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Date: 4/24/2019 11:59:00 AM
Subject: Climate Emergency Questions/Answers

Greetings Mayor and Council-

Here's the first set of questions and answers to your questions on the climate emergency report.

1. Vancouver is 115 km² and just one of 22 local governments within Metro Vancouver. How do you think that these "big moves" in Vancouver will impact the Region outside our 115km²? If Vancouver is the only municipality that adopts these "big moves" what impact can our 155km² make in isolation.

A: Vancouver's actions over the last 10 years have had significant impact on regional, provincial and national policy so we believe these moves will also impact local, provincial, national, and international policy. A good example would be our work on the Zero Emissions Building Plan, which has become the framework for the BC Energy Step Code, which is allowing local governments around to province to advance high performance buildings. More importantly this work only seeks to mitigate Vancouver's own pollution. It's the equivalent of picking up our own garbage.
2. There are significant additional costs associated with construction methods implicit in the "big moves" Vancouver is already deeply unaffordable. How do you reconcile the added costs with Vancouver's lack of affordability. As a corollary, will these additional costs drive construction outside the City of Vancouver, into surrounding municipalities?

A: To date Vancouver's green policies have had a net reduction in costs to taxpayers in saved energy costs (\$12M since 2007). Based on our economic modelling, moving Vancouver to 100% renewable by 2050 will continue to have a net financial benefits to local businesses and residents. Some of these moves will cost more initially due to industry's learning curve and the immature supply chain but eventually will be in the realm 1-2% of total cost to construct a building. Many in industry realize the world is moving in this direction and their experience in Vancouver is allowing them to be more competitive in other jurisdictions, therefore we do not see this as a detriment to development in Vancouver.
3. You talk about a Walkable City and the need for distributed transit development. How do you reconcile this with the proposed Broadway subway that will simply put a single line through the City as opposed to a more distributed network such as a streetcar network on which Vancouver was originally built? Further, there are construction implications associated with concrete subway construction. How do you reconcile the climate change implications of the subway in terms of construction materials and methods? It seem to me that there are better strategies for promoted distributed transit throughout the fabric of the City.

A: A distributed transit system is needed for any city to be successful and affordable and multiple subway/skytrain systems exist and more will be needed in Vancouver. These are supported by good walking, cycling, bus and possibly streetcar feeders. All of these modes are important for a complete city. RE: Embodied carbon, these have been included in the Broadway subway studies and the reduction in operational emissions greatly outweigh the embodied carbon in the concrete. This is especially true when you consider the embodied carbon of the cars that will be displaced by the subway.
4. High rise buildings have been shown to be extremely inefficient in terms of electricity use. The glass in high rises are not particularly green-friendly, by definition. Furthermore, construction in concrete high-rises have been shown to have negative implications for climate change. How do you suggest that this information can shape housing development policy going forward? What are the cost implications?

A: The good news is that our electricity is 98% renewable but the high energy use is a concern. Our new building codes are designed to improve energy efficiency as well as GHG emissions. These apply to all types of developments, including high-rises. Rec F regarding embodied carbon will help address embodied emissions and ideally affordability by looking at alternative material like mass timber construction.
5. If we are able to reduce/remove the use of fossil fuels in vehicles, why do we need to reduce or remove the use of vehicles in the City? Is the problem fossil fuels or vehicles? How do electric cars fit into this strategy?

A: We are not proposing removing vehicles in the City in this report, although we do want to reduce the number of trips by vehicle. In order to accommodate the population growth in the city and improve affordability we need to provide more transportation choices for people such as walking, biking and transit. For those who still need vehicles to move in the city we need to make it easier for them to choose low carbon alternatives, which is quickly become less expensive than gasoline/diesel vehicles. Recs B, C and D all address this issue.

Best

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The City of Vancouver acknowledges that it is situated on the unceded traditional territories of the Musqueam, Squamish, and Tsleil-Waututh peoples.