



**PUBLIC AGENDA  
SASKATOON ENVIRONMENTAL  
ADVISORY COMMITTEE**

**Thursday, January 14, 2016, 11:30 a.m.  
Committee Room A, Second Floor, City Hall  
Committee Members:**

**Councillor M. Loewen  
Ms. K. Aikens  
Dr. D. McGrane  
Mr. S. Homenick  
Ms. A. Bugg  
Ms. A. Garg  
Dr. S. Moshiri  
Mr. B. Sawatzky  
Ms. K. Palmer  
Ms. S. Harrison  
Ms. K. Engele-Carter**

**Pages**

**1. CALL TO ORDER**

**1.1 Confirmation of Chair and Vice-Chair**

At the January 8, 2015 meeting of the Saskatoon Environmental Advisory Committee, the Committee resolved:

That the appointment of Michael Hill as Chair and the appointment of Kathleen Aikens as Vice-Chair of the Saskatoon Environmental Advisory Committee until December 2015 be confirmed.

City Council, at its meeting held on November 23, 2015, adopted a recommendation of its Executive Committee that the following be appointed and reappointed to the Saskatoon Environmental Advisory Committee for 2016:

Councillor Loewen

Ms. Kathleen Aikens

Dr. D. McGrane

Mr. Sean Homenick

Ms. Angie Bugg

Dr. Saeed Moshiri

Ms. Aditi Garg

Mr. Brian Sawatzky

Ms. Kathryn Palmer

Ms. Sara Harrison

Ms. Kari Engele-Carter

**Recommendation**

That the Saskatoon Environmental Advisory Committee appoint a Chair and Vice-Chair for 2016.

**2. CONFIRMATION OF AGENDA**

**Recommendation**

That the agenda be confirmed as presented.

**3. ADOPTION OF MINUTES**

**Recommendation**

That the minutes of Regular Meeting of the Saskatoon Environmental Advisory Committee held on November 12, 2015 be approved.

**4. UNFINISHED BUSINESS**

**5. REPORT OF THE CHAIR**

2016 Appointments to the Saskatoon Environmental Advisory Committee - Welcome to Kathryn Palmer, Sara Harrison, and Kari Engele-Carter.

**Recommendation**

That the information be received.

**6. COMMUNICATIONS**

**6.1 Greenhouse Gas Reduction Recommendations (File CK.375-4)**

5 - 25

Attached is a letter from the Saskatchewan Environment Society, which was considered at the Standing Policy Committee on Environment, Utilities & Corporate Services meeting held November 9, 2015; it was resolved that the letter be forwarded to the Saskatoon Environmental Advisory Committee for its information.

Also attached for the Committee's information is the report of the General Manager, Corporate Performance, dated January 11, 2016 in response to the above.

**Recommendation**

That the information be received.

**7. REPORTS FROM ADMINISTRATION**

**7.1 Environmental & Corporate Initiatives (File CK. 7550-1)**

*Verbal Update - B. Wallace*

**Recommendation**

That the information be received.

**8. APPOINTMENT OF SASKATOON ENVIRONMENTAL ADVISORY COMMITTEE REPRESENTATIVE ASSISTANCE TO COMMUNITY GROUPS - CASH GRANTS PROGRAM ENVIRONMENTAL COMPONENT (File CK. 1871-1)**

This matter is on the agenda to determine the Saskatoon Environmental Advisory Committee representative for 2016. The Committee has been asked by the Environmental & Corporate Initiatives Division to select a representative to serve on the evaluations for the Environmental component of the Community Cash Grants Program.

Dr. Saeed Moshiri was appointed as the Saskatoon Environmental Advisory Committee representative for 2015.

**Recommendation**

That the direction of Committee issue.

**9. 2015 ANNUAL REPORT - Saskatoon Environmental Advisory Committee (File CK. 175-9)**

This matter is on the agenda to determine the writer(s) for the 2015 Annual Report.

**Recommendation**

That the direction of Committee issue.

**10. STATEMENT OF EXPENDITURES**

Attached is a current Statement of Expenditures.

**Recommendation**

That the information be received.

**11. PUBLICATIONS (File CK. 175-9)**

*Planning and Design Newsletter, Fall/Winter 2015 edition*

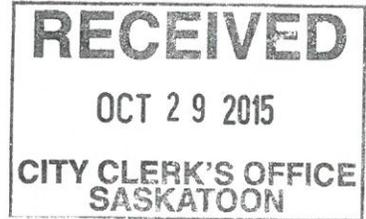
The Committee Assistant will distribute copies of the above noted publication at the meeting.

**Recommendation**

That the information be received.

