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April 21, 2016

Re: Suggestions for Community-Wide Greenhouse Gas Emission Reduction in the City of Regina

Chris Holden, City Manager

Via email: cholden@regina.ca and service_regina@regina.ca

Dear Mr. Holden

The board of directors of the Saskatchewan Environmental Society is pleased to offer suggestions for your consideration on important components of a community-wide greenhouse gas reduction strategy. As you know, there are many important policy levers that can be exercised at a municipal level to reduce the City's greenhouse gas footprint.

We are appreciative of the positive steps the City of Regina has taken over the past 10 years to begin to mitigate greenhouse gas emissions. We are also conscious of the emissions challenge that comes as city population grows. However, we are now in an era where all cities in the world must dramatically reduce their greenhouse gas emissions, despite population growth.

The implementation of comprehensive greenhouse gas emission reduction strategies at the municipal level is becoming increasingly urgent as negative climate change impacts accelerate on a wide variety of fronts around the world. These impacts are directly related to the vast quantities of manmade greenhouse gases that are being released into the atmosphere each year and the resulting steady rise in average global temperature.

Some of the global and regional impacts our organization is most concerned about include:

- Intense rainfall and severe flooding events are becoming more widespread around the world. We have seen this in our own province with unprecedented 'one in one hundred year' rainfall events in southeast Saskatchewan in June 2011 and June 2014.
- The past three years have been marked by unprecedented hurricane/cyclone speeds over land. One example was Hurricane Haiyan which battered the Philippines with one minute sustained wind speeds of 315km/h and gusts up to 378km/h. Over 6,000 people died; 4 million were displaced.
- The forest fire season is growing longer in many parts of the world, and wildfires and forest fires are becoming more intense and difficult to control. We got a glimpse of what many parts of the world have



been experiencing, when last summer a dangerous forest fire season in northern Saskatchewan required the evacuation of 13,000 northern residents.

- Mosquito borne illnesses and other vector borne diseases (for instance those carried by ticks) are spreading beyond their traditional range. Some, such as Lyme Disease, will pose a risk to Saskatchewan residents over the medium term.
- Pollinators are suffering negative impacts from climate change. For example, in both North America and Europe the southern range of bumblebees has shrunk by about 300 kilometres. At the same time, the bee's northern range has not expanded.
- The global rate of sea level rise has jumped to an average of 3.2mm per year. Warming ocean waters (which result in the molecular expansion of seawater) and the melting of Greenland and of mountain glaciers around the world is accelerating the pace of sea level rise. Sea level rise poses a significant threat to coastal communities and to island nations.
- Food production in many parts of Africa is declining, with climate change making traditional drought impacts worse.
- Coral reefs are home to 25% of all marine life at some point during their life cycle. As tropical ocean waters warm beyond their traditional range due to climate change, widespread coral reef bleaching is occurring. The future of coral reef ecosystems in much of the world is now very much at stake. We are witnessing a beautiful 500 million year old ecosystem worth tens of billions of dollars to the world economy being put gravely at risk by climate change.
- A 30% increase in acidification of the oceans, with the situation getting worse every decade as more and more carbon dioxide is taken up by the oceans. This poses major risks for shell forming marine life.
- High financial losses are being experienced by many nations because of a growing number of extreme events. We are beginning to witness this trend in Saskatchewan where spending on Provincial Disaster Assistance is up at least 20 fold in the course of the past 12-15 years.

It is important to recognize that while Saskatchewan is clearly not experiencing all of these impacts, Saskatchewan greenhouse gas emissions are contributing to all these problems. Similarly, it will be global greenhouse gas emissions that ultimately shape the climatic future of Saskatchewan. If emissions are not brought down quickly worldwide, we face far more serious problems in Saskatchewan than anything we have experienced yet, including the likelihood of prolonged and serious drought.

With the signing of the new international climate change agreement in New York City on Earth Day 2016, the international community is making a commitment to try to hold the increase in global average temperature to no more than 1.5 degrees Celsius above pre-industrial levels. As you know, global average temperature has already risen 1 degree Celsius, with most of the rise in the past four decades. A new global average temperature record was set in 2014, then broken in 2015. Now the first three months of 2016 have set new record highs again for each individual month. We are witnessing a trend not seen in the 137 years that global temperature records have



been kept.

