

Mobiliser le Canada face à la crise climatique – Mobilizing Canada to address the climate crisis

09:15 Diane Bérard : Alors, j'aimerais souhaiter la bienvenue à tous et toutes pour la prochain – Nous allons passer la prochaine heure et demie ensemble en compagnie de Seth Klein, l'auteur de *The Good War – Mobilizing Canada for the Climate Emergency*, ainsi que d'un panel qui sera composé de Marie-Josée Parent, Karel Mayrand, et Claude Vachet. Pour débiter la présentation, je vais d'abord vous présenter Annie Bérubé. Alors, Annie a passé la majorité de sa carrière comme attachée politique et conseillère au- en politique environnementale à Ottawa sur la colline parlementaire au sein du bureau du vérificateur général du Canada, ainsi que pour Environnement et Santé Canada. Annie a également travaillé au Think Tank Smart Prosperity à l'Université Ottawa, ainsi qu'aux relations gouvernementales pour l'organisme Equiterre. Annie s'est jointe à la Fondation McConnell en 2019 comme directrice de programme axé sur la transition vers une économie carboneutre. Annie, je vous cède le micro.

10:28 Annie Bérubé : Bonjour Diane, bonjour à tous et bienvenue. Et bien, je suis seulement ici aujourd'hui pour vous souhaiter la bienvenue au nom de mes collègues à la fondation McConnell. Je me joins à vous aujourd'hui d'Ottawa en territoire traditionnel non-cédé du peuple Anishinaabe Algonquin. Et vraiment on aurait pas pu imaginer un moment plus opportun pour avoir cette importante conversation avec Seth Klein sur la mobilisation essentielle pour faire face à la crise climatique. Pendant que la Californie brûle, on en ressent les impacts sur la côte ouest canadienne, et, ici à Ottawa on entendait les intervenants aujourd'hui en Cour Suprême qui défendaient la tarification carbon. Le mouvement citoyen, le mouvement des jeunes se poursuit toujours en mobilisation. Vous vous rappellerez que ça fait moins- ça fait juste un an qu'on était un demi-million de personnes dans les rues à Montréal, rassemblé avec Greta Thunberg. Et bien, ce mouvement jeunesse-là, il est toujours en vie malgré les restrictions de la pandémie, et se poursuit en ligne. Donc, je vous inviterai à aller voir les organismes et les activités en ligne ce vendredi. Grand vendredi de mobilisation jeunesse pour l'action climatique au Canada. Il me fait plaisir de vous présenter la prochaine intervenante, Mme Désirée McGraw. Désirée est Montréalaise d'origine, elle vient tout juste de rentrer à Montréal après avoir terminée son poste en tant que Directrice du Collège Pearson, le collège du monde uni en Colombie-Britannique. Désirée est également une des fondatrices du projet de formation Réalité Climatique Canada, qui a été instigué par l'ancien vice-président Al Gore aux États-Unis, et qui depuis 2017-- 2007 a rejoint des, et a formé des dizaines de milliers de canadiennes et de canadiens face à l'urgence climatique. Et je crois comprendre que Désirée est une bonne amie de Seth Klein, alors qui mieux pour le présenter ce soir? Désirée, à toi la parole.

12 :29 Désirée McGraw : Merci Annie, et bonjour à tous et à toutes. J'ai le privilège de vous présenter aujourd'hui le conférencier principal, c'est-à-dire Seth Klein qui je connais depuis que nous sommes ados, grandissant ici à Montréal. How do you introduce someone who has accomplished so much in the 30+ years you've known them? Seth Klein of course as you know is an author, an advocate, an educator, and one of Canada's leading progressive policy analysts. For 22 years he served as the founding BC director of the Canadian Center for Policy Alternatives, where he remains a research associate while also serving as an adjunct professor at Simon Fraser University in Vancouver, where he makes his home with his spouse, Vancouver City councilor Christine Boyle, their young and beautiful son, Aron, and Seth's daughter Zoe. Not only is Seth a devoted father and partner, he is a beloved son to award-winning NFB filmmaker Bonnie Sherr Klein, groundbreaking family medical doctor Michael Klein, and brother to bestselling author and icon Naomi Klein. What you may not fully appreciate about Seth is that he comes to the climate emergency with deep, indeed decades-long experience, in mobilizing Canadians around

the greatest challenges of our time. I first met Seth when I was 15 when I joined a group that he co-founded called SAGE: Students Against Global Extermination, keeping in mind this was the late 80s, around the Cold War. This was a Montreal-based group that did high school presentations about the threat of nuclear war and what young people could do to prevent it. Based on growing interest in our peer-to-peer model of engaging fellow youth, Seth, myself and two other Montreal teens took a year off school and took the show on the road, travelling from Newfoundland to British Columbia, reaching hundreds of high school students and high schools across the country. Our big lesson from the SAGE experience is that one cannot scare people into effective action, because fear-mongering leads to anger and apathy. To inspire action, Seth understands the need to empower and equip citizens with the tools and attitudes to make a difference. Seth is what I call a practical idealist. He knows that people need a sense of purpose, powerful role models and examples of positive change, and above all, they need a plan. And that's what Seth is all about. He is the man with the plan. From addressing global warming to global warming, Seth has applied these formative lessons throughout his career and into his book, A Good War. Seth demonstrates that with-- while the reality of climate change can be cause for intellectual pessimism, we have an obligation to be operationally optimistic. That is, to act as if there is hope and to make that our future. I am so proud of you Seth, and I am so grateful to you for challenging all of us to step up and fight the climate emergency, to fight a Good War that we must and we will win. Merci.

15:41 – D.B. : Merci. Merci Désirée, merci Annie. Je me rends compte que j'étais tellement enthousiaste de commencer cet évènement que j'ai oublié de me présenter. Donc, je vais le faire avant de commencer l'entretien avec Seth. Mon nom est Dianne Bérard, je suis journaliste de solutions. Et maintenant nous allons nous tourner vers Seth. Hi Seth.

16 :04 – Seth Klein : Hello everybody. Nice to be with you. Thank you all of you who are on this, on this webinar for your interest in the book. I just want to say a special thanks to Désirée, it's- it's very special to be introduced by somebody who, who I cut my political teeth with as a teenager. That means a lot. And I also just want to say special thank you to the McConnell Foundation, not only for hosting this event, but for being one of the key supporters of my book when I was doing the actual research. It really wouldn't have happened without them. And, as you, as Annie also said, I'm coming to you from Vancouver, which means I'm coming to you from the unceded territories of the Musqueam, Squamish, Tsleil-Waututh peoples. And it may feel, you know in a virtual event, a bit odd to make these land acknowledgements but in the book, I try to make the case for why the assertion of Indigenous rights and title is actually key to winning this fight. Nice to be with Dianne.

17:06: D.B.: Thank you Seth. I love the fact that Désirée described you as a practical idealist, because in my bio I describe myself as a pragmatic dreamer. So I think that there's a meeting of the minds somewhere. laughs

17:19 S.K.: Let's do it! Laughs

17:20: D.B.: So let's start with the first question. Let's talk about Quebec. There's this good-news-bad-news stories about, story about Quebec perspective and climate change action. And, Quebec has the strongest level of support for bold climate action, but that being said, something else comes after. So tell us about the bad-news-good-news stories of Quebec.

17:45 S.K. Yeah. Sure. I think it is a mix story as you say. Well, well, let's build out the good news for a bit. As – I – As part of my research for the book, I actually commissioned a national, a major national opinion poll from Abacus research, and as you say, there is strong support across the country, in fact for bold climate change, but it is strongest in the province of Quebec. And the civil society mobilization really, by a long stretch, is strongest in Quebec. Annie mentioned of the top a year ago, there were the student strikes, by far and away the largest in Montreal. And, at the municipal level, we have 400-odd Quebec municipalities that have declared climate emergency motions, which is more than the rest of the country combined. So that's all good news. And of course in the practical level, we think about greenhouse gas emissions, Quebec is starting from an enviable position compared to other provinces because of your electricity-based hydro. So Quebec is responsible for 11% of Canada's GHG emissions, you compare that to Alberta, with a smaller population is responsible for 38% of Canada's emissions. But I would say, you know, if I'm asked, does the—does the government of Quebec, are they acting like it's an emergency? And my answer would be no. First of all when you look at GHG emissions, and maybe there's a slide that I'm hoping can get called up that looks at both Canada and Quebec's GHG emissions. There you go. So the larger bars there are Canada's greenhouse gas emissions going back the last 20 years. And to me, this is a deeply disturbing chart. Because, what it communicates is, at, on the core challenge of our time. Everything we have been doing is not working. The best you can say is that we have flattened the curve, but we have not bent the curve. And in the yellow, you see Quebec's emissions which are obviously a smaller share of the country, but there too, you see a little bit of drop in Quebec emissions between 2004 and 2014, and then it's basically flat line. In fact, in the latest year, they're up again. So the approach we're taking isn't working, and a big piece of what I'm arguing in the book, is what emergency measures need to actually look like. So, for example, take, take 0-emission vehicles. So Quebec has one of the most positive policies on that in the country, you know, there's rebates for people who buy electric vehicles, there are exemptions from the bridge tolls. That's all well and good. But it misses the point of an emergency. In an emergency, we don't make things voluntary, we, we, we don't just incentivize change, we mandate change. Same with buildings, right? It's one thing to encourage people to change their heating sources, but in an emergency, we would say, next year, no new buildings would be able to tie in to natural gas lines for heating, right. That's what it looks and feels like to treat it as an emergency.