**12. ADJOURNMENT**

375-4



Dear Mayor Atchison and Members of City Council,

RE: Greenhouse Gas Reduction Recommendations

Saskatoon is in a period of change as the city is growing. The City of Saskatoon has been active in trying to guide future infrastructure investments in order to provide more choices for residents in how they live and move around the city. The Saskatchewan Environmental Society (SES) recognizes the hard work that the City of Saskatoon and City Council have conducted so far in such initiatives and consultations as the *Growth Plan to Half a Million* and the *2015 Performance Goals*.

SES is a non-profit, registered charity whose mandate is to work towards a world in which all needs can be met in sustainable ways. Sustainability requires healthy ecosystems, livelihoods, and communities. Recently the Board of Directors of the Saskatchewan Environmental Society adopted a recommended strategy on municipal greenhouse gas reduction for Saskatoon. This strategy was prepared with the view to providing suggestions on how Saskatoon could successfully curb its rising greenhouse gas footprint.

The City of Saskatoon has a long history of being leaders and innovators on important sustainability and preventive health initiatives, such as helping found the Meewasin Valley Authority and being the first city in the province to enforce a smoking ban in public places. Climate change is now the most important sustainability challenge we face and a looming public health threat. SES believes the suggestions in the attached greenhouse gas reduction strategy could help the City of Saskatoon play a major leadership role in reducing community-wide greenhouse gas emissions in Saskatoon, and at the same time set an example for the rest of Saskatchewan to follow.

The attached emission reduction strategy contains 21 recommendations. Highlights of these recommendations include establishing an inventory of city-wide greenhouse gas emissions, putting in place a municipal building code for energy efficiency, supporting widespread installation of solar power, encouraging low-emission transport options and adopting an idle-free bylaw.

Achieving greenhouse gas emission reductions at a community level will require City Council leadership and a strong community-wide effort. As such, SES recognizes that leadership will be needed from several civic departments. We would be happy to meet with interested civic department managers to discuss how some of our suggestions in the attached paper might be implemented.

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Time is now an important consideration. The damage that has already been done to the global climate from fossil fuel emissions is not reversible over the next several centuries, but there is much we can do in the years ahead to prevent the consequences of climate change from becoming far worse than they are right now. This summer's forest fires in northern Saskatchewan, the 2011 and 2014 intense rainfall and flooding events in southeast Saskatchewan, the spread of Lyme Disease in Canada, and the increasing acidification of coastal waters on every Canadian coastline provide glimpses of what the future holds if local, provincial and national governments do not take the steps necessary to achieve deep greenhouse gas reductions.

With the international negotiations to forge a global climate change treaty scheduled for December of 2015, we suggest this could be an opportune time for the City of Saskatoon to develop a comprehensive community-wide greenhouse gas reduction plan.

We look forward to assisting you in any way we can and to receiving your response in regards to our recommendations when you have had time to consider them.

We would be grateful for the opportunity to make a short presentation on the attached document before the appropriate Standing Policy Committee of Council. Our sincere thanks.

Yours truly,

Bert Weichel, SES Board President

Sarina Gersher, SES Board Member

Ann Coxworth, SES Board Member

Allyson Brady, SES Executive Director

Peter Prebble, SES Director of Environmental Policy

CC. Brenda Wallace, Manager of Environment and Corporate Initiatives  
CC. Trevor Bell, Manager of Saskatoon Light and Power



# **Recommendations for a Municipal Greenhouse Gas Emission Reduction Strategy for the City of Saskatoon Focused On Community-Wide Emissions**

**October 28, 2015**

The board of directors of the Saskatchewan Environmental Society is pleased to offer the following suggestions on important components of a community-wide greenhouse gas reduction strategy that we would like to see the City of Saskatoon move forward with. There are many important policy levers that can be exercised at a municipal level to reduce the City's greenhouse gas footprint.

## **Monitoring, Assessment and Public Education**

### **1. Community GHG Reduction Target**

We hope the City of Saskatoon will adopt an official target for community-wide reduction of greenhouse gases (GHGs). The Saskatchewan Environmental Society (SES) urges the City of Saskatoon to adopt an ambitious reduction target followed by the establishment of clear city policies needed to achieve it. Based on the physical realities of climate science and the threat posed by rising greenhouse gas concentrations in the atmosphere, SES recommends an overall community GHG reduction target of at least 35% below current emission levels by 2025. In the items that follow, we recommend several key policy directions for the City to consider as it works to achieve that goal.

### **2. An Up-to Date Assessment Of Current Community GHG Emissions**

The City of Saskatoon does not have an up-to-date detailed assessment/inventory of current annual community-wide greenhouse gas emissions. This assessment is essential for tracking future emission reduction progress, for setting emission reduction targets for each sector of the Saskatoon economy, and for formulating good public policy for each sector. We urge the City to publish such an assessment in the near future and to update it every two years.

