complete
	8	Develop Circular Economy Strategy including advancing Plastic Actions Plan and requiring more manufacturers to take responsibility for products recycle, reuse or safe disposal.	2022	In progress
	9	Develop a workforce readiness framework.		Complete

Low Carbon Energy	**10**	Modernize legislation, including expansion to include marine and aviation fuels beginning in 2023.	2023	Complete (jet fuel); Marine (TBD)
	11	Raise target from 20% to 30% by 2030.	2030	Complete
	12	Double production capacity for made-in-BC renewable fuels to 1.3 billion litres per year by 2030.	2030	In progress
	13	Introduce an emissions cap on natural gas utilities at approximately 6 $MtCO_2e$ per year in 2030.	2030	on hold
	14	100% of electricity supply will be from renewable sources by 2030.	2030	In progress
	15	Over the next 5 years BC Hydro will invest $260 million to advance electrification ($190 M to promote fuel switching in buildings and more than $50 M to attract new customers).	2025	In progress
	16	Add electrification and fuel-switching to the BC Hydro mandate.		Ongoing
	17	Consider environmental impact of electrification initiatives in regulatory applications (previously written as "Introduce an internal carbon price to evaluate electrification initiatives…")		Complete
	18	Enable investments in green hydrogen and commercial vehicle incentives and infrastructure.		Ongoing
	19	Implement the BC Hydrogen Strategy		In progress
	20	Open the BC Center for Innovation and Clean Energy (CICE)		Complete
	21	Launch a co-designed and co-led Indigenous Clean Energy Opportunities engagement process.		Ongoing

Transportation	**22**	Reduce distance travelled in LDVs by 25% relative to 2020.	2030	In progress
	23	Work with ICBC to monitor Vehicle Kilometres Travelled.		Complete
	24	Collect and share transportation data.		In progress
	25	Increase share of trips made by walking, cycling and transit by 30% (2030), 40% (2040) and 50% (2050)	2030/2040/2050	In progress
	26	Reduce the energy intensity of goods movement by 10% (2030), 30% (2040) and 50% (2050) relative to 2020.	2030/2040/2050	In progress
	27	Increase share of LDV-ZEV sales to 26% (2026), 90% (2030) and 100% (2035).	2026/2030/2035	In progress
	28	Adopt right-to-charge legislation.		Complete
	29	Introduce new ZEV targets for medium and heavy duty vehicles.	2023	Delayed
	30	Achieve 10,000 public EV charging stations by 2030.	2030	In progress
	31	Develop new equipment regulations for air, marine and off-road vehicles.		In progress
	32	Identify how the CleanBC Heavy Duty Efficiency Program can drive further improvements.		Delayed
	33	Complete the Clean Transportation Action Plan	2023	Delayed

Buildings	**34**	Add a new carbon pollution standard to BC Building code to support a transition to zero-carbon buildings by 2030.	2030	In progress
	35	Incorporate energy-efficiency standards for existing buildings starting in 2024.	2024	Ongoing
	36	Highest-efficiency standards for new space and water heating equipment by 2030	2030	Delayed
	37	Continue to support market readiness and affordability through CleanBC Better Homes and Better Buildings (BHBB) rebates and financing, innovation funding, technical guidance and ongoing industry training.		Ongoing
		Proceed with next steps on a Property Assessed Clean Energy (PACE) program.		Delayed
	38	Phase out incentives for gas-fired heating equipment.		Complete
	39	Introduce a user-friendly, web-based, virtual home-energy rating tool.		Complete
	40	Develop a Low Carbon Building Materials Strategy.	2023	Complete
	41	Develop and implement embodied carbon targets for public sector buildings.	2030	In progress

Communities	**42**	Work with municipalities and regional districts to enhance work on land-use planning by providing supports, tools, guidance and data as well as using a climate lens to review provisions in Regional Growth Strategies and Official Community Plans.		Ongoing
	43	Establish a new program in 2022 to support local government climate actions through flexible, predictable funding.	2022	Complete
	44	Work with federal partners to enable local governments, Indigenous communities and stakeholders to apply a climate and resilience lens for all major infrastructure funding applications.		Ongoing
	45	Evaluate opportunities to strengthen the local government legislative framework.		Ongoing
		Re-invigorate the Province's partnership with local governments and the Union of BC Municipalities through the Green Communities Committee.		Ongoing
	46	Support access to GHG emissions data on buildings, transportation and waste.		Ongoing
	47	Enhance the Community Energy and Emissions Database for local governments and Indigenous communities.		Ongoing
	48	Work to develop regionally specific adaptation and resilience strategies as part of CPAS.		Ongoing
	49	Support the development of natural asset infrastructure for local governments and Indigenous communities.		Ongoing

Industry, including Oil and Gas	**50**	Work with industry, the federal government, and Indigenous peoples to redesign the program to align with new federal carbon pricing rules.	2022	Complete
	51	All new large industrial facilities must have a plan to achieve net-zero emissions by 2050 and will have to show how they align with the interim 2030 and 2040 targets.	2030/2050	In progress
	52	Zero emissions from methane in the industrial sector by 2035.	2035	In progress
	53	Reduce methane emissions from oil & gas by 75% below 2014 levels.	2030	in progress
	54	Introduce policies and programs to meet the oil and gas sectoral target	2023	In progress
	55	Clean up 100% of current orphan wells in BC before 2030.	2030	in progress
	56	Review rules for oil & gas royalties to ensure they support goals for economic development, environmental protection and fair returns.		Ongoing
	57	Develop a coordinated, comprehensive provincial approach to guide deployment of CCUS.		In progress

Forest Bioeconomy	**58**	Explore opportunities to partner with federal government to plant more trees.		In progress
	59	A new BC Forest Carbon Offset Protocol will expand access to the carbon-offset market for Indigenous communities and forest companies.	2024	Complete
	60	Explore policy actions to increase the use of biomaterials in carbon-intensive products such as concrete, asphalt, and plastic components used in finishing cabinets, flooring and other materials.		Ongoing
	61	Encourage the use of biomaterials in the packaging, consumer goods and biochemical sectors.		Ongoing
	60	Explore opportunities to support sector growth through market and supply chain studies, capacity building, technology assessments and pilot projects.		
	62	Advance mass timber production through a Mass Timber Action Plan.		Ongoing
	63	Explore potential for regional bio-hubs to ensure communities have access to fibre for diversified manufacturing and enhance number of well-paying forest sector jobs in the province.		
	64	Explore ways to streamline regulations and generate investment for bioproducts facilities at pulp mill sites.		
	65	Work towards near elimination of slash pile burning by 2030 by diverting materials away from slash piles and into bioproduct development.	2030	Ongoing