21:01 D.B. I see. Avant de passer à la prochaine question, j'aimerais rappeler aux participants que, qu'il existe un service d'interprétation. Vous allez dans votre barre d'outils, en bas du Zoom, et vous sélectionnez le globe terrestre. À ce moment-là, on va vous demander de choisir la langue que vous préférez, donc le français ou l'anglais. Vous avez le choix, si vous le mettez sur mute original audio, vous allez seulement entendre la langue de votre choix. Si vous le laissez sur « Manage language interpretation » vous allez quand même entendre un 20% de discours dans la langue d'origine. For those in English, you will get some English instruction in the chat, if you want to have the translation in French. Voilà. Seth, I'd like to talk about mindset, because in the book, I love the fact that you talk about an emergency mindset. You see, we have to get—there's a need for this emergency mindset. You talk about the – the fact that the government has to mandate, not just *inciter*. So how does that translate on the ground, that emergency mindset, and how different is it from the past mindset? Because there's been a little scale, like, we are more worried than we used to be, but we're not in this emergency mindset.

22:20 S.K. Yes, no, we're not. Although, interestingly, you know, it is an ironic bit of timing that I, I wrote my entire book before the pandemic. And I shipped it off for final copy edit three days before the pandemic. I thought, you know my whole book is structured around lessons from the second world war, which we treated as an emergency. And I thought we needed this historic reminder of, of what that looks like. And what becomes possible. Now, of course, we've all been living through that. In real time. And, the pandemic gives you a sense of, ah yes, this is what it looks and feels and sounds like when a government treats an emergency as an emergency. There are daily briefings, we invoke emergency measures as, if necessary. We control supply chains in order to ensure necessary things get produced. We strike emergency cabinet committees to oversee all of this work. That's what it looks and sounds and feels like. And it stands in such stark contrast to the more lackadaisical approach we've seen with respect to the climate emergency. In the case of the climate emergency, the messaging has been much more confused and contradictory right, so our federal government will pass the climate emergency motion one day, and reapprove the transmountain pipeline the very next day. That's confusing to people. That's confusing to the public. And it's incoherent from a policy point of view. And the math doesn't work on it. So what does it look like? So what happens with an emergency mindset is, things that seemed political impossible(?) become possible. It liberates a kind of new sense of shared purpose, a new sense of national unity around a shared project, again like we're seeing in the pandemic. It liberates governments from an austerity mindset. You know interestingly, just today in the throne speech, we heard that now is not the time for austerity but they were talking correctly about Covid, but not yet about the climate emergency. So, a piece of operationalizing that, is, as I said before, you shift from incentivizing and encouraging change to mandating change with clear timelines. You also spend what you have to spend to win. That's what we're doing with Covid, that's what we did in the war. Incidentally, with all of the, you know we're going to have a very large deficit this year with Covid, it doesn't hold the candle to what we did in the second world war. And you create the new economic institutions that you need to get the job done. So, for example, in the war, I know I'm kind of like, people's weird uncle talking about the war all the time, but I'm going to give you an example. The cabinet minister in the MacKenzie King government who oversaw war time production in World War II is a guy named C.D. Howe. He was no- he was no lefty by the way. He was on the right wing of the liberal party. But he was seized with, with what had to happen. He was happy to give contracts to the private sector, to expand- but any time they couldn't quickly do what he needed done, he created a new Crown corporation to expedite that military production. He created 28 Crown corporations during the war to get that job done.

25:38 D.B.: So do you see the creation of new Crown corporation for this climate crisis? What kind of corporation would you imagine?

25:45 S.K.: One piece of it, yes. So, for- just – by way of contrast first of all, the Justin Trudeau government has created two Crown corporations in its time in office so far, one of which is the Transmountain Pipeline Corporation. So what would we do if we were to try to replicate what C.D. Howe did? First of all, you take an inventory of everything that we need: how many electric buses, how many electric heat pumps, how many solar arrays, how many wind farms? And then you survey the production landscape, and you say, what do we need- what do we have, and what do we need? And in, and in order to fill the gap, you either contract with the private sector, or you, if it can't happen fast enough, we do it ourselves and we would create – I personally, so my book has a three-page list of possible new generation Crown corporations, but to give you one example, electric heat pumps. I just

converted my whole home this year off of natural gas onto electric heat pumps. It's expensive. It's more expensive than it needs to be. If we had a Crown corporation utility that was mass producing and installing electric heat pumps, taking off the profit margin, getting the economies of scale, we could shave thousands of dollars off of that job. So that's one example. High speed rail corporation. Another example. A huge retrofit corporation at the municipal [D.B. Yeah] – at the municipal level. That's what we need.

27:07 D.B.: You think we give enough incentive for, not incentive, but enough attention to all that retrofitting of buildings? Because we talk a lot about electric cars, about transportation, but I don't feel that there's that much energy about retrofitting, or that much interest. Is it less sexy? Why don't we talk about retrofitting?

27:27 S.K.: [chuckles] It's true that retrofitting is not sitting. [laughs] But it is very important. The throne speech today mentioned it which is good, but [inaudible] so far, we incentivize change. [D.B. That's it.] If you do, if you want to do this kind of energy-efficiency retrofit, we'll give you a rebate. Okay? That's not emergency.

27:48 D.B.: You would mandate retrofitting?

27:50 S.K.: Yes. So, so, exactly. So, first of all, like I – and by the way, while it's true that it's good to make our buildings and homes more efficient, the goal now, and we're told they're going to legislate this, is to get to carbon zero. Now to get to carbon- you can't achieve carbon zero through energy efficiency. You can only achieve carbon zero by fuel swapping. Meaning, actually turning off the gas lines to our homes, and replacing it with electric. What I think, and actually this is, Désirée mentioned my wife is a Vancouver City councilor, who introduced Vancouver's climate emergency motion a year and a half ago, which was the first in English Canada. And as part of their climate plan, in one year, no new buildings will be able to use natural gas for heating. In- as of 2025, any building of any age, when, when the furnace, or hot water boiler goes, you won't be able to replace it with gas. That's what I mean. You got to mandate it.

28:54 D.B.: And, but, there's a big barrier to this emergency mindset, and it's something called the new climate denialism. I'd like you to – because you talk about it a lot in your book, define what this new climate denialism looks like and how it's in the way. Because it's very sneaky.

29:12 S.K.: Well it's sneaky but it's, it's ubiquitous in, in many ways. So I define this as I think one of the, if not the principal, barrier to transformative change that's now needed. So what do I mean by that. Traditionally we think of climate denialism, we think of Donald Trump, or Maxine Bernier, you know just, deny the reality of scientific – human-induced climate change. The good news on that front, is that the share of public opinion that believes that is a diminishing rump. Much more insidious is what I call the new climate denialism. And, the new climate denialism, and I think it's practiced by almost all of our governments, federally and provincially, across the political spectrum, is to say you get it and accept the science, but continue to practice a policy agenda that does not align with what the science says we have to do. So to say, we get the climate emergency but continue to double down on the expansion of the tar sands, that's the new climate denialism. In my province to say, we're going to have the most ambitious climate plan, and also expand fracking and liquifying natural gas, that's the new climate denialism. And it's a very attractive message to the public.

30:32 D.B.: How does it play on our mind, this double, double way of acting, saying one thing, acting another thing. How does it play?

30:40 S.K.: Well, the problem is, is that it- it's very attractive. To the public. The core message, from our governments, has been, you don't have to choose. Right? We can get serious about climate without sacrificing anything.

30:55 D.B.: So it's reassuring. It's reassuring.

30:57 S.K.: It's reassuring. And so, so, we end up – one of the problems that I also speak of in the book, is that, while the public is ready for bold action, the level of basic climate literacy in Canada is terrible. Only about half of the public identifies that the main source of climate change is the burning of fossil fuels. Now that speaks to a failure of leadership, it speaks to a failure on the part of the media, your domain, not your personally! But if that many people don't understand something as basic as that, we have not done a lot of work.

31:36 D.B.: But speaking of the media, I might say that we, on the quantity of the reporting, I think there is a lot of reporting on climate change, climate crisis. But the problem is finding the right storytelling. And that, media has a very hard time. Because there's a lot of information. But we haven't found the right storytelling, scaring people doesn't work, making it too light doesn't work, making it too easy doesn't work, too hard- so the storytelling is very hard to find.

