

Good Afternoon Mr. Chair and Members of the Committee.

My name is Joanna Kyriazis and I am a Senior Policy Advisor for Clean Energy Canada, a climate and clean energy think tank at Simon Fraser University. I am based here in Ottawa.

I'd like to spend my time with the committee today covering four points: the costs of climate inaction, carbon pricing as a key tool, the clean energy opportunity, and why Canada needs a plan.

We spend a lot of time talking about the potential costs of carbon pricing and climate action. But what about the cost of delay or failing to act altogether? This is where I'd like to start today. The fact is: climate change is already costing Canadians.

Last year was another [record-breaking](#) year for damages caused by extreme weather events, at \$1.9 billion.

In July, a major heat wave swept Central Canada, contributing to up to [93 deaths](#) in Quebec. The elderly and those without access to air conditioning were most vulnerable. Summer storms across the Prairies caused more than [\\$240 million](#) in damage. In August, [heavy rains fell](#) on downtown Toronto in a storm so strong we are supposed to see one like it every 1 in 100 years. Union Station, a central transit hub, was flooded, Bay street business towers lost power. The event cost more than \$80 million. That same month, wildfires blazed out west, causing British Columbia to declare a province-wide [state of emergency](#) for the second year in a row. Tens of thousands of people were evacuated from their homes.

And of course, these also have a knock-on effect in other areas of the economy, whether it's damage to our tourism sector, disruption of our financial centres, or increased health care costs from more visits to the hospital due to smoke inhalation.

Homeowners are also getting hit. Do you know what the [average cost of fixing a flooded basement](#) in Canada is? \$43,000. Not to mention missed days from work and the long-lasting psychological impacts this sort of event causes. Intact Financial, one of Canada's largest property insurers, is reported to have [raised premiums](#) by as much as 15% to 20% in response to increasing costs of weather-related property damage. The Insurance Bureau of Canada estimates that up to 10% of Canadian properties may soon be too high-risk to be insurable.

These are not costs we *might* incur in the future. They're not numbers being spit out by models. This is the price we are *already* paying. And these events are expected to increase in frequency and intensity with climate change. This is the price of inaction—and it is steep.

Luckily, we have solutions to protect Canadians and to reduce costs to our economy. One of these solutions is carbon pricing. This is my second point.

As this committee has heard at length, carbon pricing works. Economists widely agree that carbon pricing is the most efficient way to cut carbon pollution. There are now [46 national jurisdictions and 24 subnational jurisdictions](#) that have put a carbon pricing system in place or soon will. Carbon pricing

also has a proven track record, internationally and at home. We need look no further than B.C. for evidence that a [carbon tax works](#). And carbon pricing reduces emissions while supporting strong economic growth. The four provinces with carbon pricing systems in place last year—B.C., Alberta, Quebec, and Ontario—[led Canada](#) in GDP growth in 2017.

Carbon pricing also drives growth in cleantech and clean energy sectors. It works by sending a market signal that directly impacts behaviour, rewarding those who make choices that reduce carbon pollution. What's more, it allows for flexibility in how business and consumers reduce emissions; they can pay the carbon price or invest in clean solutions—heat pumps, energy storage, renewable natural gas, energy efficiency. By incentivizing these solutions, Canada is helping grow its cleantech industry, the global market for which is now estimated to be worth more than [\\$5.8 trillion](#) and growing. That is bigger than [Japan's GDP](#)—the third largest economy in the world.

This brings me to my third point. The clean economy is a big opportunity for Canada. And Canadian companies are already emerging as clean energy leaders. The [Clean Tech 100](#) came out this week. This is a list of the most promising cleantech companies in the world. Twelve of those companies were Canadian. Here are two other examples of what Canada stands to gain in the clean energy transition.

The first is Corvus Energy. Corvus is a Canadian company that builds batteries for electric ferries. When [Norway put out a call for more energy-efficient ferries](#), Corvus was part of the winning bid, supplying batteries and charging stations for the [world's first electric ferry](#). Norway's ferry operators [reported](#) a cut in emissions by a whopping 95%—while operating costs have fallen 80%. Corvus's success [continues to boom](#) as it now provides battery power to hybrid and all-electric ferries around the world.

Another example is Canada's mining sector. Canada is home to [14 of the 19 metals and minerals](#) needed for solar panels. We also have rich deposits of silver, nickel, copper, and lithium used in wind turbines and battery technologies. Canada can claim some of the world's largest mining companies, such as Barrick Gold and Teck Resources. For firms such as these, growth in clean energy technologies represents a significant opportunity. Carbon pricing and other climate policies can help accelerate this transition and ensure Canadian companies have a leg up as the world moves in this direction.

The final point I'd like to emphasize to the committee is this: a do-nothing approach is not an option. Every year the World Economic Forum releases its Global Risks report, where it ranks the world's top risks in terms of likelihood and impact. This year's [report](#), just released, found that the failure to tackle climate change and extreme weather events are the most threatening global risks in 2019. Not cyber security. Not terrorism. Not political instability. Climate change.

My question is: What are we waiting for?

We need to act now. The solutions are there. And it would be a shame to leave the most efficient tool we have to address this problem on the table.

Thank you for the invitation to speak today. I look forward to your questions.