Tackling climate change will require major leadership from all levels of government. We have frequently made representation to the Saskatchewan government on a set of actions, we are of the view, should be taken at the provincial level to reduce greenhouse gas emissions. However, it is equally important to have leadership from Saskatchewan's large urban centres. Thus we are pleased to offer the following suggestions, which we hope you will find useful.

Suggested Actions Over The Next 5-10 Years

Emission Reduction Targets and Public Education

1. Community GHG Reduction Target

We hope the City of Regina will adopt an official target for community-wide reduction of greenhouse gases (GHGs) that reflects the international climate change agreement that is being signed this week in New York. At a minimum we recommend an overall reduction in community-wide GHG emissions of at least 35% below current emission levels by 2025.

2. Public Education Campaign on Climate Change

Community-wide emissions will only decline if the public supports and actively participates in local initiatives towards that end. To achieve higher levels of public engagement, a local information campaign on the urgency of climate change and the exceptionally long-lived nature of greenhouse gases is needed. Such a campaign could also highlight potential monetary savings from reduced fossil fuel use.

Buildings and Subdivision Design

3. Energy Efficiency Provisions in the Municipal Building Code

The Saskatchewan government has conducted consultations on introducing energy efficiency provisions into the provincial building code, and received a positive response. Unfortunately, the Province has yet to take action on actual implementation, and if it does so the provisions are unlikely to be ambitious. However, the City of Regina has the authority to adopt its own energy efficiency provisions for new building construction. We recommend that the City do so, and urge City Council to adopt R80 (ENERGY STAR®) as the official standard, and then continually upgrade the standard every 3 years. ENERGY STAR® would represent a significant improvement over current building practice, and offers a good starting point, since many builders have some experience with it in the City of Regina. ENERGY STAR® has also been widely promoted by the Saskatchewan Home Builders Association, and is already the requirement for all new home construction in the Province of Ontario.

4. Medium Term Goal for Energy Efficiency: Net Zero Energy Buildings

If Regina is to grow over the medium and long term without significantly adding to its existing level of greenhouse gas emissions, it is important - within a decade - to move to a level of energy efficiency in new building construction that does not rely on fossil fuels for heating or electricity. Net-zero energy house construction is becoming more widely adopted in Canada and costs are declining. The City should work towards the goal of making net-zero building construction the municipal standard for energy efficiency by 2025 for both new homes and new commercial



buildings. With this in mind, appropriate training sponsored by the City of Regina, SaskPolytechnic and numerous other partners should get underway as soon as possible for architects, home builders, carpenters, electricians, plumbers and other relevant building trades.

5. Design Standards for New Neighbourhoods to Utilize Solar Energy

The Saskatchewan Environmental Society urges the City of Regina to modify all new subdivision design so as to maximize the ability of homeowners to use solar energy in both passive and active applications. We hope the City will require that future subdivision design and street layout allows all new homes to have good south facing exposure and to be able to make full use of passive solar energy.

6. Solar Provisions In New House Construction And Protection of Solar Access

We recommend the City of Regina require that all new homes be designed and wired for future potential installation of solar photovoltaic systems. The City should also consider actively encouraging builders to install solar hot water as a standard feature in new home construction. The City of Regina should also consider taking steps to ensure that those who have installed solar systems will have their right to access sunlight on their solar installation protected.

7. Financial Incentives for All Forms of Solar Energy

As a way of incenting solar installations, the City of Regina could consider giving a small property tax discount to homeowners that install solar hot water systems, solar heating systems, or solar photovoltaic systems.

8. Model Low GHG Emission Neighbourhood

We suggest the City of Regina consider the development of a model environmentally sustainable neighbourhood. Examples of features that could be built into such a neighbourhood include: (a) well designed walking and cycling paths (b) all homes designed for passive solar energy use (c) all homes super-insulated (d) all homes equipped with solar hot water and solar photovoltaic systems (e) all homes designed to conserve water.