32:06 S.K. Well, so, first of all, let me say two things about – one about the media, and one about the story. So on the story side, this is actually one of the things that I've enjoyed structuring, framing my book the way I have around the second world war. Which is that it allows me to tell a story that in the end is very hopeful. Because it is this historic – you know, all of us who wonder, can we really do this? Is this job to big? [D.B.: We need hope.] We need hope. But, but, what I love about our WWII story, where we completely retooled the economy, not once but twice, in the space of six years. Once to ramp up military production, another to convert back to peace time. For all of us who wonder, can we do this – the answer is, yes we can because we've done it. So, that becomes a hopeful story. And I try to walk a line in the book, it's a very delicate line, of not being Pollyanna, not being an ingenu about the severity of the crisis we face, and to tell the truth, but on the other hand, still have hope. But you say there's been more reporting on climate, it has gotten better in the last couple of years. But it's nowhere near where it needs to be. The media, even like... Annie spoke of the example which we've been living with, in Vancouver, from the smoke, but the fires in the Western United States. It's a tiny fraction of the media stories connect the dots back to climate change. And that's been true for years. I mean, I look at... I look at, say CBC, where you are, Radio-Canada. So, Radio-Canada/CBC actually had a really important role to play in mobilizing the public in the WWII. Fortunately, the CBC had been created three years before the war, and now could reach Canadians. When you contrast that with today, you know, every morning on my CBC radio, I get hourly business reports, I get hourly sports reports, surely I could have a morning climate emergency report. And, and, and that's what we did in the war. It wasn't a TV service then, it was just radio. But in English Canada at least, the voice of CBC nightly news was this guy, Lorne Greene, now many people know him because he went on to become a famous Hollywood actor from Bonanza and Battlestar Galactica, but in the second world war, he was affectionately known as the voice of doom. Every night. Every night! He told us what had to happen, and it wasn't – it was a combination of fear and hope.

34:37 D.B.: But you know, what the big difference, and you say it in your book also, but who's the enemy? You see, in WWII, the enemy was so clear, so mobilizing people for, against this enemy was not easy, but it was a clear path. Now it's very tough. I can say as a reporter, who's the enemy and how do you identify the enemy? And if you want people to go fight a good war, you need a good enemy. So how do you work out that part?

35:08 S.K.: It would certainly be helpful. A few things on this. One, I would point out that in this fight against Covid, you know the enemy is much more... it's hard to get your head around. It's not as clear as it was say when it was the Nazis in WWII. But I actually want to press back on the historic record here. When I, it's funny that you should say this Dianne because when I was starting to tell people about the book project, very often people would say, ah yes, but in the second world war, everyone understood the threat to be clear and present, as you just said. Except that's not true. It wasn't clear and present to Canadians. It was on the other side of 2 oceans. And this was not a public that was keen to go back into a world war, especially in Quebec. Nor was it a leadership that wanted to go. The Mackenzie King government desperately did not want to do this. Right, even though on the cusp of our society being completely transformed, right up until the 11th hour, this was a government that did not want to do this. And that was still their own form of threat denial. Mackenzie King actually met with Hitler and dismissed him as no serious threat.

36:28 D.B. So you think that we can make this war with, this climate war real in the mind of people?

36:36 S.K.: Yes I do. And I think it takes leadership, is my point.

36:40 D.B. So we go back to this mandate.

36:41 S.K.: It took- It took work on the part of the government to bring the public to where they needed to go. And to ultimately, you know, it's extraordinary in the end, out of a population base of a little over 11 million people at the time, over a million Canadians enlisted in WWII. But it did not happen right away. It took work to get people there.

37:07 D.B. J'en profite. On est à la moitié de la conversation avec Seth pour vous dire que, si vous avez des questions, à mesure qu'on discute, que vous pouvez voir la pensée de Seth évoluer, je vous invite à poser des questions dans le chat. Donc, dans l'onglet de conversation. Les questions vont toutes être retenues, sauf qu'on va en garder 2 pour poser à Seth. Les autres vont être gérer plus tard, et vous aurez des réponses plus tard par courriel.

37 :33 D.B.: So, I'd like to go back to the private sector Seth. The role of the private sector in this climate crisis. I'm an economic reporter, I deal with the private sector, I've interviewed tons of CEOs, what are they supposed to do in this climate crisis? And, because, I'm not sure they feel it's their job. So, how do you see it?

38:01 S.K.: Well, there is an important role for the private sector. Just as there was in the second world war, in rising to the climate emergency. But part of what I'm trying to argue in the book is to disabuse people of the idea that the private sector can actually lead us in what we need to do. As in the war-

38:23 D.B. It won't be able to because it- it won't want to, because it's not their role? How? Why—

38:29 S.K.: Because it's too voluntary. Because it's too voluntary. It has to be state-led, and mandated as I described. So, let me, if I may, let me go back to that WWII story. So the private sector played a very

important role in this incredible build up of, of armament. So, and just let's appreciate this for a moment, from a base of almost nothing, in six years, Canada produced about 750 big ships, 16 000 military aircraft, ultimately creating the fourth largest air force in the world. 800 000 military vehicles, more than Japan, Germany and Italy combined. From a base of nothing. And the private sector had a huge role to play. But what the private sector wasn't allowed to do, is to determine the allocation of scarce resources, because in an emergency, that's not what you do. So instead, what C.D. Howe did, is, he, he controlled all of the key input supply chains. Machine tools, rubber, silk, coal, fuel, timber, and he, and to prioritize military production. What he then did is he actually recruited a whole bunch of his friends from the private sector to head up those Crown corporations I mentioned before and to serve as controllers of those supply chains that I just mentioned. In fact, over 100 of them served in that role as, what were called dollar-a-year man during the second world war. So the private sector played a big role, but, but, for many of those leaders, interestingly, what they actually did is abandon their post in the private sector and moved over temporarily to the public sector in order to do what needed to be done. And I should say there was a fascinating little story I stumbled across during my research about McConnell himself I want to share because McConnell Foundation is hosting us. So John McDonald-McConnell was, by the time WWII came, he had recently founded this foundation, he was one of the richest men in the country, he was actually asked to be one of those dollar-a-year men but he politely declined. He was quite elderly at this point. He was very sensitive to any the perception, and this is interesting around the pandemic right, because we see many corporations profiting during the pandemic, he was very sensitive to a perception that he would be guilty of that. And he took, his biggest asset was the St-Lawrence Sugar company in Montreal, he basically took all of the profits of that sugar company for the duration of the war and plowed it instead into this foundation that's hosting us today. That's what capitalized a bunch of this, was – the point in this story is that the way the private sector responded to that emergency, we have- is on a scale that we have not seen anything like. When it comes to the climate emergency.

41:24 D.B. : But if we look at the climate emergency, what we're telling most of the enterprise- most of the private sector is, you have to stop doing something. You have to invest so you stop do something and do something else. And yes, we say it's a business opportunity, we say there's a new green deal, but basically a lot of the private sector has to stop do something and find something else to do. So that- it's not a very mobilizing proposition to tell them, you know, because of this crisis, we're not asking for your help, we're asking you to stop doing something because you're messing up. What you're doing is messing up. So there's this discourse about business opportunity, but to be very honest, on the ground, for many companies it's not a business opportunity, it's a life-threatening moment, a soul-searching moment.

42:16 S.K.: It depends on the company. [D.B.: Yeah, that's it.] So, so, for example in the pandemic, we have seen some companies say, hey! What we do can be transit- I mean, there's a craft beer companies that are making vas- hand sanitizer, and things like that. So you shift to meet the emergency.

42:33 D.B.: But there are some who stopped doing everything because they were not useful at all.

42:37 S.K.: Right. And then there's a whole bunch of companies that are neutral in this. But that still have to, I mean, part of the mandates that I spoke of earlier, is that every, every institution including every private sector institution of any notable size, is going to have to present, develop and present, what is your fossil fuel wind-down plan for the next 10 to 20 years. And, you know, that's what we're

going to need to see. There are some companies that are explicitly in the fossil fuel industry that are in fact on the path (??) for wind down, and that is their existential threat. And I'm not that concerned about those companies frankly. I'm more concerned about those workers. And that's where the government has to make a real and meaningful offer particularly in those parts of the country that have the most heavy lifting to do: Alberta, Saskatchewan, Newfoundland, in particular. And, I actually think there should be a new federal transfer called the Climate Emergency Just Transition Transfer, but instead of allocating it based on population, we would allocate it based on current GHGs. So if Alberta's currently 38% of GHGs, they get 38% of the money. But I wouldn't send it to Jason Kenney because he's not to be trusted on this. I think we actually should have Just Transition agencies in every province-

44:00 D.B.: But there's a lot of discussion in Quebec about Just Transition. A lot of workers (found) taking the lead for this discussion, so yes, this is a concern here, and I think this idea might be interesting of a transition fund, yeah.

44:15 S.K.: And it's a little easier in Quebec, because all of those industries that are currently emitting – the technology for the most part exists for them to actually switch to non-GHG emission technologies. It's much harder when your core business is the production and extraction of those fossil fuels.