### **3. 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.

### **4. Reporting Progress On Emission Reduction**

SES recommends that the City take steps to ensure that residents are kept aware of progress being made to reduce greenhouse gas emissions in our community. One option would be to consider updates on signs or billboards - similar to what the United Way does when informing the public how close it is to reaching its annual fund raising goal. A chart could show the reduction of total GHG emissions put out by Saskatoon and our progress towards meeting our 2025 goal.



## **Buildings and Subdivision Design**

### **5. 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, and may not do so for some time. However, the City of Saskatoon 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 5 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. 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.

### **6. Medium Term Goal for Energy Efficiency: Net Zero Energy Buildings**

If Saskatoon 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 energy 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 Saskatoon, SIAST and numerous other partners should get underway as soon as possible for architects, home builders, carpenters, electricians, plumbers and other relevant building trades.

### **7. Design Standards for New Neighbourhoods To Utilize Solar Energy**

The Saskatchewan Environmental Society urges the City of Saskatoon to modify all new subdivision design so as to maximize the ability of homeowners to use solar energy in both passive and active applications. The City should 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.

### **8. Solar Provisions In New House Construction And Protection of Solar Access**

The City of Saskatoon should require that all new homes be designed and wired for future potential installation of solar photovoltaic systems. The City should also actively encourage builders to install solar hot water as a standard feature in new home construction. The City of Saskatoon 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.

### **9. Financial Incentives for All Forms of Solar Energy**

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

### **10. Model Low GHG Emission Neighbourhood**

We suggest the City of Saskatoon 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**

### **11. Use of Saskatoon Light & Power As A Vehicle for GHG Reduction**

The City of Saskatoon is fortunate to have its own municipal utility. This provides it with enormous potential to set its own policy path in support of clean, sustainable electricity production. It would be valuable for Council to consider using this potential to incent the use of energy efficiency measures, and to incent the most promising source of renewable power the City has available to it: solar energy.

### **12. Net Metering As A Policy Initiative for SLP**

The Saskatchewan Environmental Society congratulates the City of Saskatoon and Saskatoon Light and Power on the decision to adopt net metering for the SLP area. This is an important element in building a municipal greenhouse gas reduction strategy.

### **13. Financial Options for Accelerating Installation of Solar Photovoltaic Systems**

Here are two options to consider:

#### **a) Facilitating Payment of Capital Costs For Solar Photovoltaic Installations**

The City of Saskatoon 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.

#### **b) The City Could Explore the Option of a Feed-In-Tariff**

More than 70 countries in the world now have a feed in tariff to incent renewable electricity installations. A feed-in-tariff is a policy under which customers who install renewable power receive a price for the electricity they produce that reflects actual installation costs plus a modest profit. In the absence of the Province of Saskatchewan having adopted such a policy measure, Saskatoon could follow the lead of several other cities in North America and consider a modest feed in tariff targeted at accelerating the adoption of solar power. Banff, Alberta was the first city in Canada to adopt a feed-in-tariff at the municipal level. Given the good sunlight resource in Saskatchewan and the pace at which solar costs are dropping, the extra incentive would not need to be high.

### **14. Saskatoon Light and Power Could Consider Direct Installation of Electricity Efficiency Technologies**

The City of Saskatoon could ask Saskatoon Light and Power to consider 'direct installation' of electricity saving measures to help customers cut their power bill and reduce their greenhouse gas emissions. SLP could offer to cover the up-front cost of electricity saving measures that pay for themselves within six years, and then allow their customers to pay off the installation costs via their monthly payment on their electricity bill. After each electricity-saving installation was complete, a customer's electricity bill would remain the same (except for regular rate increases charged to all customers) until such time as costs of the installation had been fully paid for. In other words, installation costs and interest charges would be paid in full through energy savings.

### **15. The City of Saskatoon Could Move into Wind Power and Ask the Province of Saskatchewan for Permission to Build Wind Turbines Outside the City**

Saskatoon Light and Power is currently limited to installing renewable power within the SLP district. This places unreasonable limits on the City of Saskatoon being able to pursue wind power. A 20-50 MW wind power installation would be financially attractive for Saskatoon and



would be an important vehicle for reducing GHG emissions, but it naturally needs to be located outside City limits. Saskatoon Light and Power should consider asking permission from SaskPower to be able to build a wind generation station outside Saskatoon city limits and within a 50 km range of Saskatoon.

#### **16. LED Street Lighting for all Neighbourhoods**

The City is to be commended for installing 100% LED street lighting in the Evergreen neighbourhood and in all new areas of the city. We recommend converting every neighbourhood in Saskatoon to LED street lighting. The majority of street lights in Saskatoon are still high pressure sodium. A switch to LED lighting would offer a 60% reduction in energy use.