Agriculture, Aquaculture and Fisheries	**66**	Encourage fuel switching and electrification from equipment in agriculture, aquaculture and fisheries as well as efficiency in manure and nutrient management.		Ongoing
	67	Support waste management by growing activities to capture biogas.		Ongoing
	68	Support research and monitoring to fill critical knowledge gaps for beneficial management practices.		Ongoing
	69	Encourage producers to implement regenerative agricultural practices and technologies.		Ongoing
	70	Work with Indigenous communities and aquaculture sector to explore the carbon-storage potential of seaweed cultivation.		Ongoing
Negative Emissions Technologies (NETs)	**71**	Consider allowing negative-emissions technologies (NETs) as an option for LCFS compliance.		Ongoing
	72	Build an accounting framework to define how non-forest offset NET projects may impact emissions reductions and how they can be brought in-scope.	2025	Paused
	73	Deliver support for CCUS through the BC Centre for Innovation and Clean Energy.		Ongoing
	74	Assess the need for new provincial tools to encourage private sector investment in NETs.		Paused
	75	Assess the potential of research developed through UBC and Uvic to mineralize CO_2 from the atmosphere.		Ongoing

APPENDIX D:

CleanBC Budget Allocations (2019–25)

	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	Total
Operating ($Ms)							
Low Carbon Energy	7	26	14	82	216	25	370
Transportation	36	105	289	226	310	347	1,313
Buildings	0	9	40	43	53	145	290
Communities	0	0	20	11	47	97	175
Industry, Including Oil & Gas	0	46	105	120	233	395	899
Forest Bioeconomy	0	3	67	49	30	50	199
Agriculture, Aquaculture and Fisheries	0	0	11	11	6	5	33
Negative Emissions Technologies	0	0	1	0	1	2	4
Other	4	10	62	19	71	24	190
Sub-Total - Operating	47	199	609	561	967	1,090	3,473
Capital ($Ms)							
Carbon Neutral Capital Program	0	0	44	52	46	49	191
Sub-Total - Capital	0	0	44	52	46	49	191
Indirect ($Ms)							
Climate Action Tax Credit	234	252	303	325	363	693	2,170
Transit Projects	0	0	305	240	377	758	1,680
Sub-Total - Indirect	234	252	608	565	740	1,451	3,850
Total	281	451	1,261	1,178	1,753	2,590	7,514

Vancouver

APPENDIX E:

Cross-cutting Themes from Stakeholder Feedback

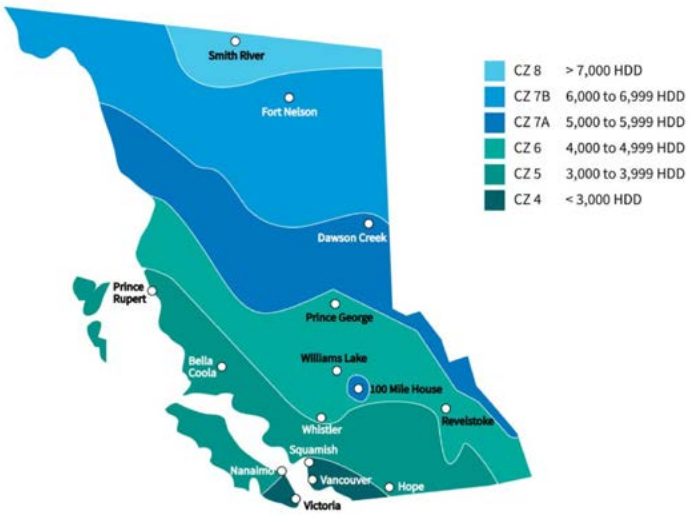
Predictability and durability increases certainty, with room for flexibility

With respect to policies and programs, a diverse array of stakeholders and review participants emphasized the importance of predictability and durability. Stopping, starting, or even publicly reconsidering programs sends mixed signals that can delay or prevent investment decisions, which undermines progress on decarbonization. Such flip-flopping is especially disruptive if industries, businesses, and individuals have already invested in a solution based on a shared understanding of the market's direction. At the same time, participants encouraged the government to offer policy flexibility in response to new information, first-hand experience, or a shift in the overall context. In other words, government should be free to correct its course, but its overarching direction must remain clear.

Regional considerations deserve more attention

Stakeholder discussions regarding policies related to how British Columbians heat their homes and buildings consistently made the point that regional considerations— notably the range of climate zones in the province (*Figure 1*)—require more attention than they have received to date. While performance requirements vary by climate zone,[125] they all follow the same timeline. The BC Building Code uses climate zones, primarily based on Heating Degree Days (HDD), to set energy performance targets for buildings. The province is divided into multiple zones, and the specific zone determines insulation requirements and other energy efficiency measures, with colder zones requiring higher levels of insulation and more stringent energy efficiency standards. *Appendix H* includes a list of communities by climate zone.

Figure 1: B.C.'s climate zones



Some stakeholders felt that CleanBC policies didn't fully recognize how much harder or more expensive it can be to meet energy and climate goals for buildings in different parts of the province—especially in colder regions of B.C.

Participants broadly agreed that future policies and programs should build in regional flexibility to reflect these differences, and that this principle should guide the next steps for CleanBC's building-related policies, including the Energy and Zero Carbon Step Codes and the Highest Efficiency Equipment Standard.

Some stakeholders believed the Zero-Emission Vehicle Act set sales targets for local car dealerships, and that rural and northern communities should therefore get more flexibility. In reality, the regulation applies to automakers, not dealerships. Automakers decide how many electric vehicles (EVs) to send to each dealership across B.C., focusing deliveries in areas where EVs are the best fit for drivers and conditions, and can focus their EV sales in the southern and more densely populated areas of the province to meet their requirements.

125 See 2018 Metrics Research Full Report Update. BC Housing and the Energy Step Code Council. 2018.

Consumer rebates play a critical role in driving adoption of clean solutions

Stakeholders delivered a clear and consistent message about government support: CleanBC rebates and incentives have been critical policy levers to cut climate pollution while lowering household costs, boosting health and jobs, and readying the energy system for an electrified future.

Rebates and incentives help speed up a transition that markets won't do fast enough on their own. Specifically, they aim to:

- **Overcome upfront-cost barriers:** While many upgrades save money over time, typically higher initial costs for heat pumps, EVs, solar + storage present real barriers. Rebates help narrow that gap.
- **Lower energy bills and improve comfort:** Building-upgrade programs cut costs and carbon for households and strata/MURB owners.
- **Grow clean-economy jobs and investment:** By kick-starting the market, they create new demand for skilled workers.
- **Advance equity:** Income-tested rebates and enhanced supports for social housing communities—as well as programs tailored for apartments—and condos, help ensure that lower-income residents and renters share in the benefits of climate action.

Stakeholders consistently noted that the shift to income-tested and tiered consumer incentives—designed to make programs more equitable—was generally well-received and should continue to be the focus. This is especially true given the government's current financial pressures. To maintain public trust and avoid the kind of backlash that ultimately led to the demise of the carbon tax, many recommended that the government recycle any revenue from climate policies (such as industrial carbon pricing or BC Hydro's sale of clean-fuel credits) directly back into climate and affordability programs.