44:34 D.B.: My – let's go with the last discussion on inequalities. Because we know that climate change fuels inequalities, and inequalities fuel climate change. So, it's like a two-way street. So, how does solving climate crisis will solve inequalities? Is there a possibility that if we go through that crisis and come shining on the other– there's sun on the other side, that maybe inequalities will be lessened?

45:00 S.K.: Yes, there is. [D.B. How?] So first of all, these things have to be linked. There-there are some climate policy purists out there who very much object to linking climate action with tackling inequality and other social justice issues. And you know, their argument is, don't make this any more complicated. Climate's hard enough as it is. And I respectfully think they're wrong. And they're wrong for a few reasons. First of all they're wrong for the reason you just said: the two things are intimately connected because the wealth- the wealthier have much higher emissions, and lower income people are hardest hit, including by climate actions themselves. So we need to mitigate that. But here's the main reason why they need to be linked: and it's because that's how we win. In the polling I referred to before, you know I asked people about a bunch of bold climate actions, I found strong support. And then I asked people, well, would your support go up or down if we tackled – if we tried to, particularly, well if we accompanied that by increasing taxes on the wealthy and the corporations, increasing transfers to lower income people, offering a good jobs guarantee to fossil fuel workers. When you do that, the support doesn't go down, it goes through the roof! And this is the appeal of the Green New Deal. Of-of linking these issues, it becomes that much more popular when we link it this way. And by the way, that was true in the war as well. You asked before, well how do you mobilize public opinion? A key thing that the federal government realized in WWII, is that, you know, in the early days, they just had this kind of classic propaganda, you know: Go get Hitler. You know, that works, to a point. But what they realized particularly as of like 1942, is that it wasn't enough. If you were actually going to get hundreds of thousands of people to enlist voluntarily, offer up their lives, [D.B.: mhmm] you had to make them a promise about the kind of society they were going to come back to. And so, unemployment insurance is introduced in 1940, the family allowance is introduced in 1944, the whole architecture of the modern welfare state is written during WWII and offered as a promise back. That's how you get everyone on the bus.

47:23 D.B.: So you think that if we, we should talk more about inequalities and climate change, that would help popular support.

47:30 S.K.: Yes, and interestingly, you know, I often- again when I would tell people I'm working on this book, people would sometimes say: oh well, we were a much more cohesive society back then. Well, actually no, we weren't. When, when you measure inequality in Canada, and you measure how much income is going to the wealthiest 1%, you look back over the last hundred years, the year in which there was the most income inequality measured that way was 1938, the year before the war. After the war, you see this strong redistribution. So we didn't actually go into the war particularly socially cohesive, that social solidarity was forged in the doing. And we did it not just through mobilizing to fight, but also by, you know, corporate taxes in the second world war increased from 18% to 40%. We had an excess profits tax, so the kind of profits here (?) we've seen in this pandemic was illegal in the second world war. And on the flip side, we had those new social programs. So you know, that's how you do it.

48:40 D.B.: If we talk about inequalities, we will talk about mitigation, because we- you talked a lot earlier about government has to mandate. Well if he mandates at some point, it will have a trickle-down effect on the poorest, or people who are living the more inequalities. So, there will be a lot of mitigation to do. You can't just put measures, and then, don't expect that some people will pay the price for those measures.

49:06 S.K.: This is very important. I mean, most – I was hinting at this before but let me be clear, almost every climate action policy you can think of, will increase energy prices in the short term [D.B.: Yes] and in the, you know – as economists, in the language of economists, it has a regressive distributional impact. [laughs] Meaning lower income families feel- are more impacted by that, which isn't a reason not to do it, we have to do it. But we have to do it eyes wide open. And mitigate.

49:39 D.B.: But that's often an excuse that is used, [S.K. Absolutely] saying we can't do that because it will impact on the poorest. So it's one way of saying- you know when you said earlier about a new state of mind and be opened to say- to government's say, I can't do stuff I couldn't do before because it's a crisis. [SK: Right] Well that's one very delicate area because we always come up to the point where some politician from the opposition will say, no it will impact the poorest so we can't.

50:05 S.K. Yeah, or even worse, it will be perceived as elitist in some way that – this climate project, and it feeds this kind of, sort of right-wing populist backlash that is often quite ugly. So you know, my former colleagues at the Canadian Center for Policy Alternatives have modelled how to do this. How can you take the carbon tax, combine it with a dividend, a credit, and transform what would otherwise be a regressive tax, into a progressive tax that actually redistributes income? These things can be fixed. But we have to do it consciously and deliberately.

50:42 D.B.: And they have to be done at the same time. [SK: Absolutely] You have to announce the major and the mitigation at the same time. You can't come up after with the mitigation because then, it's always a question of public adhesion and seeing that, will people go with it. [SK: Absolutely] They will if you come up with the whole picture, so it's a very, a very complete strategy from what I understand.

51:03 SK: Absolutely, it has to be combined right up front. And I would say the same is true on the jobs front. You know for many workers, these promises about just transition historically ring very hollow. They are always like this promise that never really materializes. Which is why I develop this idea of the

Just Transition Transfer. It has to be real. It has to be billions of dollars. And that money and – it has to be there on the table so people know it's real.

51:33 DB: There was this worker phone (??) in Quebec, we did this – they went in many cities in Quebec to see how many workers from “the old economy” feel. And there was this one man who says, “I don't belong here anymore. I belong to the old economy. What am I good for now?” And that was really a cry from the heart. Like saying, I feel I don't belong anywhere now. And I guess many workers in the “brown” industries must feel like that, that they don't belong anywhere because there's this Green New Deal, green economy, and what about them? So I guess...

52:07 SK: It's an anxious time for a lot of people. We have to acknowledge that up and- upfront. My difficulty is that often I hear our leaders articulating and therefore being defeatist about what we need to do. And this is where I come back to the WWII story, right. We were 11 million people, over a million Canadians enlisted, and over a million Canadians were involved in military production. They all had to be trained up, and they all had to be reintegrated into a peace time economy. That's far, far more people than are currently employed in those fossil fuel industries today in a population that is more than 3 times as large as it was then. If we could do that then, with that level of ambition then, we can do it again. We did it then through income supports, through housing supports, through post-secondary training supports that changed the face of the post-secondary sector in the country for a generation and changed people's lives. We can do that again.

53:07 DB: Well on the day of the throne speech, you are – we are talking – we are giving a big agenda to the government. Now let's see what the people- the attendees think about this – everything you said. Ok, so I have this first question for you Seth: According to you, what are the two biggest communication challenges to massively embark individual citizens in climate positive action? So the two biggest communication challenges.

53:41 SK: Well as I was saying earlier, we need, as we had in WWII, we need a message that is ubiquitous and consistent. Right now we're getting confusing messages. Right? When our government says, yes climate emergency, but yes expand the transmountain pipeline the next day, that's confusing. Even in the level of advertising, right? Why do we allow fossil fuel cars and gas stations to advertise? We don't allow it for tobacco. Because it's bad for your health. So if you're a young person, and you're told, it is an emergency, but you're still seeing all these ads, that's confusing. So, that's part of it. We need something equivalent to the war time information bureau we had in the war, which is coordinating all of this. But the other piece out of that war experience was, it wasn't just that they made a promise to people during the war, they actually switched gears mid-war to have a conversation with Canadians about the kind of society we were going to come back to. And you know, there's so much scope for this. We have so many ways of doing participatory engagement and so on to invite people to say, ok we have clarity on these mandated targets, but how we achieve it together remains an open question; let's figure it out together.

55:10 DB: So, what you're talking, ubiquitous [sic], and you're talking participatory. [SK: Yes] Those are the two challenges I understand.

55:17 SK: Yeah. And consistent!

55:18 DB: And consistent! Next question. When there is such resistance and a sense of entitlement by car drivers against municipal initiatives like bike bypaths (??), how can we hope that people will accept mandating? Good question.

55:36 SK: This is what I mean by what becomes possible when we actually see an emergency as an emergency. I want to give you an example from the second world war. The United States didn't enter the war until two years after we did, but they had some time to plan as a result. Pearl Harbor happened in December of 1941. In February of 1942, two months later – two months later! – in the United States of America, the center of car culture, the last civilian automobile came off the assembly line in Detroit. And for the next four years, the production and sale of the private automobile was basically illegal. I'm not saying we have to do quite that. I'm simply saying that remarkable things become possible when we actually treat something as an emergency.

56:27 DB: Goes back to the emergency mindset! My last question, how do we deal with collective action problem globally? Umm... Even if Canada does all the right things, how can we make sure that big emitters also reduce their emission? What do you think about the idea: climate club of likeminded country [sic] working together using trade barriers as policy instrument?