#### **17. A Bylaw To Regulate Over-lighting On Signs**

Numerous establishments in Saskatoon are using unnecessary amounts of light on their signs and their outdoor lighting. The City should consider an educational campaign to discourage the unnecessary use of electricity for outdoor lighting purposes, and should also consider the adoption of a bylaw that would have the effect of curbing outdoor over-lighting practices. The initial application of the bylaw should be with respect to signage.

## **Transportation**

#### **18. City Support for Low-Emission Transport Options**

Climate change and public health are two important reasons why the City of Saskatoon should encourage local residents to reduce their vehicle use. SES supports many of the improvements the City of Saskatoon is planning for the transit system, but encourages the City to set much higher targets for transit ridership. Increasing transit ridership will require more bus frequency, lower bus fares, better snow maintenance around bus shelters, and a system that gets people to their destination more efficiently. SES also encourages the City of Saskatoon to support a large increase in cycling during the spring, summer and fall months. Saskatoon 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 Saskatoon.

#### **19. 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 Saskatoon 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.

#### **20. Incentives For Ultra-Low Emission Vehicles**

Ultra-low emission vehicle use needs to be actively encouraged in Saskatoon. 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.



## **21. GHG Emission Reduction in the Industrial Sector**

The industrial sector is Saskatoon's largest source of greenhouse gas emissions and one that the City of Saskatoon has little direct control over, making it a very challenging sector to manage. We have three suggestions on steps the City may wish to consider. First, we recommend the City of Saskatoon adopt strict standards for space heating and electrical efficiency for all industrial facilities built in Saskatoon 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 Saskatoon Light and Power be mandated by Council to negotiate with large industrial facilities on a schedule for energy efficiency improvements.

## **Conclusion**

The recommendations we have made here are our observations about best places to start in reducing community-wide greenhouse gas emissions in Saskatoon. We hope these suggestions are helpful in your deliberations. Thank you very much for considering them.

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## **Municipal Greenhouse Gas Emissions Reduction Strategy – Response to SES Letter**

### **Recommendation**

That the report of the General Manager, Corporate Performance Department dated January 11, 2016, be forwarded to City Council for information.

### **Topic and Purpose**

The purpose of this report is to provide information on the status of current civic initiatives that respond to the recommendations of the Saskatchewan Environmental Society (SES) for reducing community greenhouse gas emissions.

### **Report Highlights**

1. The SES submitted a letter to City Council encouraging leadership and innovation in reducing community greenhouse gas (GHG) emissions.
2. Twenty-one (21) recommendations were provided to the City as a suggested strategy for reducing emissions today and avoiding future climate change impacts.
3. The letter noted that climate change impacts are already evident and mitigation will help reduce impacts related to future changes.
4. The City of Saskatoon (City) has identified the need to adapt to climate change as a key corporate risk and will be submitting a number of reports outlining strategies for managing this risk.

### **Strategic Goals**

This report responds to the priority to implement the Energy and Greenhouse Gas Reduction Plan under the Strategic Goal of Environmental Leadership.

### **Background**

On November 9, 2015 the Standing Policy Committee on Environment, Utilities and Corporate Services received a letter from the SES (Attachment 1) encouraging the City of Saskatoon to recognize climate change as the most important sustainability challenge and a looming public health threat. The SES acknowledged the City's long history of leadership and innovation and encouraged City Council and various civic departments to focus and prioritize reducing community GHG emissions. A proposed strategy including twenty-one (21) recommendations was submitted with the letter.

### **Report**

#### **Status of Civic Initiatives That Respond to the Recommendations**

The Administration has compiled a brief summary of a variety of civic initiatives that directly respond, or are related, to the recommendations made by the SES (Attachment 2).

### **Options to the Recommendation**

The Administration is recommending the information be received at this time and further reporting on the status of current initiatives continue.

Attachment 2 identifies where the City is not currently working on initiatives that directly respond to the following recommendations made by the SES:

- Regulation of solar access and the preservation of sunlight penetration in new home construction
- Financial incentives for solar energy
- Program for installing electricity efficiency technologies
- Wind turbines outside city limits
- Additional restrictions on illuminated signs
- Adoption of a bylaw restricting vehicle idling
- Incentives for ultra-low emission vehicles
- GHG emission reduction in the industrial sector

City Council may direct the Administration to bring forward further reports outlining options for developing new initiatives in these areas.

### **Financial Implications**

The Administration reports financial implications each time an initiative is introduced, changed, or is concluded. A number of initiatives listed in Attachment 2 will be reported on later this year. The Administration can prepare program plans with financial implications for specific recommendations listed in the SES letter where there are no current civic initiatives. Further direction from City Council is requested before such efforts are made.

### **Other Considerations/Implications**

There are no additional environmental, stakeholder, communications, policy or privacy considerations to report at this time.

### **Due Date for Follow-up and/or Project Completion**

Further reports on the status of current civic initiatives will be provided to the Standing Policy Committee on Environment, Utilities and Corporate Services in conjunction with reporting on the Compact of Mayors in July 2016.

