To: Members of the Joint Committee on Carbon Reduction

As you prepare for your work session tomorrow, I urge you to **keep HB 2020 as strong as possible and not to weaken it by offering further concessions to corporations emitting fossil fuels**. Specifically, I as that you not give further free carbon allowances, e.g. to methane fossil fuel utilities. Also, do not allow "banking of allowances" for future use. Carbon reduction needs to happen now and fast. All of us (citizens as well as corporations) will need to experience the pain of the changes in our lifestyle that are needed if we are to save the planet.

As background to your deliberations, I urge you to consider the following brief section from a chapter I have just written on "Environment, Health, and Behavior":

Climate scientists have concluded that without significant global efforts to control greenhouse gas emissions, the earth could soon pass a tipping point that would lead to a much higher global average temperature than any interglacial period in the past 1.2 million years and to sea levels significantly higher than at any time in the Holocene epoch. This runaway "Hothouse Earth" effect would result from several self-reinforcing feedbacks. These include permafrost thawing with associated increased releases of carbon dioxide and methane; increased bacterial respiration in the ocean; weakening of land and ocean carbon sinks; Amazon and boreal forest dieback with associated release of carbon dioxide, often through wildfires; decreased "albedo effect" (the reflection of sunlight by ice and snow) due to summer loss of Arctic sea ice, reduction of northern hemisphere spring snow cover, summer loss of Antarctic ice, and loss of the polar ice sheet. All of these feedbacks would amplify and accelerate warming. **The Intergovernmental Panel on Climate Change (IPCC) warns that humanity has about 8 years to take significant action to prevent the earth crossing this threshold.**

**The impact of earth's warming on human health is enormous and varied.** The *direct effects* of climate change on human health include heat-related illnesses and deaths; increased floods and droughts (often followed by malnutrition due to loss of cropland); the spread of infectious diseases to wider geographical ranges, both in latitude and altitude, as mosquito-borne illnesses such as dengue fever and West Nile virus, tick-borne illnesses such as Lyme disease, and rodent-borne illnesses such as hantavirus follow the warming trends; a longer seasonal duration of biogenic allergens; cardiorespiratory problems due to increased ground-level ozone concentrations and smoke from wildfires; increase in water-related diseases as water scarcity and rising sea levels lead to freshwater contamination; algal blooms with associated cholera outbreaks; increased outbreaks of cryptosporidiosis due to heavy rainfall; and the threat to human health and well-being by the more violent storms associated with warming.

The *indirect health effects* include water scarcity, with the number of people living in water-scarce countries expected to rise to 3 billion by 2025; nutrition deficits driven by a drop in crop yields combined with increased demand due to population growth and higher levels of consumption as affluence promotes shifting to a meat-based diet; undernutrition (indicated by stunting and underweight in children under 5 years) due to lowered crop yields; decreased nutritional content of grains due to increased atmospheric $CO_2$ concentrations; and finally population displacement—with associated immune system challenges, infectious diseases, housing and sanitation challenges, lack of safe drinking water, malnutrition, violence, and post-traumatic stress disorder (PTSD).

Best wishes,

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