B.C should lean into its leading climate and clean tech sector

B.C has emerged as a national and even global leader that punches above its weight in climate and clean energy technology innovation:

- Canada consistently ranks second only to the United States on the Global Clean Tech 100 list—with B.C. leading the country.
- This year, five of the nine Canadian companies listed hailed from B.C.; last year we claimed seven of 13.
- B.C. had just over 49,000 jobs in the environment and clean technology sector (2023).[126]
- Clean tech jobs pay 1.4 times the national average.[127]

Sector stakeholders urged the government to build on this foundation by continuing to invest in infrastructure and innovation. They stressed the importance of ensuring ongoing access to affordable clean electricity and clean fuels, Canadian-made energy and battery storage and grid solutions, and in-province supply chains resilient to global shocks. A growing clean-fuels industry can diversify revenues and cut emissions in currently struggling sectors, such as forestry, they noted. B.C.'s expanding carbon-management cluster also positions the province to lead in a global market with significant GDP potential.

Clean tech sector stakeholders noted that policies like the Low Carbon Fuel Standard and the province's industrial carbon pricing system have sent a clear market signal, attracting investment in decarbonization and cleaner alternatives. Further, their predictability and transparency fosters innovation in strategically important industries such as mining, forestry, energy, transportation. They are also spurring the creations of new industries such as carbon management with B.C. home to leading companies, including Svante, $CO_2$80, and Arca.

126 Employment in the environmental and clean technology products sector. Government of Canada.

127 Employment in the environmental and clean technology products sector. Government of Canada.

Similarly, BC Hydro's capital plan, calls for power, and requests for expressions of interest all serve as clear signals to companies that manufacture, supply, and service established clean-energy systems, and those who work on the cutting edge of innovation. Stakeholders suggested that the next iteration of CleanBC prioritize energy security and affordability by investing not only in new generation, but also in next-generation storage and grid infrastructure, energy storage, digital tools, and demand-side solutions.

However, early-stage climate ventures face a persistent gap between invention and commercialization. Without stable mechanisms to bridge that gap, B.C. risks losing homegrown technologies to jurisdictions offering clearer pathways to growth. Sustaining this leadership will require predictable capital pathways—from company formation through scale-up—if B.C. is to build and retain the next generation of companies, jobs, and industrial capacity. To monitor B.C.'s competitiveness and progress in growing its clean energy and climate tech sector, stakeholders recommended a range of new economic indicators.[128]

CleanBC is driving job creation, but the plan to train and transition workers remains outstanding

While both CleanBC and the CleanBC Roadmap to 2030 mention a labour plan, and are spurring new job creation, stakeholders expressed disappointment and frustration that these have yet to be effectively delivered. Labour stakeholders were engaged in 2019, but the government waited until 2024 to release a pair of ensuing reports developed in 2020, the Industry Strategy for Workforce Readiness for the Clean Economy[129] and the associated labour market analysis.[130]

The stakeholders flagged what they perceived as a disconnect between climate planning and workforce transition planning. The province will not successfully navigate the clean-energy transition without the active support and inclusion of workers in carbon-intensive sectors, they said.

In 2021, the Province of British Columbia, Government of Canada, and Shell Canada Ltd., founded NorthX Climate Tech as an independent non-profit organization that provides funding to early-stage clean tech companies. NorthX backs and de-risks first-of-a-kind projects, and matches innovators with industrial partners and investors. In just a few years, North X has:

1. **Funded 62 projects with $40 million committed;**
2. **Catalyzed $415 million in follow-on investment;**
3. **Created 850+ jobs in technology and the skilled trades;**
4. **Unlocked $30 of investment for every $1 contributed by the province to NorthX.**

Job opportunities in clean energy are growing. For example:

- **BC Hydro's capital plan and first call for power are expected to spur about $40 billion in investment and as many as 14,000 construction jobs per year.[131]**
- **An estimated 384 companies compete in B.C's zero emission vehicle sector; the cluster directly provides 8,280 full-time jobs and contributes $920 million to GDP.**
- **The CleanBC Industry Fund (CIF) has unlocked as many as 2,000 permanent, full-time jobs in emerging decarbonization technologies.**

128 Recommended indicators include: Capital formation in clean sectors; Commercial-scale deployments;Early-stage project throughput; Private/public leverage ratios Total private investment catalyzed in climate tech; Number of projects reaching first commercial deployment; Jobs created by sector and region; Export activity from B.C.-based climate companies; and, First Nations partnership and equity outcomes.

129 Industry Strategy for Workforce Readiness for the Clean Economy. Government of BC. April 2020.

130 https://engage.gov.bc.ca/app/uploads/sites/121/2024/04/CleanBC-LMI-Summary-Report-FINAL_May-14-2020.pdf. Delphi Group for the Ministry of Advanced Education, Skills and Training. April 2020.

131 British Columbia Clean Electricity Snapshot. Government of Canada, 2025.

The StrongerBC: Future Ready Action Plan,[132] which purports to "help thousands of people get the skills they need to succeed in the changing economy," does not include the robust clean-economy strategy many stakeholders believe is required. Similarly, while the 2024 clean energy strategy repeatedly references job creation, CleanBC still lacks an overall workforce development strategy.

The same holds true for Clean and Competitive: A Blueprint for BC's Industrial Future, an industrial strategy released in 2024. Labour stakeholders remain concerned that the blueprint offers no clear plan to secure good, family-supporting careers, as well as support and pathways for impacted and equity-deserving workers.

Skilled worker shortages could prove particularly acute for the renewable energy sector, which could negatively impact the pace and cost of BC Hydro's procurements, unless more proactively addressed. With many occupations in the renewable energy sector projected to be in a national shortage out to 2030, B.C. will need to compete to secure the workforce it requires.[133]

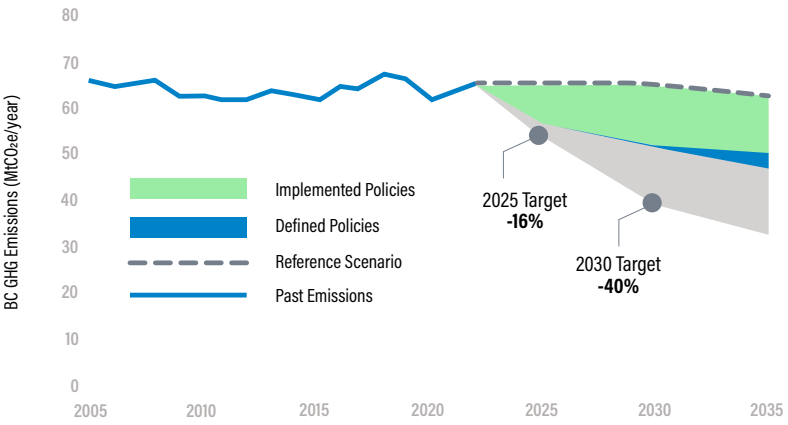
Overly ambitious targets can be counterproductive

Targets show what we aim to achieve and by when. They set ambition and guide policy, but can also suggest a false sense of precision. Numerous stakeholders indicated that when treated as a simple "pass or fail," they can hide meaningful progress or the reasons behind shortfalls.