### **Public Notice**

Public Notice, pursuant to Section 3 of Public Notice Policy No. C01-021, is not required.

### **Attachments**

1. Letter from the Saskatchewan Environmental Society
2. Current Status of Civic Initiatives

**Report Approval**

Written by: Brenda Wallace, Director of Environmental and Corporate Initiatives

Reviewed by: Trevor Bell, Director of Saskatoon Light and Power  
Carla Blumers, Director of Communications  
Christine Bogad, Office of the City Solicitor  
Kara Fagnou, Director of Building Standards  
Angela Gardiner, Director of Transportation  
Clae Hack, Director of Finance  
Frank Long, Director of Saskatoon Land  
James McDonald, Director of Saskatoon Transit  
Alan Wallace, Director of Planning and Development

Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report – Municipal Greenhouse Gas Emissions Reduction Strategy – Response to SES Letter.docx

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Yours truly,

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Bert Weichel, SES Board President

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

Sarina Gersher, SES Board Member

A handwritten signature in black ink that reads "Ann Coxworth".

Ann Coxworth, SES Board Member

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

Allyson Brady, SES Executive Director

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

Peter Prebble, SES Director of Environmental Policy

CC. Brenda Wallace, Manager of Environment and Corporate Initiatives

CC. Trevor Bell, Manager of Saskatoon Light and Power



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### **1. Community GHG Reduction Target**

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### **2. An Up-to Date Assessment Of Current Community GHG Emissions**

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## **Buildings and Subdivision Design**

### **5. 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, and may not do so for some time. However, the City of Saskatoon 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 5 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. 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.

### **6. Medium Term Goal for Energy Efficiency: Net Zero Energy Buildings**

If Saskatoon 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 energy 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 Saskatoon, SIAST and numerous other partners should get underway as soon as possible for architects, home builders, carpenters, electricians, plumbers and other relevant building trades.

### **7. Design Standards for New Neighbourhoods To Utilize Solar Energy**

The Saskatchewan Environmental Society urges the City of Saskatoon to modify all new subdivision design so as to maximize the ability of homeowners to use solar energy in both passive and active applications. The City should 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.

### **8. Solar Provisions In New House Construction And Protection of Solar Access**

The City of Saskatoon should require that all new homes be designed and wired for future potential installation of solar photovoltaic systems. The City should also actively encourage builders to install solar hot water as a standard feature in new home construction. The City of Saskatoon 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.

### **9. Financial Incentives for All Forms of Solar Energy**

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

### **10. Model Low GHG Emission Neighbourhood**

We suggest the City of Saskatoon 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**

### **11. Use of Saskatoon Light & Power As A Vehicle for GHG Reduction**

The City of Saskatoon is fortunate to have its own municipal utility. This provides it with enormous potential to set its own policy path in support of clean, sustainable electricity production. It would be valuable for Council to consider using this potential to incent the use of energy efficiency measures, and to incent the most promising source of renewable power the City has available to it: solar energy.

### **12. Net Metering As A Policy Initiative for SLP**

The Saskatchewan Environmental Society congratulates the City of Saskatoon and Saskatoon Light and Power on the decision to adopt net metering for the SLP area. This is an important element in building a municipal greenhouse gas reduction strategy.

### **13. Financial Options for Accelerating Installation of Solar Photovoltaic Systems**

Here are two options to consider:

#### **a) Facilitating Payment of Capital Costs For Solar Photovoltaic Installations**

The City of Saskatoon 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.

#### **b) The City Could Explore the Option of a Feed-In-Tariff**

More than 70 countries in the world now have a feed in tariff to incent renewable electricity installations. A feed-in-tariff is a policy under which customers who install renewable power receive a price for the electricity they produce that reflects actual installation costs plus a modest profit. In the absence of the Province of Saskatchewan having adopted such a policy measure, Saskatoon could follow the lead of several other cities in North America and consider a modest feed in tariff targeted at accelerating the adoption of solar power. Banff, Alberta was the first city in Canada to adopt a feed-in-tariff at the municipal level. Given the good sunlight resource in Saskatchewan and the pace at which solar costs are dropping, the extra incentive would not need to be high.

### **14. Saskatoon Light and Power Could Consider Direct Installation of Electricity Efficiency Technologies**

The City of Saskatoon could ask Saskatoon Light and Power to consider 'direct installation' of electricity saving measures to help customers cut their power bill and reduce their greenhouse gas emissions. SLP could offer to cover the up-front cost of electricity saving measures that pay for themselves within six years, and then allow their customers to pay off the installation costs via their monthly payment on their electricity bill. After each electricity-saving installation was complete, a customer's electricity bill would remain the same (except for regular rate increases charged to all customers) until such time as costs of the installation had been fully paid for. In other words, installation costs and interest charges would be paid in full through energy savings.