56:54 SK: Oh, I'm so glad this question came up. So, first of all, of course it's a global enterprise. And we have to have that kind of international cooperation. Actually, one of the initiatives that I'm involved in is this initiative – it's a global initiative – for a fossil fuel non-proliferation treaty. Um, people are going to be hearing more and more about it in the coming months. It's very new. But the idea is, for all of these countries that are fossil fuel producers, including Canada, you know everyone's caught in this prisoner's dilemma. No one wants to be a chum, nobody wants to lower their own emissions, only to have somebody else do it instead. And so, can we have a treaty kind of modelled on the nuclear non-proliferation treaty where we cooperatively come down. So we do need things like that at an international level. But! But, my book is written for Canadians. It's about what we have to do, in our own domain. And we have to do it knowing that there are millions of people of good will around the world who are doing the same in their own countries. And it's often the case – again when I told people about this book when I was working on it, very- a very common refrain among Canadians. It's to say, oh, but we're a small country. What we do doesn't really matter. Look, it's true that our emissions relative to the US, or Europe, or China or India are small. Our per capita emissions are the worst in the world. [DB: Yeah, that's so [inaudible].] And, that doesn't even count what we extract and export that's burned somewhere else and counts towards somebody else's emissions conveniently. So, we do have a big role to play.

5829 DB: We have a big impact, yeah.

58:30 SK: And, and, I want to come back to the war, as I always do. Here's what I love about our WWII story: Canada didn't require an attack on our own soil. We went to war two years before the United States. For a number of those first two years, we were the only country in the western hemisphere that was engaged in that war, and we were only 11 million people. And at the end of it, nobody questioned the value and importance of what we had done.

58:56 DB: I guess your image of Pearl Harbor is-struck- has an impact. Is there something – Is something like Pearl Harbor required to help push the good war on climate emergency, our enemy comes to our shore in a more imme- immediate(?) way to get our lasting attention?

59:16 SK: Hmm, good question. So again, you know, we don't always require an attack on our soil, but that said, in the book, I actually encourage us to re-think and re-frame these extreme weather events as attacks on our soil. I actually specifically use that language. You know, these floods, these wildfires, these are our attacks on our soil. And back to the media, right? I mean, in WWII, Canadians every day in their newspaper saw a map, the map of the, of, of the line and the advancement of the different forces. Let us see that map every day of these attacks on our soil. That's part of the communication.

59:58 DB: Well, when there was the flood in Ste-Marthe-sur-le-Lac in Quebec, there was a lot of coverage in the news. We saw people who lost their home, we saw people struggling with insurance to get paid, people who didn't know if they would, you know, build again on the same land, and it was very passionate about, do we build on the same land? Do we allow people to build back? So there was a lot of very emotional coverage. But I don't know, one year later, what's left of it. Because at that time, everybody was so into it. But one story chases the other.

1:00:32 SK: Yeah. Well, that's very- and that's what we need the media to do. In the poll I conducted for, for my research, I asked a question about whether or not you personally, or someone close to you, has experienced already the impacts of climate change. Now, I found very high yeses to that question. The lowest level of yes to that question was in Alberta, even though Alberta has experienced the most examples of what we're talking about. But what happens in the political culture there, and in the media culture there, it's, it becomes forbidden to make – to connect the dots. It's somewhat viewed as insensitive to those who are experiencing these events. And that needs to stop.

1:01:18 DB: You have a personal story about that. Yo-your book starts with your personal story about an extreme event. Maybe you can tell it to our um participant.

1:01:28 SK: Yeah well my book opens with this fire when I was with my wife and her family a couple of summers ago, and where, it was like a war scene, all day long. It was helicopters and planes coming to fill up.

1:01:43 DB: You were going to the cabin? You were trying to go to the cabin? What was – what happened?

1:01:46 SK: No, it was- It was a rental home in the Okanagan, and the fire was on the ridge behind us. And it was just like a scene from Apocalypse Now, or something. Like, we literally were yelling over the sound of helicopters all day. But look, let me give you a more recent example. These f- these fires on the- on the West coast of the United States meant that all last week, we were engulfed in smoke here in Vancouver. And so, just as we were sending our children back to school, and we had been promised that the windows would be opened, and that they would maximize the time the children spent outside, we were ordered to stay inside and close the windows. This is the convergence of the crises that we face.

1:02:28 DB: Okay, Seth, now we will turn to French, and you will listen to the panels, so you can react after. Merci beaucoup Seth. Alors, nous allons passer au panel. On a trois super panelistes avec nous aujourd'hui qui ont écouté la – mon entretien avec Seth et à qui je vais poser à chacun une question. Donc, je vais vous nommer mes trois panelistes, et puis, après ça, on va commencer avec, dans l'ordre, Marie-Josée, Karel et Claude. Donc, Marie-Josée Parent a été élue en 2017 Conseillère municipale du district Champlain-Île-des-Sœurs dans l'arrondissement de Verdun. Elle siège actuellement au comité exécutif de la ville de Montréal à titre de conseillère associée à la culture. Karel Mayrand est le PDG de la

Fondation du Grand Montréal. Il a été directeur général pour le Québec et l'Atlantique de la Fondation David Suzuki entre 2008 et 2020, et président du conseil d'administration du projet de la réalité climatique d'Al Gore pour le Canada. Claude Vachet, quant à lui, est associé-directeur chez Cycle Capital, un pionnier des fonds de capital de risque en technologie propre au cours des 30 dernières années. Il a acquis une expérience opérationnelle en matière de technologie propre entre autre dans le secteur de l'eau, de l'énergie et des déchets, ainsi que d'autres applications industrielles. Alors, je vais commencer avec Marie-Josée. Ma première question va porter sur le secteur municipal. Donc, Marie-Josée, j'aimerais savoir – on a vu des villes qui s'engagent pour le climat, pour lutter contre la crise climatique. Maintenant, à quoi ressemble le prochain palier, le prochain niveau d'intervention municipale dans le dossier de la crise climatique?

1 :04 :12 Marie-Josée Parent (M-J.P) : Oui, bonjour, bonsoir, je vais d'abord commencer en reconnaissant qu'on est en territoire non-cédé de la nation Kanien'keha:ka que je remercie pour son hospitalité sur son territoire. Pour répondre à la question, d'abord j'aimerais dire que, comme ville, on doit faire face à trois grands enjeux, hein? La lutte au changement climatique, la protection de la biodiversité, et la mise en place de mesures d'adaptations aux nouvelles réalités climatique. Les villes sont aux premières loges des impacts des enjeux climatiques, on en a parlé avec Seth il y a quelques minutes : les ouragans en Nouvelle-Orléans, les feux de forêt dans le ouest américain qui affectent plusieurs villes, les inondations en 2019 à Montréal, par exemple, les chaleurs accablantes partout dans le monde, à Paris, à Montréal, dans plusieurs grandes villes, à New York. Um, ce sont souvent, en fait, quasiment tout le temps, les services d'urgences des villes qui réagissent en premier. Montréal en 2019 a dû déclarer l'état d'urgence pour pouvoir lutter efficacement contre les inondations. Donc, ces enjeux-là ont des impacts majeurs sur nos opérations comme ville, et on a le devoir, la responsabilité de se préparer aux feux de forêts, aux inondations à répétition, à l'augmentation des maladies dues à la pollution et aux prochaines pandémies parce qu'il risque d'en avoir d'autres. Um, dans ce contexte-là, notre-notre, nos espaces d'actions et d'interventions sont multiples, et je pense que c'est important de le souligner. Um, on peut agir sur notre territoire à différents niveaux et tous ces niveaux-là sont essentiels pour avoir une lutte active et une mobilisation efficace dans la lutte au changement climatique. Tous les plans d'urbanisme, de toutes les villes, devraient considérer les éléments que j'ai nommé, euh, les feux de forêt, les inondations, enfin, tous les impacts qui émergent des changements climatiques et des mesures qui font en sorte de pouvoir, pas simplement s'adapter, mais aussi lutter efficacement contre les changements climatiques, et réduire d'abord et avant tout les émissions de GES à l'échelle des villes. Um, comme ville, nos espaces d'actions et notre pouvoir est limité. Il est encadré par des lois, des lois provinciales. Ça n'empêche qu'on a des capacités importantes d'amener des changements matériels, des changements matériels, donc des changements qui transforment la ville, et, qui donc, transforment aussi les façons de faire, et en transformant les façons de faire, transforment les mentalités. Um, notre culture, notre façon d'agir est aussi construite en fonction de l'espace dans lequel on vit. Il influence notre façon d'être, notre façon d'interagir avec les autres, et notre façon de penser. Um, notre rôle, c'est donc de contribuer à se sortir des actions individuelles en proposant des mesures à grande échelle qui facilite la participation des citoyens à la construction d'une société carboneutre et résiliente. Um, c'est aussi de créer un impact systémique en offrant des options viables aux citoyens pour se libérer de notre dépendance au pétrole. Donc ce qu'on fait, et ce qu'on doit amplifier de façon drastique, arrêter la destruction des espaces verts dans les territoires urbains, um, améliorer um la protection de la biodiversité des milieux humides(??) qui existent aussi en milieu urbain, commencer à parler de façon continue et soutenue de foresterie urbaine, planter des arbres, démultiplier les