The 2024 Climate Change Accountability Report shows B.C. is not on track for its 2030 target (*Figure 2*). When targets are set unrealistically high, they can backfire—driving policies (proposed or implemented) that are too costly, too unpopular to sustain, or that provoke a strong negative response from the public or affected businesses. This often leads to either rollback or inaction, both of which only serve to widen the gap to a target.

Since climate policies seek to reduce climate pollution, governments quite naturally measure their efficacy via GHG reductions. But GHG

Figure 2: Climate pollution emission projections to 2035[134]



emissions are a lagging indicator; given the inertia in the energy system, deep cuts take time to show up in the charts. For example, on average people replace their vehicle every 12 years, and heating systems last longer still. To more readily measure success, the government might instead track the rate of clean technology adoption, such as EV sales and heat pump installations, and assess progress relative to what was anticipated from related policy measures. Judging today's progress using GHGs alone—and only looking out a decade—misses the full picture on the impact and effectiveness of policies and programs.[135]

As an alternate approach, the government might pair ambitious but achievable targets with clear plans to remove barriers and drive clean-technology adoption, and track both leading (again, adoption rates of EVs and heat pumps) and lagging (pollution) indicators.

The government listed numerous targets in its CleanBC Roadmap to 2030, and those participating in this review highlighted several as overly optimistic, including:

132 StrongerBC: Future Ready Action Plan. Government of BC. May 2023.

133 Winds of Change: Labour Market Dynamics in Renewable Energy. Electricity Human Resources Council. 2025.

134 2024 Climate Change Accountability Report. Government of BC. 2025.

135 For example, see Carbon budgets are not enough: the case for transition milestones. S-Curve Economics. May 2025.

- An emissions cap for natural gas utilities, which would limit emissions from gas used in buildings and certain industries to about 6 Mt CO_2e by 2030—a 47% reduction below 2007 levels.
- A target to reduce light-duty vehicle-kilometres travelled (VKT) 25% by 2030, compared to 2020.
- The Zero-Emission Vehicle Act EV sales target for 2030, which the province bumped up from the initial 60% to 90%.

In these cases, the pace and scale of change and/or the cost involved triggered significant concern from various stakeholders. In some cases, it also set the stage for disinformation-fueled pushback campaigns that aimed to scrap the targets altogether.

Government needs to improve internal coordination and communications

Multiple and diverse stakeholders found room for improvement in the government's internal coordination and external communications.

While the province has often characterized CleanBC as an "all of government" effort, many stakeholders observed and directly experienced policy disconnects between various ministries. At the same time, some were optimistic that bringing the Climate Action Secretariat under the umbrella of the Ministry of Energy and Climate Solutions would improve delivery, recognizing the proportion of emissions arising from energy production and use.

The January 2025 ministerial mandate letters re-affirmed that the government's "commitment to take action on climate change remains foundational and will be key to a healthy and prosperous B.C. for future generations." While stakeholders broadly applauded this clear direction, some felt strongly that government must embed climate action and the energy transition into its other priorities, including jobs and skills training, economic growth, affordability, health care, and community safety.

Others noted that the government is not yet adequately capturing the costs of climate change—and the corresponding benefits of reducing pollution—in the economic analysis it conducts to inform fiscal planning and policy development. The removal of the consumer carbon tax only exacerbated this gap, they said.

The United Kingdom's Office for Budget Responsibility, a government-funded arm's length public body, recently updated its assessment of pressures on the treasury. The assessment estimated the fiscal costs of meeting the government's net zero commitments and of climate change-related damage to the nation's economy.[136] Notably, it concluded:

> **"The costs of climate change are highly uncertain, but represent a significant risk to the public finances in all the scenarios explored in this chapter. These costs come from both transitioning the economy to net zero emissions, and from damage to the economy caused by climate change. However, the latter is the more significant fiscal cost in the scenarios that we present.**

Beyond this type of assessment, the government could adopt additional economic analysis tools, such as a calculation of the social cost of carbon, a metric used by the federal government.[137]

Many stakeholders expressed concern with what they see as increasing polarization among British Columbians on climate action. Some argue over whether this is the right time to pursue climate action when so many other urgent challenges loom large. In reality, policies that meaningfully address climate change also help solve many of the other issues confronting our communities today. Participants noted that government communications about CleanBC don't do nearly enough to highlight the co-benefits of cutting climate pollution.

---

136 Fiscal risks and sustainability – July 2025. Chapter 4: Climate change. UK Office of Budget Responsibility. 2025.

137 See Social Cost of Greenhouse Gas Estimates – Interim Updated Guidance for the Government of Canada.

Stakeholders flagged the acute risks of growing misinformation (e.g. erroneous media coverage) and disinformation (deliberate campaigns to misrepresent the facts). Numerous stakeholders urged the government and Crown corporations (specifically, BC Hydro) to play a much more proactive role in communicating about CleanBC and its results, in addition to improving its reactive response to clear, and often repeated, misrepresentations.

Kamloops

APPENDIX F:

Where We Fit: **British Columbia's Place in the Global Energy Transition**

How energy is produced and used in B.C. is responsible for about 85% of the province's climate pollution. As a result, securing significant reductions in pollution requires a transition from fossil fuels to cleaner energy, as well as greater energy efficiency. As this primer explores, this transition is already underway globally and in B.C., driven forward by a confluence of forces and offering myriad benefits.

Clean power and electrification are on the rise

Across the globe, the shift to clean energy—and to more efficient ways of using it—is picking up speed. Electrification is the driving force underpinning this transformation, as companies and governments work to replace fossil fuels with clean electricity to power homes, businesses, and the economy.

Though this shift has been underway for many years, a growing number of indicators suggest clean energy is beginning to displace fossil fuels in the global energy system. Investors now move $2 into clean energy projects for every $1 they direct to fossil fuels. In the first half of 2025, for the first time on record renewable energy sources surpassed coal as the leading source of global electricity generation.[138]

According to an International Energy Agency (IEA) projection, by the end of this year one out of every four new vehicles sold worldwide will be fully electric. The IEA reports that in 2024 electric vehicles (EVs) displaced 1.3 million barrels of oil *per day*, a figure that is expected to grow to 5 million barrels per day by the end of the decade.[139]

Electric heat pumps are also playing a leading role and by 2021, the most recent year with global data, they were delivering about 10% of global space heating needs.[140, 141] From 2021 onward, heat pumps have shifted from niche to a mainstream, fast-growing heating technology worldwide.