### **15. The City of Saskatoon Could Move into Wind Power and Ask the Province of Saskatchewan for Permission to Build Wind Turbines Outside the City**

Saskatoon Light and Power is currently limited to installing renewable power within the SLP district. This places unreasonable limits on the City of Saskatoon being able to pursue wind power. A 20-50 MW wind power installation would be financially attractive for Saskatoon and



would be an important vehicle for reducing GHG emissions, but it naturally needs to be located outside City limits. Saskatoon Light and Power should consider asking permission from SaskPower to be able to build a wind generation station outside Saskatoon city limits and within a 50 km range of Saskatoon.

#### **16. LED Street Lighting for all Neighbourhoods**

The City is to be commended for installing 100% LED street lighting in the Evergreen neighbourhood and in all new areas of the city. We recommend converting every neighbourhood in Saskatoon to LED street lighting. The majority of street lights in Saskatoon are still high pressure sodium. A switch to LED lighting would offer a 60% reduction in energy use.

#### **17. A Bylaw To Regulate Over-lighting On Signs**

Numerous establishments in Saskatoon are using unnecessary amounts of light on their signs and their outdoor lighting. The City should consider an educational campaign to discourage the unnecessary use of electricity for outdoor lighting purposes, and should also consider the adoption of a bylaw that would have the effect of curbing outdoor over-lighting practices. The initial application of the bylaw should be with respect to signage.

### **Transportation**

#### **18. City Support for Low-Emission Transport Options**

Climate change and public health are two important reasons why the City of Saskatoon should encourage local residents to reduce their vehicle use. SES supports many of the improvements the City of Saskatoon is planning for the transit system, but encourages the City to set much higher targets for transit ridership. Increasing transit ridership will require more bus frequency, lower bus fares, better snow maintenance around bus shelters, and a system that gets people to their destination more efficiently. SES also encourages the City of Saskatoon to support a large increase in cycling during the spring, summer and fall months. Saskatoon 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 Saskatoon.

#### **19. 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 Saskatoon 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.

#### **20. Incentives For Ultra-Low Emission Vehicles**

Ultra-low emission vehicle use needs to be actively encouraged in Saskatoon. 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.



## **21. GHG Emission Reduction in the Industrial Sector**

The industrial sector is Saskatoon's largest source of greenhouse gas emissions and one that the City of Saskatoon has little direct control over, making it a very challenging sector to manage. We have three suggestions on steps the City may wish to consider. First, we recommend the City of Saskatoon adopt strict standards for space heating and electrical efficiency for all industrial facilities built in Saskatoon 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 Saskatoon Light and Power be mandated by Council to negotiate with large industrial facilities on a schedule for energy efficiency improvements.

## **Conclusion**

The recommendations we have made here are our observations about best places to start in reducing community-wide greenhouse gas emissions in Saskatoon. We hope these suggestions are helpful in your deliberations. Thank you very much for considering them.

## Current Status of Civic Initiatives

RECOMMENDATIONS FROM THE SASKATCHEWAN ENVIRONMENTAL SOCIETY	CURRENT STATUS
Community GHG Reduction Target of 35% below current emission levels by 2025	<ul style="list-style-type: none"> <li>SEAC is working on a proposed Target and will make recommendation to City Council early in 2016.</li> <li>The City estimates that approximately 5,000,000 tonnes of GHGs may need to be reduced to meet the target. This is equivalent to 7 tonnes per person.</li> <li>Saskatoon is a signatory to the Compact of Mayors and has committed to establishing a Community GHG Reduction Target within two (2) years.</li> </ul>
Community GHG Inventory	<ul style="list-style-type: none"> <li>Resources were reallocated as part of the 2016 Business Plan and Budget to ensure that an inventory will be prepared in 2016.</li> <li>Saskatoon is a signatory to the Compact of Mayors and has committed to completing an inventory within one (1) year.</li> </ul>
Public Education Campaign on Climate Change <ul style="list-style-type: none"> <li>SES recommended the launch of a local information campaign on the urgency of climate change and exceptionally long-lived nature of GHGs.</li> </ul>	<ul style="list-style-type: none"> <li>No current City-led education campaigns focus on messaging of this kind. A report outlining environmental education initiatives will be provided in the first quarter of 2016 outlining options to redirect resources from current initiatives to meet this recommendation.</li> </ul>
Reporting Progress on Emissions Reduction <ul style="list-style-type: none"> <li>SES promoted the idea of posting signs or billboards within the community similar in nature to a United Way campaign goal sign.</li> </ul>	<ul style="list-style-type: none"> <li>Annual reports on GHG emissions were produced in 2012 and 2013 and GHG reductions have been reported in the Service Savings and Sustainability report since 2010.</li> <li>A dashboard highlighting performance against established targets is available on the City website. Currently Corporate GHG Emissions are tracked. Once a Community GHG Target is set these will be added to the dashboard.</li> </ul>
Energy Efficiency Provisions in the Municipal Building Code <ul style="list-style-type: none"> <li>SES recommended adoption of R80 (Energy Star®)</li> <li>SES recommended updating the standard every 5 years</li> </ul>	<ul style="list-style-type: none"> <li>Building Standards is currently working with internal and external stakeholders to develop a strategy to promote energy efficiency in buildings in advance of the provincial adoption of the energy standards.</li> <li>The merits of voluntary vs. mandatory labeling for residential construction are being evaluated.</li> </ul>
Net Zero Energy Buildings <ul style="list-style-type: none"> <li>SES recommends forming a partnership with SIAST and others to sponsor training on Net Zero Energy Building techniques.</li> </ul>	<ul style="list-style-type: none"> <li>The City is a member in the Sustainable Net Zero Building Energy Research Network facilitated by McGill University. Two research projects are currently underway. The hope is that the research may be applied by the City in its own corporate buildings with lessons learned shared with the community.</li> </ul>