plantations d'arbres, se créer des forêts à l'intérieur des villes, augmenter de façon drastique le transport en commun. On l'a vu à Montréal, ce travail est en train de se faire avec le REM, avec les voies réservées pour les autobus, avec les acquisitions d'autobus hybride avec la STM, qui électrifie sa flotte aussi. On doit se concentrer sur le transport actif, et transformer l'espace urbain pour faciliter le transport actif, pour le rendre plus qu'accessible, pour le rendre sécuritaire, pour le rendre enviable, pour faire en sorte que les gens, les citoyens aient non seulement le goût, mais sentent que c'est un moyen de transport plus efficace, plus avantageux que ne l'est la voiture. Avec le réseau express-vélo, par exemple, on est en train de construire 174 km de pistes cyclables sécurisées en site propre à Montréal. C'est énorme, mais on sait que ce travail-là devra être amplifié dans le futur. On a aussi un impact sur un sujet peut-être moins sexy mais o-combien important : la gestion des matières résiduelles. On vient d'adopter notre plan de gestion des matières résiduelles, un plan sur 5 ans, qui a comme objectif de réduire de façon drastique l'enfouissement et le nombre de déchets par ménage. Pour ça, on a créé un nouveau centre de tri à Lachine, et on est en train de construire une usine de biométhanisation à partir de résidus alimentaires. Donc, la production de gaz naturel renouvelable à partir du composte, par exemple. Ce sont des grands projets qui à l'échelle de la ville prennent beaucoup d'énergie, mais qui sont fondamentales pour pouvoir adapter la ville et devenir un acteur efficace de lutte au changement climatique. Il y a aussi le principe de la ville nourricière. Donc, um, la ville de Montréal est une des villes qui produit le plus de um, de produits alimentaires en son sein, grâce aux jardins collectifs, aux initiatives communautaires, aux initiatives de la ville aussi, mais notre plein potentiel est loin d'être atteint. Um, et ça permet de réduire, par exemple, le transport des aliments, ça amène une plus grande résilience et ça amène une démultiplication des espaces verts aussi. Enfin, il y a toute la question de la planification urbaine, um, limiter la construction dans certaines zones qui sont maintenant inondables, être capable de l'assumer, de le dire clairement. Contrôler le zonage aussi en fonction des nouvelles réalités climatiques. Donc ce sont, um tout-tous les espaces d'actions qui um incombent à l'espace municipal, et dont, je pense, toutes les municipalités doivent adresser de façon efficace et ambitieuse. Notre devoir, c'est aussi de –

1 :10 :05 D.B. : Mme Parent, je veux juste vous dire qu'il vous reste moins d'une minute.

1 :10 :07 M-J.P. : J'ai presque terminé! [rire] [D.B. : Parfait! Excellent] Notre devoir, c'est aussi de faire preuve de leadership. En tant de pandémie, on l'a vu, hein, la situation est extrêmement difficile pour tout le monde. Et c'est aussi notre devoir de prendre le relais, de pouvoir dire aux citoyens : on reconnaît que vous êtes débordés, on reconnaît que la situation est extrêmement difficile émotionnellement, économiquement, dans votre quotidien, um, on est là pour prendre la lutte entre nos mains, avec vous. Mais, on est aussi les leaders qui avons la responsabilité de créer ses espaces de lutte au changement climatique pour que vous puissiez y participer. On a le devoir d'alléger l'anxiété citoyenne et de dire, on est là, on travail pour vous, et on lutte efficacement contre les changements climatiques à la hauteur de notre capacité comme municipalité. Et puis, je pense qu'on doit être honnête aussi, les villes n'ont pas le pouvoir d'agir seules, mais elles ont le devoir de créer des alliances entre les villes au Canada, à travers le monde. Le C-40 s'est mis en place il y a quelques années, le Climate Caucus au Canada existe aussi, pour pouvoir faire pression sur les autres paliers de gouvernement de façon concertée, et pour pouvoir faire entendre un message clair. Um, Seth a parlé d'un plan de mobilisation. Je pense que ce plan-là doit se faire de manière concertée, avec toutes les villes à travers le Canada. Et les villes, les grandes villes, ont un devoir de leadership dans ce travail. On a le –

1 :11 :30 D.B. : Je vous remercie Mme Parent. Il faut vraiment arrêter.

1.11 :31 M-J.P. : Parfait, alors on cherche à inspirer avant tout. Et puis, je voulais remercier Seth pour son livre qui est excellent. C'est ma bible maintenant!

1 :11 :40 D.B. : Merci Marie-Josée. Um, je vois que M. Vachet, um, Claude a allumé sa caméra. Donc, on va y aller avec Claude, et la question suivante... donc, Claude, existe une différence entre un investissement qui cible la transition et un autre qui concerne une action liée à l'action climatique urgente. Il y a l'urgence climatique, et il y a la transition, et ce sont deux choses différentes. Je sais que vous êtes spécialisé dans les fonds reliés aux technologies propres, Cycle Capital est un leader, alors j'aimerais savoir, quelle proportion du portefeuille de Cycle Capital cible vraiment l'urgence climatique?

1 :12 :21 Claude Vachet : Bonjour tout le monde. Merci Diane, et merci beaucoup à la Fondation McConnell de l'invitation à participer. Euh, Seth, un excellent livre, un excellent ouvrage qui donne un nouvel angle à comment attaquer le défi des changements climatique. Bon, comme vous savez, Cycle Capital est un pionnier dans l'investissement du secteur des technologies propre qui ont un impact sur la réduction des gaz à effet de serre. Cycle a été fondé en 2009 par ma partenaire Andrée-Lise Méthot. Et puis aujourd'hui, on compte cinq fonds, un demi-milliard (?) suggestions, et plus de 40 sociétés dans lesquelles on a investi. La mission de Cycle c'est d'investir dans des technologies propres, des compagnies qui ont des technologies propres, afin de réussir le défi de l'énergie, de la transition énergétique. On parle ici des secteurs des nouvelles énergies, d'efficacité énergétique, euh la chimie verte, l'agriculture soutenable, les villes intelligentes, et puis la mobilité(?) durable. D'ailleurs l'énoncé qui vient de l'analyse cycle de vie qui est très utile pour pouvoir faire des investissements dans le secteur de l'investissement durable. Je vais démystifier un peu ce qu'on fait, juste très rapidement, pour passer dans le vif du sujet. On est des investisseurs en capital de risque qui recherchons les entreprises avec des technologies qui ont des solutions aux problèmes qu'on fait face aujourd'hui. Euh, dans les secteurs de l'énergie, dans le secteur de la chimie verte. Et, lorsqu'on trouve une telle entreprise, ben, c'est souvent qu'elle a beaucoup de propriété intellectuelle, et une bonne équipe de gestion, et on vise à les aider à les amener à devenir des grands succès parce que ces compagnies-là sont essentielles pour qu'on réussisse la transition pour arriver à une économie carboneutre d'ici 2050. Je vais vous donner quelques exemples de portefeuille, d'entreprises dans portefeuille. Et puis, ça va bien illustrer le cas. Enerkem, qui est une compagnie de Montréal, qui est un spécialiste en gazéification prend les déchets municipaux et en transforme en molécule verte, qui est le chemin principal d'une nouvelle industrie de la chimie verte. Euh, on a actuellement une usine fait à Mirandar(?) qui traite les déchets de la ville d'Edmonton, et on vise à en construire partout dans le monde. Donc, c'est un grand pas en avant, et, c'est une nouvelle industrie qui est très prometteuse. Une autre entreprise à Ottawa, Gan Systems, est une entreprise de semi-conducteurs qui a développé des *transiteurs* qui permettent entre autre la gestion des batteries, mais aussi d'avoir les voitures électriques plus performantes, de 10 à 15% de plus de distance qui permettent aussi de faire des recharges rapide. Donc qui va faire en sorte que ils vont être beaucoup plus attrayantes pour la transition. Une autre entreprise, c'est ESS, qui a développé une solution de stockage énergie renouvelable, parce que le solaire, ça fournit de l'énergie pas nécessairement quand on en a de besoin! Et faut que ce soit abordable, le stocker, et de le redonner au réseau. Donc, pour revenir à la question, 100% de nos entreprises sont – ont développé des technologies pour la transition. Et puis elles sont prêtes, pour faire une analogie avec le livre, ils sont prêts à être les équipementiers pour la technologie de guerre pour aller au champ de bataille. Et je dirais même plus que nos entrepreneurs sont sur la ligne de front, et attendent le signal. Et, pour ça, ça va être important que nos

gouvernements, et je pense que Seth l'a bien expliqué, que le leadership de cette bataille là doit venir de nos gouvernements partout sur la Terre.

1 :16 :08 D.B. : Mais pour que vos technologies soient des technologies de crises et non pas des technologies de transition, qu'est-ce que ça va prendre? De ce que je comprends, vous me parlez de l'horizon de 2050, vous me parlez de technologies de transition, mais, Seth parle de crise, puis d'immédiate côté immédiat. Donc, pour qu'elles se transforment en technologies de crise, est-ce que c'est juste une question gouvernementale d'incitatif, ou est-ce que certaines ont le potentiel d'être des technologies de crise, et d'autres de transition?