Similar trends are playing out here at home. BC Hydro is in the midst of a $36 billion capital plan that will expand and strengthen community and regional electrical infrastructure, ensuring clean power can be delivered when and where it's needed. In late 2024 the utility signed power purchase agreements with independent power producers and First Nations partners that will advance 10 new wind and solar projects. (It also issued a second call for power this year and will announce the results in early 2026.) Similarly, FortisBC has also launched a call for power targeting new wind projects in the Southern Interior.[142]

If regulators approve these new renewable power projects, billions of dollars in private capital investment will begin flowing into the province. The power would be put to good use. Each year more EVs roll off dealership lots and onto B.C. roads. In 2024, light-duty EVs accounted for 22.4% of all new car sales; total EVs registered in the province surpassed 194,000.[143]

---

138 Global Electricity Mid-Year Insights 2025. Ember. October 7, 2025.

139 Global EV Outlook 2025. International Energy Agency.

140 A heat pump uses technology similar to that found in a refrigerator or an air conditioner, but in reverse, extracting heat from the air or ground and transferring it to where it's needed. Unlike a gas furnace, which provides heat, and an air conditioner, which provides cooling, heat pumps do both singlehandedly.

141 The Future of Heat Pumps. International Energy Agency. November 2022.

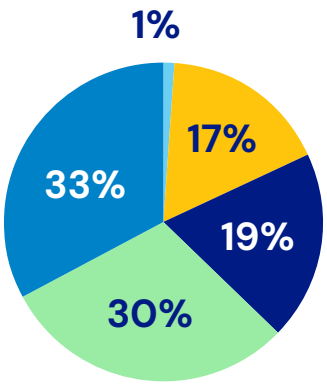
142 Call for power. FortisBC.

143 Zero Emission Vehicle Update - 2024. Government of B.C.

Homeowners and landlords are also switching to electricity for heat and hot water. Between 2017 and 2022, the number of heat-pump equipped B.C. households increased by approximately 80%, from an estimated 142,000 to 254,000 units. And in 2022 and 2023, for the first time, equipment distributors brought in more heat pumps than natural-gas furnaces, signaling a pronounced market shift.[144]

This shift to electrification of transportation and heating will increase the province's proportion of energy use served by electricity. As of 2022, electricity provided 17% of energy used in the province, whereas fossil fuels provided 63% (*Table 1*). Despite B.C.'s very clean grid, our electrification level (~17%) is well below hydro-rich leaders such as Quebec (41%)[145] and Norway (47%)[146], and a bit below the Canadian (20%)[147] and global (21%)[148] averages. This underscores the degree to which this province's vehicles and buildings still rely on fossil fuels. Here in B.C. and around the world, electrification and energy efficiency are key levers for improving "energy productivity"—a measurement of economic value produced per unit of energy consumed. A recent analysis found that by 2050, stronger commitments to electrification and energy efficiency could allow the world to do more with less—expanding energy services and enabling the global economy to double in size, while reducing total energy use by nearly a quarter compared to today.[150]

Table 1: Energy use by type and sector in B.C (2022)[149]



Energy Type	Overal Use (PJ)	Breakdown by Sector
Refined Petroleum	394 PJ (33%)	• 74% Transportation • 24% Industrial • 2% Buildings
Natural Gas	366 PJ (30%)	• 60% Industrial • 40% Buildings
Biofuels and Decarbonized Gas	229 PJ (19%)	• 81% Industrial • 13% Transportation • 6% Buildings
Electricity	208 PJ (17%)	• 57% Buildings • 43% Industrial
Other	8 PJ (1%)	• 100% Industrial

144 Powering Our Future: BC's Clean Energy Strategy. Government of BC. June 2024

145 Provincial and Territorial Energy Profiles – Quebec. Canada Energy Regulator.

146 Norway Country Profile. International Energy Agency.

147 Provincial and Territorial Energy Profiles – Canada. Canada Energy Regulator.

148 Where does the world get its energy? International Energy Agency.

149 Provincial and Territorial Energy Profiles – British Columbia. Canada Energy Regulator.

150 Energy productivity: Increasing efficiency in an expanded, electrified energy system. Energy Transitions Commission. October 2025.

Beyond these productivity upsides, British Columbians are and will continue to reap other benefits as they choose electricity to meet a larger share of their needs:

- **Improved affordability** by lowering total household energy costs
- **Significantly reduced energy waste** and lower total energy demand
- **Reduced reliance** on imported petroleum products, leading to increased energy security
- **Less volatility in energy prices** relative to oil and gas commodities, which are sensitive to supply and demand dynamics, and leave British Columbians vulnerable to geopolitical events beyond their control
- **Healthier homes and communities** from reduced air pollution from burning fossil fuels

Drivers of the energy transition: less waste, lower cost, greater security

British Columbians typically discuss electrification and the shift to clean energy within the context of efforts to reduce climate pollution. But physics, economics, and geopolitics are playing a much bigger role.[151] In this section, we summarize each of the three drivers, and explain how they are currently playing out in British Columbia.

Physics

Physics—specifically, thermodynamics—dominates the three drivers. That's because fossil fuel combustion is inherently inefficient; irrespective of the fuel in question, the process squanders more than two-thirds of input energy as unwanted heat. Compared with their fossil fuel counterparts, technologies like solar and wind power, electric vehicles, and heat pumps are roughly three times more efficient.

THE B.C. CONTEXT:

As illustrated in *Figure 1*, in British Columbia wastes about 68% of the energy generated from refined petroleum products such as gasoline and diesel, while 26% of that produced by natural gas is similarly left unused.

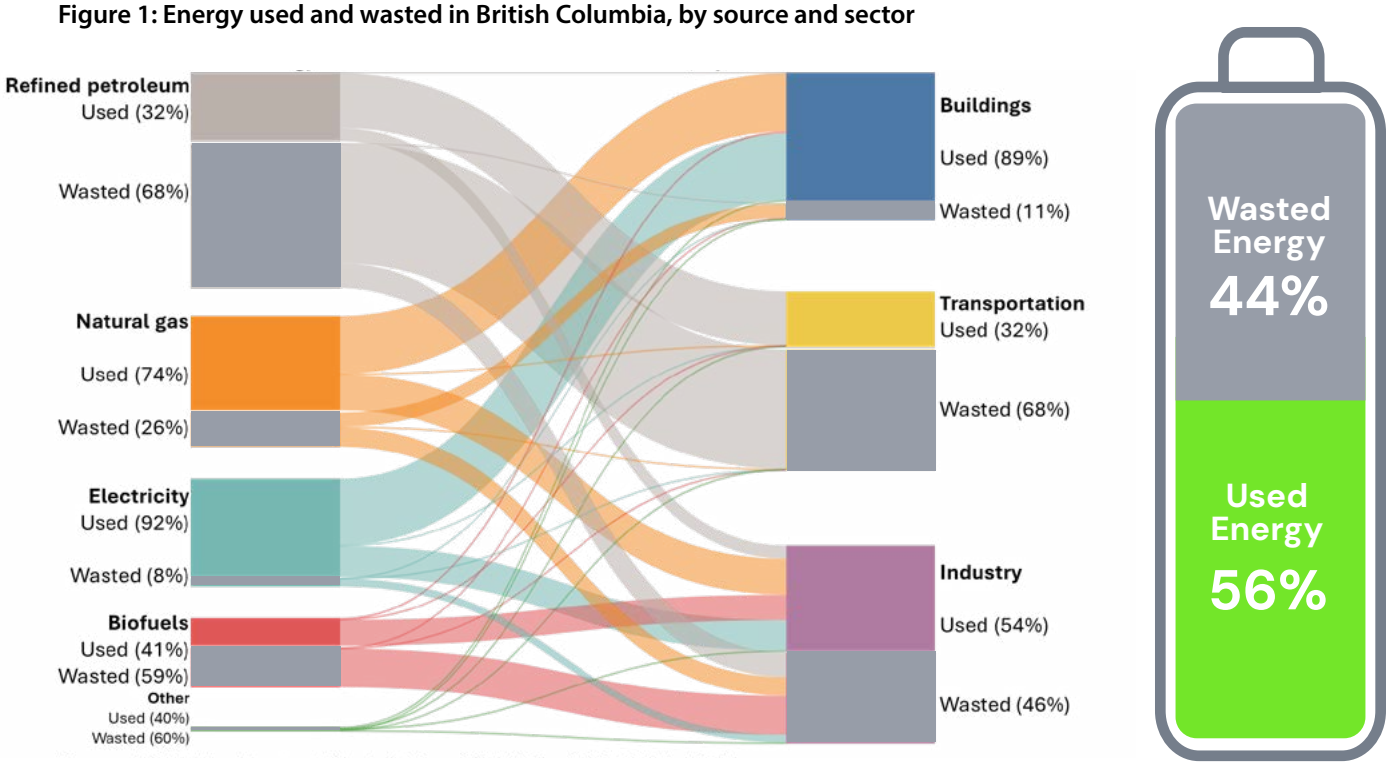
Compare these figures with electricity. Just 8% of the energy generated by electricity goes to waste. This means that while electricity contributes 17% of all energy supplied in British Columbia, it provides 33% of the province's useful energy. (*Note: Useful energy is the energy that actually meets human or industrial needs after all conversion losses have occurred. It is the closest measure of the "energy services" people rely on for daily life—warmth, mobility, comfort, lighting, and so on.*)

