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Submission to BC Government and Climate Solutions and Clean Growth Advisory Council

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Introduction

“Climate change is now reaching the end-game, where very soon humanity must choose between taking unprecedented action, or accepting that it has been left too late and bear the consequences.” These are the words from Professor Hans Joachim Schellnhuber,¹ leading German climate scientist and senior advisor of German Chancellor Angela Merkel and the European Union, in August 2018.

The reason for the warning is new research highlighting that the world might be closer to dangerous thresholds of uncontrollable climate change than previous studies have suggested.² One of the starkest examples of worsening climate impacts that speed up global warming are BC’s wildfires, currently burning at more than 600,000 hectares³—enough to more than double BC’s official annual emissions. In 2017, BC lost 1.2 million hectares to wildfires, causing an estimated 190 million tonnes of CO₂ emissions.⁴ This essentially quadrupled BC’s official emissions (as a result of international agreements, BC’s official emissions do not include forest emissions, one reason why the provincial government has not taken the needed steps to reduce emissions from wildfires, destructive logging and slash burning).

“BC is just 4.5 million people sharing a planet with seven billion others. We have to be realistic about what our impacts would be.”⁵ These are the words from BC Premier John Horgan, on August 21, 2018, when asked how the province can justify supporting the LNG Canada project, which will enable a massive increase in global greenhouse gas (GHG) emissions from burning gas and leaking methane, in BC and abroad.

¹ <http://www.climatecodered.org/2018/08/take-unprecedented-action-or-bear.html>

² <http://www.pnas.org/content/115/33/8252>

³ <https://theprovince.com/news/local-news/b-c-wildfires-2018-prime-minister-visits-wildfire-crews-as-hundreds-of-blazes-burn/wcm/15e8426a-8a5c-4d50-8b75-e7531d7240d3>

⁴ <https://www.cbc.ca/news/canada/british-columbia/it-s-alarming-wildfire-emissions-grow-to-triple-b-c-s-annual-carbon-footprint-1.4259306>

⁵ <https://www.cbc.ca/news/canada/british-columbia/bc-wildfires-2018-1.4792952>

This statement is a huge letdown for British Columbians. All parts of the international community consist of nations or regions with several million people. What if all of them followed the same argument? All heads of governments should be aware of the term “tragedy of the commons.” This is used to describe a situation in which individual users act according to their own self interest—contrary to the common good—and destroy their own life support systems (such as a stable climate and a healthy environment) through their collective action.

The only path to break through the problem is leadership, particularly from those who fully grasp the threat for the entire planet, who bear most of the responsibility and who have the freedom to choose an alternative path.

In fact, there are few jurisdictions in the world with a greater opportunity to lead and inspire others than British Columbia. Sierra Club BC can only hope that Premier Horgan and his government will heed the warning from Professor Schellnhuber and act with courage and speed.

Climate action must correspond to the scope and scale of the threat. Bill McKibben said this best in his December 2017 climate article “Winning slowly is the same as losing.”⁶ Being so close to dangerous thresholds means that insufficient actions in the fight against climate change will lead to similarly devastating outcome as no action. Unfortunately, this is exactly what Sierra Club BC is seeing thus far from the relatively new BC government in terms of climate action. This is reflected in the three provincial intentions papers presented by government for discussion in July on the topics of clean transportation, clean and efficient buildings, and a clean growth program for industry.

Before addressing these intentions papers, it is critical to point out three elephants in the room that are not discussed in the intentions papers. These elephants will completely overshadow the potential of solutions in the areas discussed in the papers, if left unaddressed.