1 :16 :32 C.V. : (inaudible) Nos compagnies sont prêtes aujourd'hui à déployer, et à faire la transition, donc à adresser la crise. Donc, nos compagnies –

1 :16 :40 D.B. : Okay, donc qu'est-ce qui- quand vous dites - Oui?

1 :16 :41 : C.V. : Nos compagnies sont là, et puis on a certains succès commerciaux, mais on aimerait bien avoir un mouvement d'accélération pour pouvoir déployer. Et, euh, dans une guerre, cette guerre-ci, elle va se gagner avec la technologie. La technologie que nos compagnies ont développée, elle est à coût concurrentiel, et, elle fait en sorte que on peut déployer, en déplaçant des technologies existantes, qui sont polluantes, avec des technologies non-polluantes, et qui sont concurrentielles, qui coûteront pas nécessairement plus cher à la population. Donc, ça c'est très important. Donc, oui, on répond à la crise, mais il faut un mouvement pour déployer. Et,

1 :17 :19 D.B. : Qu'est-ce que vous voulez dire par un mouvement? J'aimerais ça que vous expliquiez ce que vous voulez dire.

1 :17 :22 C.V. : Ben, aujourd'hui, on sent pas une urgence de crise climatique. Euh, on

1 :17 :27 D.B. : Donc elles sont pas assez sollicités vos technologies? Qu- c'est ça - Est-ce que c'est ça que vous voulez dire?

1 :17 :31 C.V. : Ben, il va falloir des donneurs d'ordres [D.B. : Okay.] pour pouvoir acheter ces technologies et les déployer. On a les outils.

1 :17 :37 D.B. : Okay, elles sont prêtes.

1 :17 :38 C.V. : Elles sont prêtes! Sont commerciales. Sont prêtes à, à justement, changer toute notre infrastructure. Pour pouvoir justement faire la transition. Et ça va prendre un certain temps pour... Rien ne se fait en, en, en un an. Ça va

1 :17 :53 D.B. : Mais pour que les tech- pour que les donneurs d'ordres soient au rendez-vous, est-ce qu'il faudrait des incitatifs gouvernementaux, ou est-ce que – est- ce que c'est une question d'argent, ou c'est une question de mentalité?

1 :18 :03 C.V.: C'est essentiellement une question de politique gouvernementale et euh... Le prix sur le carbone est un bon début. De mettre un prix sur le carbone va faire en sorte que ça rende les technologies propres beaucoup plus concurrentielles. Parce qu'on paie le vrai prix pour ces technologies-là, parce que le carbone est intégré dedans. Et, par contre, si on faisait des politiques gouvernementales qui incitaient à ne plus vendre de voitures en 2030 comme dans certaines provinces, ou dans certains états, ou à migrer, ou ne plus faire de la production d'électricité au charbon, ça ferait

en sorte que les entreprises seraient obligées de transitionner vers ces... Donc les politiques gouvernementales sont essentielles. Le leadership gouvernemental est essentiel pour que la transition se produise rapidement.

1 :18 :54 D.B. : Donc, si je résume votre propos, en conclusion, ce que vous nous dites, c'est que vous avez les technologies, les technologies sont disponibles, il faut qu'il ait des donneurs d'ordres qui les utilisent, qui les requièrent, ces technologies-là. Et ça- Et on revient à ce que Seth dit, ça prend une forme de leadership gouvernementale pour accélérer justement ce que vous parlez de mouvement, c'est ça?

1 :19 :13 C.V. : Exactement. Un effort de guerre pour aller de l'avant.

1 :19 :16 D.B. : Bien merci beaucoup Claude. Alors, on va passer à Karel. Euh Karel, êtes-vous là? [Karel Mayrand : Euh... oui.] D'accord. Oui parfait. Alors, Karel j'ai une question pour vous. Alors, j'aimerais savoir à quoi ça ressemble un véritable plan d'urgence climatique pour une entreprise? Est-ce qu'on a un employeur québécois qui possède un véritable plan de sortie des énergies fossiles? Parce que si on parle d'urgence, urgence, c'est ça! Donc, est-ce qu'il y a quelqu'un au Québec qui a ce plan-là?

1 :19 :52 Karel Mayrand (K.M.) : Oui. Je sais pas. Ça doit exister, probablement à différents niveaux, mais... c'est une cible qui est à l'horizon, hein? Comme, dans le fond, l'objectif c'est d'arriver à zéro émission en 2050. Juste avant de répondre, je voulais simplement dire que, sur ma table de chevet, avec le livre de Seth, j'ai deux autres livres qui sont, *Les Mémoires de Guerre* de Winston Churchill, et un livre sur les missions Apollo qui sont vraiment, ça vous donne une idée dans l'état d'esprit dans lequel je suis. C'est-à-dire, on est dans deux situations où il a fallu, pour atteindre les objectifs, mobiliser, dans un cas, l'ensemble de notre économie, c'est un peu ce que Seth nous dit. Dans le cas d'Apollo, à une certaine époque dans les années 60, c'était 4% du PIB américain qui était consacré, pas 4% des dépenses publiques là, 4% du PIB qui allait au projet Apollo. Et donc, et donc dans le fond, c'est possible même de mobiliser un 4, un 5 un 10% du PIB dans un objectif comme ça. Et euh, c'est évident qu'on a besoin de l'état comme mobilisateur. Ceci dit, pour revenir aux entreprises, um, j'ai pas trouvé d'exemples, il y a plein d'exemples d'entreprises qui font des bonnes choses. J'ai essayé de me poser la question, à quoi ça ressemblerait une entreprise qui aurait, qui se serait mis en mode urgence. Qui aurait saisi le signal. Donc la première chose, l'entreprise, elle établit une cible. Faut que ce soit, faut qu'elle est une cible qui est compatible avec un monde avec un réchauffement de 1.5 à 2 degré là. Donc ce qu'on essaie d'atteindre à l'échelle globale. Et essentiellement, une entreprise qui va dire, en 2050 ou avant, je vais être à 0 émission, neutre. C'est pas possible de la même façon dans tous les secteurs. Il y a des secteurs où il y a pas les technologies encore. Je pense entre autre aux avions, l'aviation civile. Donc, faut faire preuve quand même d'imagination. Ensuite, il faut remettre en question, pas seulement, il faut pas seulement viser d'être, de réduire les émissions de gaz à effet de serre de nos opérations, oui, il faut le faire, ça c'est important, mais il faut aussi regarder du côté de nos pratiques commerciales. Tsé par exemple, moi ça me – ça va pas m'impressionner si Ford ou Chrysler me disent, quand on produit des F-150 ou des Dodge Ram, on émet 10% moins d'émissions qu'il y a 5 ans. Le problème, c'est qu'on vend encore ce produit-là à une échelle... Tsé, c'est pas tout le monde – on s'entend c'est comme, en ce moment, c'est le véhicule le plus vendu au Canada, et um, c'est un véhicule qui est vendu parce qu'il est très, très payant pour les entreprises. C'est pas un besoin nouveau, tout d'un coup, tout le monde a besoin de ses voitures là, c'est que les entreprises ont une meilleure marge de profit. Et dans ce cas-ci, euh, et, et, là on a vraiment un dilemme : est-ce qu'on vend le produit qui est néfaste pour

l'environnement? Parce qu'ils ont des véhicules électriques aussi, mais ils sont moins payants. Donc il est- alors, il y a des pratiques commerciales à changer. Pis tant qu'on va pas de ce côté-là, ben il y a quelque chose, fondamentalement l'entreprise continue d'opérer comme si il n'y avait pas d'urgence. Ensuite, faut regarder la stratégie d'affaires, le leadership doit d'exemple, le PDG ou la haute direction d'entreprise doit avoir une stratégie d'affaires qui dit, ben écoutez, c'est dans cette direction-là, on va aller vers la transition énergétique. Et on va devoir aller changer des choses. Je reprends l'exemple de l'automobile, ben, pas juste la stratégie d'affaire, mais le modèle d'affaire, une compagnie automobile, ça repose sur un réseau de concessionnaires. Et là, t'as des entreprises qui arrivent, comme Tesla ou d'autres, qui vont dire, non j'ai plus de réseau de concessionnaires et euh, mon modèle d'affaires ne repose plus sur l'entretien du véhicule, parce que – vous comprenez ce que je veux dire? Et même on s'en va vers de plus en plus des flottes de véhicules autonomes, dans quelques années. Donc, il y a une révision des modèles d'affaires qui se fait souvent du point de vue de l'arrivée de nouvelles technologies. Pis, dans le cas qui nous concerne, quand on est du côté du changement climatique, il va y avoir effectivement, des remplacements, par exemple du passage du moteur à combustion vers le moteur électrique, je prends toujours l'exemple de l'automobile parce que je pense que c'est un exemple qui illustre bien les choses, euh mais en énergie aussi on a vu arriver par exemple la production d'énergie distribuée, euh par exemple la compagnie qui va installer des panneaux solaires sur votre maison, qui vous demandera pas de payer les panneaux solaires, elle utilise l'espace, la superficie de votre toit, pour produire une électricité qu'elle vous vend. Et donc vous dans le fond, vous avez tout bénéfique parce que vous allez payer votre électricité moins chère, pis vous avez pas besoin d'investir dans l'achat de l'infrastructure. Mais ces compagnies-là qui arrivent, ils attaquent directement le monopole, les monopoles naturels, ou les monopoles des grandes « utilities » aux États-Unis. Et donc, là, ben Hydro-Québec a vu ça venir, et Hydro-Québec c'est dit, ben écoutez, c'est la spirale de la mort, parce que éventuellement, il y a des – ces compagnies-là vont entrer sur le marché au Québec, pas maintenant, parce que l'électricité est pas chère au Québec pis c'est pas nécessairement ici que ça va se faire en premier, mais quand ça va arriver, ça va se répandre. Et plus on perd de client, plus on va devoir augmenter les clients restants, pis on rentre dans une spirale de la mort. Hydro-Québec l'a compris il y a quelques années, et là, ils viennent de lancer Hilo qui est leur nouvelle euh... filiale qui va faire de la domotique et tout ça.