Studies evaluating the most cost-effective ways to reduce climate pollution consistently find that electrification will play a central role, as clean electricity can serve the vast majority of the energy services—e.g. space and water heating or transportation—that fossil fuels now handle. While this will require significantly more electricity than we produce today, thanks to the efficiency gains from electric vehicles, heat pumps, and other electric technologies, much less energy would be wasted. For example, the Canadian Energy Regulator's net zero modeling shows that the province's total energy demand would actually contract relative to today—even as the economy grows.[152]

151 The Electrotech Revolution. Ember. September 16, 2025.

152 Canada's Energy Future 2023: Energy Supply and Demand Projections to 2050. Canadian Energy Regulator. 2023.

Figure 1: Energy used and wasted in British Columbia, by source and sector



**Sources: B.C. Ministry of Energy and Climate Solutions (2025), NRCan (2022), BC Hydro (2024). Waste estimates based on information from U.S. DOE, industry reports, end-use surveys, and published peer-reviewed research.*

Economics

Economics is the second energy transition driver and, here too, clean technologies have the edge. As Adam Smith figured out long ago, technologies benefit from economies of scale; the more you make, the cheaper they become (*Figure 2*). Meanwhile, the "easy oil" era is largely over; new barrels often come from more complex, capital-intensive sources. Similarly, while natural gas resources are ample, new supply increasingly relies on complex infrastructure. And in both cases, as globally traded commodities, they are subject to significant price volatility (often as a result of unpredictable geopolitical events).

THE B.C. CONTEXT:

While B.C's electricity system—and our relatively low electricity rates—is built on a legacy of large hydropower projects, wind, solar, and batteries will play an increasingly important role as the system grows in the coming years and decades. These will help minimize rate increases as the system expands.[153] Further, by shifting more of our energy use from fossil fuels to clean electricity, British Columbians could reduce the total amount they spend on energy. Numerous analyses have concluded that total household energy costs in B.C—sometimes described as an "energy wallet"[154]—will decrease as we increasingly shift from fossil fuels to electricity and technologies that use it, like heat pumps and EVs.[155,156]

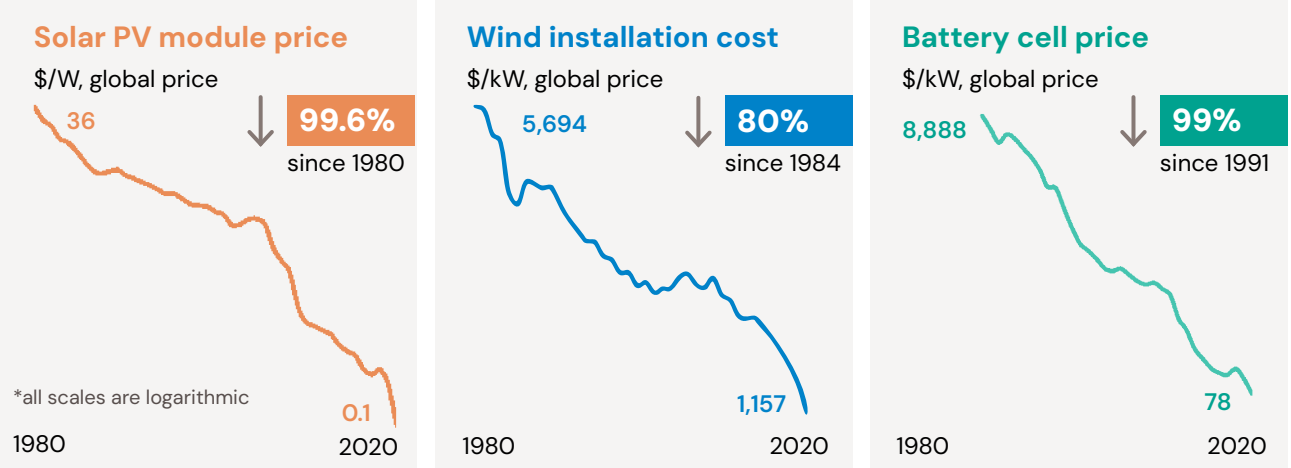
153 For an exploration of the impact of electrification on peak demand, including in British Columbia, see Can Canada's electricity systems handle the electrification of Buildings? Navius Research. April 28, 2024.

154 "The concept of an energy wallet shifts focus from the individual energy bills we pay on a daily or monthly basis (think gasoline, natural gas, and electricity) and instead considers energy use as a bundle of services consumed over time. The hypothetical energy wallet rolls together the costs we pay to operate the devices and appliances we rely on, but also how they may change over time, and the costs to buy, maintain, and replace them. See: Powering Our Future: BC's Clean Energy Strategy. Government of B.C. June 27, 2024.

155 Household Energy Affordability in a Net-Zero Future. Transition Accelerator. November 2024.

156 New analysis finds most Canadian households will save money in switch to electricity. Canadian Climate Institute. March 21, 2023.