Three elephants in the room

First elephant: Insufficient BC emissions reduction target

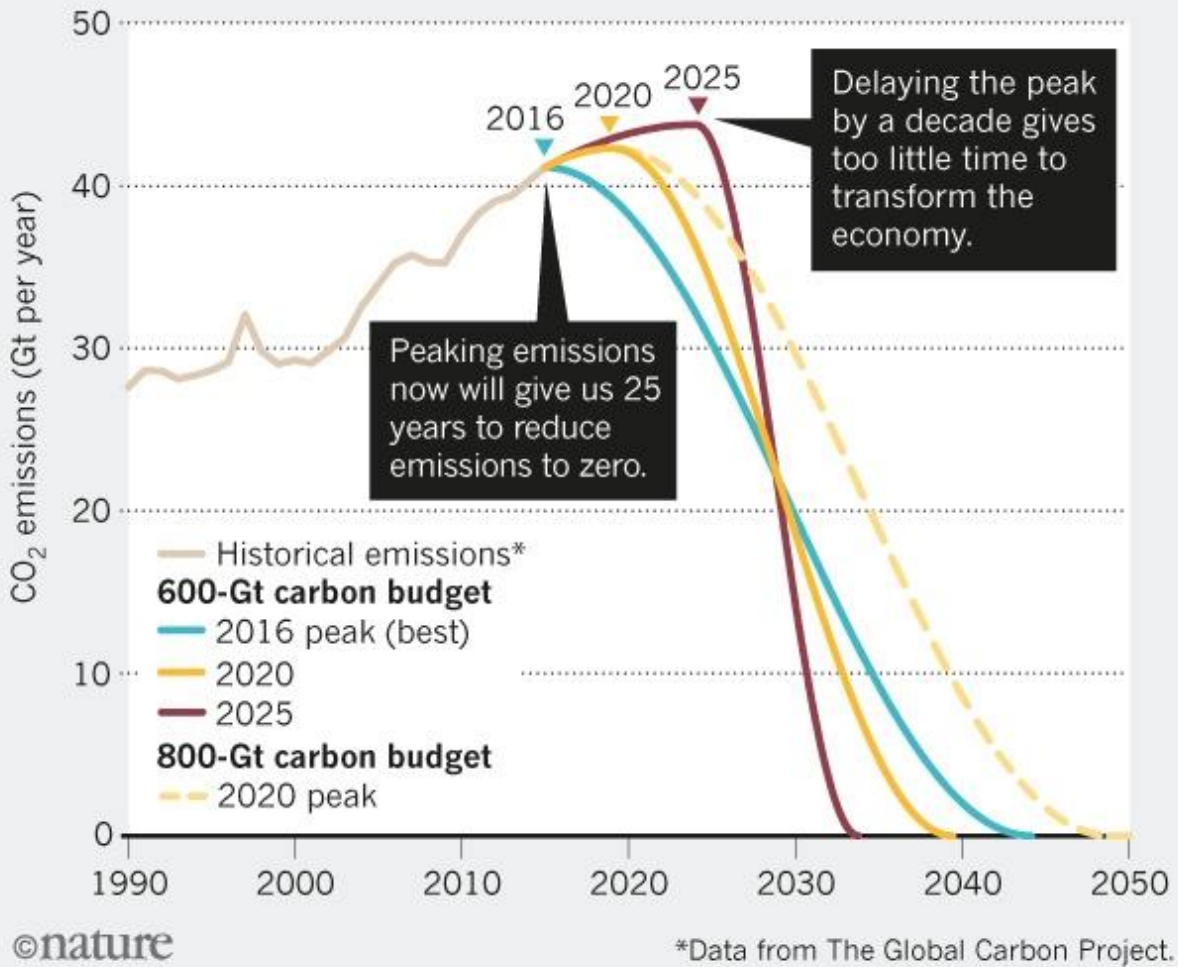
The first elephant in the room is that the new proposed target (40% reduction by 2030 compared to 2007 levels) is a roadmap to climate hell, not climate stabilization. All realistic remaining global emissions trajectories with the goal of preventing warming higher than 1.5 or 2 degrees require rapid movement toward zero emissions by 2040, and successfully reaching halfway to this goal by 2030 (this is difficult but possible if the whole world pulls together).⁷ Richer countries with higher emissions per capita must move faster than poorer nations with lower emissions per capita.

⁶ <https://www.rollingstone.com/politics/politics-news/bill-mckibben-winning-slowly-is-the-same-as-losing-198205/>

⁷ <https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201>

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There is a mean budget of around 600 gigatonnes (Gt) of carbon dioxide left to emit before the planet warms dangerously, by more than 1.5–2°C. Stretching the budget to 800 Gt buys another 10 years, but at a greater risk of exceeding the temperature limit.