Greenhouse Gas Reduction in the Electricity Generation Sector

9. Accelerating Installation of Solar Photovoltaic Systems in Regina

The City of Regina could follow the lead of several other cities and offer financial assistance to help offset the significant up-front capital investment associated with solar electric installations. This might mean a small subsidy on loans for solar power installations or permitting residents to pay off the cost of their solar installations on their property taxes.

10. LED Street Lighting

We suggest converting every neighbourhood in Regina to LED street lighting. We are conscious that much of Regina's street lighting program is overseen by SaskPower, so hope this can be a mutually agreed upon initiative.

11. A Bylaw To Regulate Over-lighting On Signs

Numerous establishments in all Saskatchewan cities are using unnecessary amounts of light on their signs and their outdoor lighting. The City of Regina could consider an educational campaign to discourage the unnecessary use of electricity for outdoor lighting purposes, and could also



consider the adoption of a bylaw that would have the effect of curbing outdoor over-lighting practices. The initial application of the bylaw could be with respect to signage.

Transportation

12. City Support for Low-Emission Transport Options

Climate change and public health are two important reasons why the City of Regina should encourage local residents to significantly reduce their vehicle use. SES encourages the City to put in place policies that will sharply increase transit ridership including more bus frequency and lower bus fares. SES also encourages the City of Regina to support a large increase in cycling during the spring, summer and fall months. Regina needs a comprehensive system of bicycle lanes and bicycle paths, with built-in safety features for cyclists when they need to travel along or cross major traffic routes. Such a system will foster higher rates of cycling in Regina.

13. Adoption of an Idle-Free Bylaw

Many cities in eastern Canada have adopted bylaws to limit vehicle idling. Idling is typically not allowed for more than 3 minutes on private property, municipal property, or while parked on the side of the road within city limits. Exemptions are usually provided for police, fire or ambulance vehicles or any other vehicles responding to an emergency situation. There are usually several other categories of exemptions such as armoured vehicles, vehicles that need to preserve cargo on board with heating or refrigeration, and vehicles where idling is required in order to service the engine, conduct repairs or refuel. The Saskatchewan Environmental Society urges the City of Regina to adopt an idle-free bylaw that will apply in the spring, summer and fall months (when temperatures are above freezing), and that will limit vehicle idling to no more than 3 minutes.

14. Incentives for Ultra-Low Emission Vehicles

Ultra-low emission vehicle use needs to be actively encouraged in Regina. The Saskatchewan Environmental Society urges the City to consider incentives/privileges to reward motorists who have purchased a super-energy efficient vehicle or an electric car powered by a renewable energy source.

15. GHG Emission Reduction in the Industrial Sector

The industrial sector in Regina is a large source of greenhouse gas emissions and one that the City of Regina has little direct control over, making it a very challenging sector to manage. We have a few suggestions on steps the City may wish to consider. First, we recommend the City of Regina adopt strict standards for space heating and electrical efficiency for all industrial facilities built in Regina in the future. Second, we suggest that the City explore options for tax incentives for major energy efficiency initiatives by industrial companies. Third, we recommend that the City negotiate with large industrial facilities on a schedule for energy efficiency improvements.

Longer Term Goal: A Carbon Neutral City

Climate scientists widely agree that the temperature target set in the new international climate change agreement cannot be met without a complete phasing out of fossil fuels by mid-century. This is because of the exceptionally long atmospheric lifetimes of most greenhouse gases. Simply put, the global community will need to become carbon neutral if it is going to stabilize



greenhouse gas concentrations in the atmosphere, the prerequisite to achieving climatic stability. With this in mind, we hope you and your City Administration will give careful consideration to the idea of Regina targeting to become a carbon-neutral city by 2050. Representatives from our organization would be pleased to meet with you to discuss this direction in more depth, if you are interested.

We hope the suggestions in this letter are helpful to you.

Sincerely,

A handwritten signature in black ink that reads 'Sarina Gersher'.

Sarina Gersher, SES Board Member

A handwritten signature in black ink that reads 'Bob Halliday'.

Bob Halliday, SES Board Member

A handwritten signature in black ink that reads 'Peter Prebble'.

Peter Prebble, SES Director of Environmental Policy

A handwritten signature in black ink that reads 'Allyson Brady'.

Allyson Brady, SES Executive Director