Figure 2: Costs of solar PV modules, installed wind, and battery cells 1980-2020[157]



Geopolitics

Finally, geopolitics is affecting both the cost of energy and, in some cases, its availability. For example, economists have identified higher oil and gas prices as the most significant driver of Canada's post-pandemic inflation, with Russia's February 2022 invasion of Ukraine further ratcheting them up.[158] Given various military conflicts and an increasingly unpredictable trade policy landscape, energy security has jumped up the list of concerns in countries around the world. A recent study noted that clean energy now fares well when energy trade is under threat, owing to the decentralized and localized nature of renewable energy and other key technologies. For this reason, energy security concerns are likely to accelerate the energy transition.[159]

THE B.C. CONTEXT:

British Columbians can strengthen their energy security by reducing reliance on imported oil and refined petroleum products—mostly used for transportation—and natural gas. While natural gas is produced here in B.C., global commodity markets determine its price, which inherently creates significant volatility. Meanwhile, the province's electricity self-sufficiency requirement requires BC Hydro to ensure it meets the needs of its domestic customers before considering exports.

157 The Electrotech Revolution. Ember. 2025.

158 The Rise (And Fall?) of Inflation in Canada: A Detailed Analysis of Its Post-Pandemic Experience. Yu Chen and Trevor Tombe. September 2022.

159 Carlyle Group, The New Joule Order. March 2025.

Electricity imports and exports and the benefits of trading

B.C. Hydro uses power trading to help manage annual variations in water inflows into its reservoirs while keeping rates affordable. In any given year, the balance between the amount of available electricity versus the amount of needed electricity can result in either a power surplus or deficit. In 2024, as severe drought conditions persisted, B.C. Hydro imported approximately 13,600 gigawatt hours (GWh) of electricity. However, the utility was a net importer in seven of the past 15 years, and a net exporter in eight of them. In addition, between 2019 and 2024 the value of the province's electricity exports was 35% higher than all of its imports.[160] As a direct result of that healthy cash influx, British Columbians paid 10% less on their power bills in 2025 than they would otherwise would have.[161]

The contracting, but still important, role of the gas system

While total gas use will decline in the wake of rising heat pump adoption, gas utilities will continue to play a role supplying dual-fuel heat pumps.[162, 163] The British Columbia-specific sections of a landmark 2024 analysis of the least-cost path to net zero emissions for building heat found: [164]

- Heat pumps will meet 68% of residential heat demand, with electric-resistance baseboards providing 8%. Hybrid heat pumps with gas back-up would make up the difference at 23%.
- Heat pumps will serve 70% of commercial and institutional building heat needs. Meanwhile, baseboard/furnaces/boilers would provide 7% of the need in the sector, and hybrid heat pumps with gas back-up would provide 17%.
- Electrification of building heat will depress demand for natural gas 98% below 2020 levels by 2050.
- Even while electricity demand increases on the path to net-zero, the province's total energy demand dramatically decreases—thanks to the extreme efficiency of heat pump technology.[165]

To align with a net-zero pathway, another analysis finds that British Columbia's gas system will need to be shipping biomethane, or renewable natural gas (RNG), to serve hybrid heat pumps.[166] FortisBC established a voluntary target of 15% RNG by 2030—part of its "30BY30" plan—referenced in regulatory filings in 2021 and 2022. However, in more recent filings the company references its RNG "designated blend" approved by the BC Utilities Commission (which began at 1% in July 2024 and rose to 2% in January 2025) and on reporting delivered RNG volumes, without restating the 15% by 2030 target. FortisBC has been actively procuring RNG to fulfill its two percent target.[167]

160 Commodity Statistics. Canada Energy Regulator.

161 British Columbia Utilities Commission (BCUC or Commission) British Columbia Hydro and Power Authority (BC Hydro) Compliance Filing in Response to Directives 77 and 79 of BCUC Decision and Order No. G-91-23. BC Hydro. October 30, 2023.

162 Heat Exchange: How today's policies will drive or delay Canada's transition to clean, reliable heat for buildings. Canadian Climate Institute. 2024.

163 Charting Space Heating Futures: Toward a Blend of Electrification and Renewable Gas. IESVic Energy Brief. Knittel, T.; Wild, P.; Rowe, A. 2025.

164 Heat Exchange: How today's policies will drive or delay Canada's transition to clean, reliable heat for buildings. Canadian Climate Institute. 2024.

165 Heating and Cooling With a Heat Pump. Government of Canada.

166 Charting Space Heating Futures: Toward a Blend of Electrification and Renewable Gas. IESVic Energy Brief. Knittel, T.; Wild, P.; Rowe, A. 2025.

167 FortisBC first energy utility in North America to automatically designate Renewable Natural Gas for customers. FortisBC. June 27, 2024.

While gas utilities have raised a potential role for hydrogen, it is unlikely to play a role in building heat.[168] A comprehensive expert review of 54 independent studies found none that supported the use of hydrogen for building heat at scale; most concluded that hydrogen heating is both less efficient and more expensive.[169] However, some opportunities for hydrogen may remain in delivering zero-carbon industrial heat.[170]

While gas utilities will continue to play an important role in meeting the needs of British Columbians over the coming decades, a business model that relies on continuous growth of the gas system is incompatible with the imperative to achieve net zero emissions. In the near-term, increasing the amount of RNG delivered to customers, and the strategic deployment of dual-fuel hybrid heat pump systems (especially in colder regions of the province) can contribute to reducing climate pollution. But if gas utilities are to remain viable, the provincial government will need to support them (through regulatory changes, for example) as they evolve their business model. Furthermore, if the provincial government and its energy regulator do not carefully coordinate the transition to increased electrification, a shrinking customer base will end up bearing the high fixed costs of legacy gas utility infrastructure, driving up bills for the equity-deserving communities most likely to be left behind.[171]

Regulators in numerous jurisdictions have acknowledged these challenges and convened inquiries or proceedings to explore the "future of gas."[172] Here in B.C., the provincial government, B.C Utilities Commission, and electricity and gas utilities have each taken preliminary steps to integrate and align planning efforts across and between the gas and electricity systems. While the process can be messy at first, such an integrated approach could yield fewer redundant investments, more affordable bills, improved reliability, and more efficient administrative processes.[173]

168 A meta-review of 54 studies on hydrogen heating. J. Rosenow. Cell Reports Sustain, 1 (2024).

169 A meta-review of 54 studies on hydrogen heating. J. Rosenow. Cell Reports Sustain, 1 (2024).

170 For example, see Electrification or Hydrogen? The Challenge of Decarbonizing Industrial (High-Temperature) Process Heat. Leicher, J.; Giese, A.; Wieland, C. 7, 439-456. 2024.

171 Effects of uncoordinated electrification on energy burdens for natural gas customers. Garibay-Rodriguez, J., Edwards, M.R., Fink, A.F. et al. Sci Rep 15, 27337 (2025).

172 For example, see The Future of Gas: The regulatory proceedings, economic analyses and equity policies shaping the methane gas system. Building Decarbonization Alliance. September 26, 2024.

173 Opportunities for Integrating Electric and Gas Planning. Regulatory Assistance Project and Berkley Lab. January 2025.