Graph source: <https://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201>

Second elephant: New fossil fuel projects are incompatible with meaningful climate action

The lack of a meaningful emissions reduction target leads directly to the second elephant in the room. The NDP government continues to pursue new LNG terminals, ignoring the climate science that demonstrates that new fossil fuel export projects are incompatible with coherent climate action. They

ignore renewable energy progress that demonstrates new fossil fuel projects are no longer needed economically because truly clean, affordable and job-creating alternatives exist.⁸

Both the LNG Canada project and the Trans Mountain pipeline expansion would massively increase provincial and national emissions and make it impossible to meet even our current, insufficient and weak targets. In fact, both projects have a very similar overall GHG footprint over their lifetimes (100 million⁹ in the case of LNG Canada and 120 million¹⁰ per year in the case of Trans Mountain when considering their full carbon footprints including emissions from extraction, transportation, processing and burning in other nations after export). There is no mathematically possible path to allow building of new fossil fuel projects and meet the needed reduction goals before it is too late.

True leadership requires following the example of France¹¹ and banning all new fossil fuel extraction projects, combined with a phase out of existing projects by no later than 2040. The rationale for this urgently needed step is summarized in the Lofoten Declaration signed by more than 800 civil society organizations: “Instead of passing the buck by ignoring the lock-in of massive new fossil fuel infrastructure that is designed to produce for decades to come, we need action, leadership, and policy that plans for climate safety.”¹²

The Lofoten Declaration calls for a “managed decline of the fossil fuel sector in line with the Paris climate goals. The Declaration demands a just transition, it demands leadership in this phase-out from the countries that can afford it first, and it confirms that the movement to stand up to dangerous fossil fuel development must be led by those on the frontlines. The energy revolution is already well underway and that energy access and demand can be met by safer, cleaner, renewable energies.”

Both BC and Canada belong to those parts of the world that remain among the most polluting on a per capita basis,¹³ we live in a relatively rich part of the world, we happen to control resource extraction across vast lands with a relatively small population, and we have many clean alternatives to continued

⁸ This month, Bloomberg reported that producers of renewable energy have installed their first trillion watts. *Bloomberg New Energy Finance* expects the next trillion watts will cost \$1.2 trillion by 2023, almost half the price of the first trillion watts. <https://www.bloomberg.com/news/articles/2018-08-02/green-energy-capacity-passes-a-trillion-watts>

⁹ <https://www.vancouverobserver.com/blogs/climatesnapshot/thirteen-proposed-lng-projects-equivalent-13-times-current-bc-emissions>

¹⁰ <https://www.vancouverobserver.com/blogs/climatesnapshot/four-charts-reveal-gigantic-climate-impact-proposed-kinder-morgan-mega>

¹¹ <https://www.sciencealert.com/france-just-became-the-first-country-in-the-world-to-ban-all-fracking-and-oil-production-fossil-fuels>

¹² <http://www.lofotendeclaration.org/>

¹³ Canadians emit close to 21 tonnes per capita, British Columbians close to 14 tonnes per capita and Albertans close to 67 tonnes per capita (without including emissions from burning fossil fuels extracted in Canada and burned in other countries). <https://www.ivey.uwo.ca/cmsmedia/2112500/4462-ghg-emissions-report-v03f.pdf> Global average per capita emissions are below 5 tonnes CO₂ per year <http://edgar.jrc.ec.europa.eu/overview.php?v=CO2andGHG1970-2016&sort=des8>

extraction and export of fossil fuels. Without BC and Canada joining other nations¹⁴ in leading in the fight against global warming, there will be little hope of inspiring others to follow and an increasing danger that those nations who have led the fight will give up and abandon hope.¹⁵

Third elephant: Forest emissions

The third elephant in the room is the increasing forest emissions from wildfires and destructive logging. Ed Struzik, author of the book *Firestorm: How Wildfire Will Shape Our Future*, outlined in a recent article in the Tyee¹⁶ some of the urgent steps the BC government must take to mitigate the risk, damage and emissions from wildfires, which are currently overwhelming all efforts to reduce emissions from other causes.