RECOMMENDATIONS FROM THE SASKATCHEWAN ENVIRONMENTAL SOCIETY	CURRENT STATUS
Design Standards for New Neighbourhoods to Utilize Solar Energy	<ul style="list-style-type: none"> <li>Solar access is currently encouraged in the design of new neighbourhoods, but is not regulated.</li> </ul>
<p>Solar Provisions in New House Construction and Protection of Solar Access</p> <ul style="list-style-type: none"> <li>SES recommends that the City actively encourage builders to install solar hot water as a standard feature in new home construction</li> <li>SES recommends that steps be taken to protect the right of those who have installed solar systems to sunlight access</li> </ul>	<ul style="list-style-type: none"> <li>The preservation of sunlight penetration is referenced in the recently-adopted Neighbourhood Level Infill Strategy; however, specific reference to solar access for power production or passive solar purposes is not included as a priority in the adopted regulations. The current priority is privacy and amenity. A review of the success of the current regulations will be completed at the end of 2016.</li> </ul>
<p>Financial Incentives for Solar Energy</p> <ul style="list-style-type: none"> <li>SES recommends property tax discounts to homeowners</li> </ul>	<ul style="list-style-type: none"> <li>While no current incentives exist for solar energy, the City has incentive programs that could be used as a model for a future program.</li> </ul>
<p>Use Saskatoon Light &amp; Power as a Vehicle for GHG Reduction</p> <p>SES recommends that the policy of SL&amp;P be to support clean, sustainable electricity production with a focus on solar energy</p>	<ul style="list-style-type: none"> <li>Saskatoon Light &amp; Power have plans for green energy generation projects that include landfill gas, turboexpander, solar project, natural gas fuel cells, organic rankine-cycle heat recovery and hydropower. The generation capacity of these projects could equal 10% of their annual energy sales (i.e. 110 GWhr).</li> </ul>
Net Metering as a Policy	<ul style="list-style-type: none"> <li>The Net Metering Program was adopted by City Council on June 22, 2015. Changes to the Power Producer Policy are currently being made and a report to the SPC – Environment, Utilities and Corporate Services will be provided this spring.</li> </ul>
<p>Accelerating Installation of Solar Photovoltaic Systems</p> <p>SES suggested Saskatoon explore a Feed-In-Tariff to boost the price paid for solar energy</p>	<ul style="list-style-type: none"> <li>With respect to a Feed-In-Tariff, Saskatoon Light &amp; Power rates are currently set based on SaskPower rates so that all Saskatonians have the same set of rates. Any recommended changes in rates should therefore be proposed to SaskPower.</li> </ul>
<p>Saskatoon Light &amp; Power Directly Install Electricity Efficiency Technologies</p> <p>SES recommends that SL&amp;P cover the up-front cost of electricity saving measures that pay for themselves within 6 years, collecting repayment through electricity savings</p>	<ul style="list-style-type: none"> <li>Saskatoon Light &amp; Power customers are able to access efficiency programs available through SaskPower. No additional programs are currently being considered by the City's utility.</li> </ul>