Leaning into energy efficiency

Energy efficiency is often described as the "first fuel" in clean energy transitions, and for good reason. It provides some of the quickest and most cost-effective opportunities to cut both carbon pollution and energy bills. Energy-efficiency investments by utilities, often broadly referenced as demand side management, can help avoid unnecessary and expensive infrastructure upgrades.

Since 2019, when it first launched its Energy Efficiency Scorecard, Efficiency Canada has recognized British Columbia as Canada's overall most energy-efficient province.[174] The national think tank cites B.C.'s nation-leading policies in high-performance buildings and transportation electrification, which it in turn attributes to CleanBC.

Both BC Hydro and FortisBC are making record investments in energy efficiency programs, with BC Hydro investing $700 million over three years and FortisBC investing $695 million over four years. As a result of these initiatives, BC Hydro customers will save about $80 million per year starting in 2026, and FortisBC will drop its climate pollution by 740,000 tonnes.[175]

While this is significant, Efficiency Canada's scorecard highlights an opportunity to do even more on utility-led energy efficiency programs. B.C utilities lag behind leaders in the field ranking 4th and 6th in annual electricity savings and natural gas and non-regulated fuel savings from energy efficiency programs, respectively, with leading provinces achieving more than double the savings.[176] The scorecard also noted that other provinces, such as Ontario and Quebec, have recently taken much stronger steps to coordinate and orient electricity DSM toward longer-term economic and environmental objectives.[177]

Conclusion: British Columbians are well-positioned to benefit from increased electrification and the energy transition

British Columbia's strong clean-electricity foundation affords the province an obvious advantage in the global energy transition. A focused push to electrify a larger share of overall energy use will bring myriad benefits, including strengthened competitiveness.

To ensure the province continues to maximize the transition's opportunities and benefits, while doing its part to cut climate pollution and improve resilience, this Independent Review of CleanBC recommends the government immediately advance seven priorities for action. These actions—and their associated recommendations (Appendix A)—would lean into B.C's advantages and progress to date in embracing electrification and navigating the global energy shift that is already well underway.

174 The 2024 Canadian Energy Efficiency Scorecard: Provinces and Territories. Nippard, A., Maas, C., Wu, M., Gaede, J., Haley, B. Efficiency Canada. 2024.

175 Powering Our Future: BC's Clean Energy Strategy. Government of B.C. June 27, 2024.

176 The 2024 Canadian Energy Efficiency Scorecard: Provinces and Territories. Nippard, A., Maas, C., Wu, M., Gaede, J., Haley, B. Efficiency Canada. 2024.

177 The 2024 Canadian Energy Efficiency Scorecard: Provinces and Territories. Nippard, A., Maas, C., Wu, M., Gaede, J., Haley, B. Efficiency Canada. 2024.

APPENDIX G:

LNG Projects in B.C: Export Capacity, Investment, GHG emissions and Electricity Demand

	LNG Canada Phase 1	LNG Canada Phase 2	Woodfibre LNG
Export capacity	14 MTPA	14 MTPA	2.1 MTPA
Emissions (annual)	Facility: 2.1 Mt CO_2e Upstream: 3.4 Mt CO_2e Combustion at destination: 37.6 Mt CO_2e	Facility: 0.8 Mt CO_2e Upstream: 3.1 Mt CO_2e Combustion at destination: 37.6 Mt CO_2e	Facility: 0.1 Mt CO_2e Upstream: 0.3 Mt CO_2e Combustion at destination: 5.6 Mt CO_2e
Electricity demand (annual)	Facility: 788 GWh Upstream: 9,766 GWh	Facility: 3,204 GWh Upstream: 10,164 GWh	Facility: 1,095 GWh Upstream: 863 GWh
Construction costs	$40 billion	(Part of LNG Canada Phase 1 estimate)	$12 billion

	Cedar LNG	Ksi Lisims LNG	Tilbury LNG (Phase 2 expansion)
Export capacity	3 MTPA	12 MTPA	2.8 MTPA
Emissions (annual)	Facility: 0.3 Mt CO_2e Upstream: 0.7 Mt CO_2e Combustion at destination: 8.1 Mt CO_2e	Facility: 0.2 Mt CO_2e Upstream: 1.1 Mt CO_2e Combustion at destination: 32.2 Mt CO_2e	Facility: 0.2 Mt CO_2e Upstream: 0.6 Mt CO_2e Combustion at destination: 7.5 Mt CO_2e
Electricity demand (annual)	Facility: 1,461 GWh Upstream: 2,293 GWh	Facility: 5,256 GWh Upstream: 4,957 GWh	Facility: 957 GWh Upstream: 1,900 GWh
Construction costs	$5.9 billion	$26 billion	$1.14 billion

APPENDIX H:

Communities by B.C. Building Code Climate Zone

The BC Building Code uses climate zones, primarily based on Heating Degree Days (HDD), to set energy performance targets for buildings. The province is divided into multiple zones, and the specific zone determines insulation requirements and other energy efficiency measures, with colder zones requiring higher levels of insulation and more stringent energy efficiency standards.

BC Climate Zone Per BCBC (* denotes locations with multiple climate zones)

CZ 4 < 3,000 HDD

Abbotsford	Duncan	Langley	Richmond	Surrey
Agassiz	Delta	Mission	Sechelt	Vancouver
Burnaby*	Maple Ridge	New Westminster	Sidney	Victoria
Chilliwack	Jordan River	North Vancouver*	Sooke	West Vancouver
Crofton	Langford	Port Renfrew	Squamish	White Rock

CZ 5 3,000 to 3,999 HDD

Alberni	Courtenay	Ladysmith	Osoyoos	Queen Charlotte City
Ashcroft	Crescent Valley	Lillooet	Parksville	Salmon Arm
Bamfield	Gold River	Lytton	Penticton	Sandspit
Bella Bella	Grand Forks	Masset	Port Alberni	Tahsis
Bella Coola	Hope	Merritt	Port Alice	Tofino
Burnaby (SFU)	Kamloops	Montrose	Port Hardy	Trail
Cache Creek	Kaslo	Nakusp	Port McNeill	Ucluelet
Campbell River	Kelowna	Nanaimo	Powell River	Vernon
Castlegar	Kitimat Plant	Nelson	Prince Rupert	Youbou
Comox	Kitimat Townsite	Ocean Falls	Qualicum Beach	

CZ 6 4,000 to 4,999 HDD

Carmi	Fernie	McBride	Revelstoke	Williams Lake
Cranbrook	Golden	Prince George	Stewart	
Dog Creek	Greenwood	Princeton	Terrace	
Elko	Kimberley	Quesnel	Whistler	

CZ 7A 5,000 to 5,999 HDD

100 Mile House	Glacier
Burns Lake	Mackenzie
Chetwynd	McLeod Lake
Dawson Creek	Smithers
Fort St. John	Taylor

CZ 7B 6,000 to 6,999 HDD

Beatton River
Dease Lake
Fort Nelson

CZ 8 > 7,000 HDD

Smith River