1:25:01 D.B.: Euh, Karel, je veux juste vous dire qu'il reste 1 minute.

1 :25 :04 K.M. : Parfait. Donc, eux transforment leur modèle d'affaires tranquillement. Ils sont en train de bâtir le nouveau modèle d'affaire pour occuper un nouveau marché. Donc, je donne ici plein d'exemples de – d'entreprises qui euh qui font des changements, mais fondamentalement, il faut être capable d'aller réfléchir à ses pratiques commerciales, comme, d'où va venir notre croissance, et si la croissance continue de venir des secteurs qui sont à haute intensité carbone, ou qui encouragent les consommations à haute intensité carbone, à ce moment-là, on a beau dire qu'on va réduire nos émissions de 10%, ou de 20%, ça aura pas d'impact. Donc il faut être prêt à aller beaucoup plus loin que ça. J'ai vu peu d'entreprises le faire. Il y en a qui était dans le charbon, des grandes- des grandes compagnies, la caisse de dépôt a investit dans des grandes compagnies de charbon – euh, d'électricité en Inde, qui vont se convertir graduellement, pour sortir complètement du thermique, et des énergies fossiles. Il y en a donc qui le font. Mais je pense que ça demeure une minorité, et qu'il y a une frilosité parce que, effectivement on manque de leadership de la part peut-être de l'état. Je pense que l'état doit donner une direction. Moi, je rejoins, je rejoins Claude là-dessus.

1 :26 :12 D.B. : Pis, vous parlez aussi, si je résume, vous parlez beaucoup aussi des pratiques d'affaires. Donc de dire, je vais réduire de 10% mes émissions mais de garder des pratiques d'affaires qui encouragent, ben il y a comme une dichotomie à quelque part. On y arrive pas!

1 :26 :23 K.M : Ben, c'est comme la compagnie de cigarettes qui dirait, j'ai, j'ai, je mets moins de pesticides dans mes champs, mais je vends des cigarettes à des adolescents, là. C'est pas...

1 :26 :32 D.B. : Je comprends.

1 :26 :33 K.M. : Ça règle pas le problème.

1 :26 :34 D.B. : Bon, ben, euh, merci Claude. Merci Marie-Josée. Merci Karel. On va retourner à Seth. Back to you, Seth. You can put your mic and your camera on, so we can hear you. Hi Seth! So we can hear you react to those three panelists. How do you see those comments? How do you put them in perspective with your book, or your... mindset?

1:27:00 S.K.: Well, my thanks to all of them. And thank you for your kind words, and thank you for, thank you for your kind words about the book. Karl, I'm very happy to hear about your bedtime book collection. [laughs] Um, and these are all important initiatives. Marie-Josée, by the way I mention Marie-Josée in my book, as one of a number of climate champions that should be supported in the political domain. Um, and her colleagues in the climate caucus, that's really important. I guess my response, maybe I'll try to – well, first of all, with respect to cities. As Marie-Josée said, there are important things that cities can do around waste management, around bike paths, around community design itself, creating complete communities where people can live and work within a walk and a roll for everything that they need. And so on. Um, I would emphasize again the importance of buildings. And, where the city does have some ability, it depends, each jurisdiction rules are a bit different, I mentioned how Vancouver has done these two things, right? They've said: no new buildings can use gas as of next year, and then by 2025, all replacements of heaters have to be not gas. Those two measures alone in a much- all part of a much larger climate plan are responsible for half of the GHG reductions in their IPCC targets. Um, as a city. So, the building piece is huge. And on the infrastructure piece, this is where it's very challenging for cities because, whether it's transit infrastructure, or other climate infrastructure, they really need the help of the federal government. The federal government has the capacity to spend with the assistance of the Bank of Canada, as we've seen with this pandemic, in a way that other levels of government do not. Um, I think just to wrap together a response to Claude and Karl, again I keep coming back to the mandates, right? This is – there's such important work happening in the domain of clean tech. But in the end, it's marginal. And the question in all of this is, how do we scale it up and take that which is marginal and make it universal and the norm? And that has to be state-led and it- price signals alone will not achieve that. Actually mandating things will achieve that scale, in the realm of vehicles for example. So, I should say, you know, Quebec does have Zev mandate, so does my province in British Columbia, but the dates are too far out. We should do like other European countries are starting to do, and say to all of the dealers and manufacturers, come 2025, you won't be able to buy a fossil fuel car. That's it. And that would drive change in the market at a scale that I was trying to give you a flavour for in the second WW. But ultimately, that society-wide mobilization needs to be state-led, and in some ways, I've heard both Karl and Claude saying that. And maybe I would just say this in conclusion, if I may, this pandemic has all shown us how quickly this stuff can happen. And how quickly our governments can pivot and start to treat things as emergencies. What I've tried to do in this historical excavation of our wartime experience is really just blow open our sense of possibility and ambition. You

know, this to me is actually the most nefarious legacy of neo-liberalism. It's not the tax cuts, and the spending cuts, and the deregulation, it's that it's sapped our imagination and our ambition about what's possible. Um, and, you know, the – I'll say, maybe, I'll try to close with two observations about WWII. [chuckle] One is, um, you know, we live in a difficult time we're in a very ambiguous time: we don't know if we can do this in time on climate. That's the truth. But I like to remind people, when all those million plus Canadians enlisted to fight fascism many years ago, they also didn't know if they would win. We know how that story ended. But they did not. And there was a few years in which the outcome was very much an open question, and they did what they had to do regardless. And, you know, I make a point in the conclusion of the book that um, not to give away the ending, although we all know how it ends! Um, but, you know a lot of us who are, who have a kind of nerdy interest in WWII or other pivotal historic moments like Karl clearly does from his book collection um, we look back on those things, and we think, what would I have done if I had lived then and there? But the answer to that question is not really a mystery. The answer to that question is whatever we're all ready to do now.

1:32:37 D.B.: Well Seth, there are two things I want to take with me from that conversation with you. First that crises lift impossible barriers. That was the beginning of your talk. And it sticks with me. And the other one is from marginal to universal. The fact that, like Claude said, technologies are there, but we feel like it's still marginal, we need people to buy them. We need to have a momentum. So, crisis needs to take us from margin to the universal, to the norm! From the margin to the norm! So, thank you Seth for this great conversation. And I will turn the mic to Annie. Annie, c'est à vous le micro pour nous dire quelques mots de clôture.

1 :33 :22 A.B. : Juste un grand remerciement à tout le monde qui s'est joint à nous ce soir, qui a participé à cette conversation très intéressante. Un grand merci à Désirée McGraw, à Marie-Josée Parent, Karel et Claude de s'être joint à nous. Diane, un grand merci à toi d'avoir animé cette conversation et d'avoir posé pleines de bonnes questions qui nous ont inspiré ce soir. And, aussi un grand merci à toute l'équipe de Comticom pour le support technique, et toute l'organisation logistique de cet événement. Seth, I can only wish you that we all heed the important historical lessons that you offer in this book, and that you give us the courage to be bold, to mobilize all sectors of society against what I think is the biggest threat to climate action which is incrementalism, as you've mentioned; that we need really to mobilize on a scale and a level that warrants the science and the climate crisis that we face. So, thank you so much.

1:34:26 D.B.: Alors d'habitude à ce moment-ci de la, des événements que j'anime, je souhaite un bon retour à la maison à tout le monde. Mais cette fois-ci, c'est difficile parce que tout le monde est déjà à la maison! Donc il me reste à vous souhaiter une bonne heure de souper agréable avec tous ceux que vous aimez autour de vous. Et puis, probablement parce qu'on a tous des gens qu'on aime dans notre vie, ça risque peut-être de nous faire réfléchir à, aux rôles qu'on devrait jouer pour que, essayer de stopper cette crise avant qu'il soit trop tard. Alors, bonne soirée à tout le monde, et merci à tous les participants qui sont restés avec nous jusqu'à la fin. Au revoir!