While many of BC's trees are going up in flames, the most resilient provincial forests that are less prone to fire – intact old-growth rainforests – continue to be clearcut in most parts of the province. Logging of old-growth on Vancouver Island alone causes millions of tonnes of additional annual CO2 emissions¹⁷ which could be phased out quickly by implementing solutions for endangered ecosystems developed in the Great Bear Rainforest as promised by the NDP in their 2017 election platform. Ending spraying of deciduous stands¹⁸ has the potential to significantly reduce wildfire emissions, increase carbon sequestration, and provide benefits to wildlife and several environmental services hit by climate impacts.

For detailed analysis of a decade of BC forest emissions and recommendations to reduce them, Sierra Club BC recommends reviewing and using our 2015 backgrounder “BC Forest Wake-Up Call”¹⁹ to inform a forest climate intentions paper.

¹⁴ “...A number of other countries have stepped up since the Paris summit by committing to net zero emissions targets by 2040 or 2050. They include France, Iceland and New Zealand – but also some developing nations such as Costa Rica and Bhutan. Driven by a progressive alliance including Sweden and the UK, the European Union is heading in the same direction. The EU parliament has already voted for a net zero target, and the commission is updating its energy and climate roadmap in line with the Paris agreement – a process which will inevitably recommend a net zero target for the EU with a target date no later than 2050.”

<https://www.theguardian.com/environment/2018/apr/17/to-lead-on-climate-countries-must-commit-to-zero-emissions>

¹⁵ See Marc Lee's submission on how the UK managed to reduce emissions to the level of 1890 by using accountability mechanisms such as short term carbon budgets by sector to meet reduction targets.

¹⁶ <https://thetyee.ca/Opinion/2018/08/22/Were-Losing-Fight-Wildfires-BC-Fire-Prevention/>

¹⁷ https://sierraclub.bc.ca/wp-content/uploads/2015/08/Old-Growth-and-Carbon-report_low-res-final1.pdf

¹⁸ <http://stopthespraybc.com/>

¹⁹ <https://sierraclub.bc.ca/bcs-forests-full-decade-of-carbon-loss/>

Comments on intentions papers

As other environmental organizations and writers have pointed out, though generally describing steps in the right direction, the intentions papers are characterized by a great lack of detail when it comes to outlining expected reductions, timelines and an overall path toward meeting BC's climate targets. In order to develop a meaningful climate action plan consistent with science, the province must address the three elephants in the room and strengthen all of the proposed steps in the intentions papers.

The papers also outline ambitions that, while laudable, are wildly insufficient to the task at hand. This problem can be traced back to the inadequate emissions reduction targets discussed earlier. Inadequate targets deliver inadequate solutions.

Marc Lee (Canadian Centre for Policy Alternatives),²⁰ the Pembina Institute,²¹ Guy Dauncey,²² and Eric Doherty²³ have outlined in detail how these intentions papers must be strengthened. Summarized below are some of their key points with which Sierra Club BC agrees.

Transportation

As Eric Doherty pointed out, the paper does not include the provincial NDP's commitment to reduce GHG pollution from transportation 30 per cent below 2007 levels by 2030, a relatively ambitious target, but not compared to what some other jurisdictions are achieving. Paris, France is aiming to cut automobile traffic in half, and has cut traffic volumes by 7 per cent since the beginning of the year.

A report Eric Doherty co-authored, *Transportation Transformation: Building complete communities and a zero-emission transportation system in BC*²⁴, estimates that a billion dollars a year must be re-allocated from projects that increase GHG to climate solutions. This crucial policy shift must be implemented as part of the climate action plan the B.C. Government will release in the fall.

Just one example of how much money is on the line is the proposal to replace the four-lane Massey Tunnel with a ten-lane freeway bridge costing over three billion dollars. The NDP government has put the project on hold, but have not cancelled it yet.