<b>RECOMMENDATIONS FROM THE SASKATCHEWAN ENVIRONMENTAL SOCIETY</b>	<b>CURRENT STATUS</b>
<p>City of Saskatoon Build Wind Turbines Outside City Limits</p> <ul style="list-style-type: none"> <li>• SES recommends asking permission from SaskPower to build a wind generation stations within 50 kms of Saskatoon</li> </ul>	<ul style="list-style-type: none"> <li>• This concept was explored with SaskPower in 2013 and a report produced (September 26, 2013) for City Council based on a request from a community entity.</li> <li>• SaskPower requires a study to show how a wind project would affect their electricity grid (interconnection study).</li> </ul>
<p>LED Street Lighting for All Neighbourhoods</p> <ul style="list-style-type: none"> <li>• SES recommends converting all streetlights in Saskatoon to LED</li> </ul>	<ul style="list-style-type: none"> <li>• Based on a successful pilot in the Evergreen neighbourhood, LED was adopted by City Council on September 23, 2013 as the standard for all new roadway and pathway lighting and major lighting upgrade projects.</li> <li>• There are no current plans to replace or retrofit existing lighting (unless part of a major upgrade project). However, an update report on LED lighting will be provided later in 2016 with options for City Council to consider.</li> </ul>
<p>Bylaw to Regulate Over-Lighting on Signs</p> <ul style="list-style-type: none"> <li>• SES recommends the City launch an education campaign to discourage the unnecessary use of electricity for outdoor lighting</li> </ul> <p>SES recommends a bylaw to curb over-lighting practices, starting with signs</p>	<ul style="list-style-type: none"> <li>• City Council adopted a general Dark-Sky Compliant Lighting Policy in 2007.</li> <li>• Restrictions on signs are included in the Zoning Bylaw including a prohibition on illumination of certain signs from 11PM to 7AM. Additional restrictions could be considered.</li> </ul>
<p>City Support for Low-Emission Transport Options</p> <ul style="list-style-type: none"> <li>• SES recommends higher targets for transit ridership</li> </ul> <p>SES recommends a significant increase in the development of safe cycling infrastructure</p>	<ul style="list-style-type: none"> <li>• Saskatoon Transit’s ridership for 2014 was 32 rides per capita. The current target for Saskatoon Transit, at 500,000 in 2045, is 62 rides per capita. The Canadian Urban Transit Association ridership targets for 2040 for large cities (400,000 to 2 million) is 120 rides per capita; medium cities (150,000 – 400,000) is 85 rides per capita.</li> </ul>

<b>RECOMMENDATIONS FROM THE SASKATCHEWAN ENVIRONMENTAL SOCIETY</b>	<b>CURRENT STATUS</b>
<p>Adoption of an Idle-Free Bylaw</p> <ul style="list-style-type: none"> <li>• SES recommends idling for more than 3 minutes not be allowed within city limits, with exceptions for emergency vehicles, vehicles requiring idling for specialized services such as heating/refrigeration, when temperatures are above freezing</li> </ul>	<ul style="list-style-type: none"> <li>• The City of Saskatoon has adopted restrictions on idling of civic vehicles in Administrative Policy #07-20 Civic Vehicles – Operating Protocol. Vehicles are not to idle for longer than 3 minutes at a time unless the temperature is above 27°C or below 5°C.</li> <li>• The idling of private vehicles is not currently regulated and an effective city-wide enforcement plan would have significant associated cost. A bylaw focussing on specific areas or uses (e.g. school zones) may be possible.</li> <li>• The Traffic Bylaw currently prohibits power units (heating/refrigeration) and large trucks in residential areas and the Noise Bylaw applies to idling trucks and power units for more than 20 minutes.</li> <li>• Some anti-idling signs have been installed outside a few civic facilities.</li> </ul>
<p>Incentives for Ultra-Low Emission Vehicles</p> <p>SES recommends that the City introduce incentives and privileges to reward motorists who own super-energy efficient vehicles or an electric car powered by a renewable energy source</p>	<ul style="list-style-type: none"> <li>• There are no current City initiatives.</li> <li>• An allocation of funding for this purpose would be required to introduce a new program.</li> </ul>
<p>GHG Emission Reduction in the Industrial Sector</p> <ul style="list-style-type: none"> <li>• SES recommends the adoption of strict standards for space heating and electrical efficiency</li> <li>• SES recommends tax incentives for major energy efficiency initiatives</li> <li>• SES recommends SL&amp;P be mandated to negotiate with large industrial facilities on a schedule for energy efficiency improvements</li> </ul>	<ul style="list-style-type: none"> <li>• The City has established programs that provide grants or tax abatement. An allocation of funding would be required to introduce a new program(s).</li> </ul>

01-5536-103 - SASKATOON ENVIRONMENTAL ADVISORY COMMITTEE - 2016 BUDGET - \$6,800								
DATE	NUMBER	DESCRIPTION	DEBIT	CREDIT	BALANCE	GL	TOTAL SPENT	BUDGET REMAINING
		Beginning Balance						\$6,800

<b>2016 Budget</b>		
Publications/State of the Environment Report/Annual Report		100
Conferences and Workshops		500
Public Education/Information Gathering		6,000
Membership Fees		200
<b>2016 Total</b>		<b>6800</b>
<b>2016 Forecast</b>		
<b>2016 Variance</b>		<b>6800</b>