EVs

Sierra Club BC agrees with Guy Dauncey's recommendation to follow Norway's example in ending conventional car sales by 2025 (not by 2040, as the intentions paper proposes). This requires continued

²⁰ <https://www.policyalternatives.ca/publications/reports/submission-bc-government-and-climate-solutions-and-clean-growth-advisory>

²¹ Pembina Institute submission on the Intentions Papers
<https://engage.gov.bc.ca/app/uploads/sites/391/2018/08/Pembina-Institute.pdf>

²² <https://thepracticalutopian.ca/2018/08/20/bcs-climate-intentions-papers-a-timid-response-and-the-twelve-solutions-we-really-need/>

²³ <https://www.nationalobserver.com/2018/07/27/opinion/bcs-climate-plans-need-push-you>

²⁴ [Transportation Transformation: Building complete communities and a zero-emission transportation system in BC](#)

support for new electric vehicles (EVs) and for charging infrastructure. The transition will be sped up by rapid technological progress, reducing costs and increasing the range of EVs.

The Clean Transportation Intentions Paper suggests continuing the \$5,000 rebate for electric vehicles but phasing it out once sales reach a market share of 5% of new vehicles. This path would not allow BC to follow the example of Norway that has progressed to the point that more than 50% of all new car sales are now electric, as result of a comprehensive incentive program²⁵. Electric trucks, short-haul passenger planes and ferries are all being developed. BC should study and adopt as much as possible from Norway in this context. This effort must include speeding up investment into charging infrastructure around the province, including outside urban centres.

Cycling

The Intentions Paper hardly mentions cycling. We need to aim for levels similar to those in the Netherlands (27% of all trips) and the city of Copenhagen (41% of all trips to work and study), with benefits for health and quality of life.

Transit

China has 400,000 electric buses on the road. Together, transit, cycling, car-sharing and closer commutes could end the increasingly long and frustrating traffic congestion delays and make our cities more happy, healthy, delightful and green instead. The Intentions Paper barely mentions transit.

New buildings to be zero carbon by 2024

We need to learn from the example of Brussels, Belgium. In 2011, they announced that every new building in the city must meet the Passive House standard by 2015. Since then, every new building—large or small, public or private—is highly efficient and carbon neutral. Just four years were needed for carpenters to train in the new approach. In Victoria, Mark and Rob Bernhardt have been building Passive Houses for a similar cost as conventional buildings – and their homes have no heating bills. The Clean, Efficient Buildings Intentions Paper simply re-states the current goal that most new construction will need to be ‘net zero energy ready’ by 2032. Sierra Club BC agrees with Guy Dauncey and believes the target year should be 2024.

Building energy labelling

All buildings should be energy-labeled to rate their efficiency by 2021. The Intentions Paper says the province is considering this, but without any target date.

Phase out of oil and gas-heated buildings

There should be no gas-heated buildings by 2030. A world-class program is needed to support building retrofits—from single family homes to condos and commercial buildings—in order to phase out heating systems that use oil (by 2025) and gas (by 2030). This means insulating buildings much more to reduce heat loss and using district heat systems and electric heat pumps to replace gas and oil.

²⁵ <https://elbil.no/english/norwegian-ev-policy/>

The Intentions Paper supports taking steps in this direction, but does not provide sufficient detail. The Pembina Institute's response to the Intention Papers expands on what is needed for buildings, but fails to propose meaningful timelines. Concrete timelines for phasing out oil and gas must be included.

Conclusion

This submission is not exhaustive in terms of topics discussed in the intention papers, nor in other areas of climate action. In 2015, Sierra Club BC released *The Future Is Here*,²⁶ a report that provides a reality check on the climate challenges BC faces and a set of recommendations to inform provincial climate action.

The Future Is Here calls for BC to:

- Stabilize the climate by setting aside unburnable carbon, reducing emissions, putting a meaningful price on carbon, and including a climate test in environmental assessments;
- Defend intact nature to preserve biodiversity and natural carbon banks and protect the ecosystem services on which our economy and human health depend; and
- Rapidly transition to an equitable post-carbon economy that leaves no one behind.

The report includes a number of steps not discussed in this submission. Sierra Club BC recommends that the BC government reviews the full set of recommendations from *The Future is Here* to revise existing intentions papers and develop additional intentions papers, followed by prompt implementation of urgently needed next steps.

²⁶ https://sierraclub.bc.ca/wp-content/uploads/SierraClubBC_Future_Is_Here.pdf