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Regional Municipality of Durham

MINUTES

DURHAM REGION ROUNDTABLE ON CLIMATE CHANGE

February 9, 2018

A regular meeting of the Durham Region Roundtable on Climate Change was held on Friday, February 9, 2018 in Boardroom LL-C, Regional Municipality of Durham Headquarters, 605 Rossland Road East, Whitby at 1:04 PM.

Present: R. Gauder, Citizen Member, Chair
Councillor Ashe, Finance & Administration Committee
Councillor Ballinger, Works Committee
G.H. Cubitt, Chief Administrative Officer
C. Desbiens, Citizen Member arrived at 1:07 PM
Councillor Gleed, Health and Social Services Committee
J. Kinniburgh, Citizen Member attended the meeting at 1:12 PM
H. Manns, Citizen Member
C. Mee, Citizen Member
Councillor Mitchell, Planning & Economic Development Committee
B. Neil, Citizen Member
R. Plaza, Citizen Member
K. Shadwick, Citizen Member attended the meeting at 1:06 PM
J. Solly, Citizen Member
Z. Vonkalckreuth, Citizen Member attended the meeting at 1:07 PM
M. Vroegh, Citizen Member, Vice-Chair

Absent: Regional Chair Anderson
T. Hall, Citizen Member
D. Hoornweg, Citizen Member

Staff

Present: B. Bridgeman, Commissioner of Planning and Economic Development
A. Gibson, Director of Corporate Policy and Strategic Initiatives, Office of the CAO
D. Hoge, Program Coordinator, Climate Change, Office of the CAO
B. Kelly, Manager of Sustainability, Office of the CAO
S. Penak, Committee Clerk, Corporate Services – Legislative Services

1. Adoption of Minutes

Moved by G.H. Cubitt, Seconded by Councillor Ballinger,
That the minutes of the regular Durham Region Roundtable on
Climate Change meeting held on December 8, 2017, be adopted.
CARRIED

Moved by G.H. Cubitt, Seconded by Councillor Ballinger,
That the minutes of the regular Durham Region Roundtable on
Climate Change meeting held on January 12, 2018, be adopted.
CARRIED

2. Declarations of Interest

There were no declarations of interest.

3. Research on Heat Reduction Standards

A) Susan Hall, Vice President and Partner, LURA Consulting re: Research on
Heat Reduction Standards

S. Hall provided a presentation titled Heat Reduction Standards Research and Recommendations. A copy of the presentation was provided to the Committee prior to the meeting as Attachments 3 to 6 to the agenda.

Highlights from the presentation included:

- Agenda
- Research Purpose and Objectives
 - Conduct research to support the development of programs identified in the Durham Community Climate Adaption Plan (DCCAP) 2016
- Research Approach
 - Reflective roofs and reflective pavement
 - Maximum allowable temperatures
- Research Results and Recommendations
 - Reflective roofs and Roofing Materials
 - Reflective Pavement and Paving Materials
 - Maximum allowable temperatures

S. Hall stated that the technical requirements for roofs are well established and include the Solar Reflectance Index (SRI); the reflectivity; and the emissivity. S. Hall advised that proposed changes to the Ontario Building Code present an opportunity for Durham Region to establish a by-law requiring reflective roofs. She also stated that a key learning from the

reflective roofs research is the need to engage stakeholders in the development of the strategies and standard for reflective roofs.

S. Hall explained that standards for reflective pavement are in the early stages of development. She stated that a combination of approaches is being used across the United States (US) and Canada to introduce and test reflective pavement solutions. She also explained that more research needs to be completed regarding how much pavement is out there; what percentage does it cover; who owns it; the maintenance required for the pavement; opportunities to identify hotspots for smaller applications; ability to start a pilot in-house (e.g. Durham Region parking lot); and subsequently respond to those results.

S. Hall advised that 26 degrees Celsius is generally accepted as the highest indoor temperature that should be considered in a standard for maximum allowable temperature and that vulnerability to heat-related health risks can be reduced by minimizing exposure to high temperatures, and increasing the options/capacity to cool one's self.

S. Hall responded to questions from the Committee regarding the measured impact of making changes to roofs or pavement; whether there is a significant difference to the temperature if changes are made; what is the business case for making changes; the costs associated with different roofing colours; pavement versus cement roads; maximum temperature standards and any existing programs that builders need to follow to address heat issues when retrofitting buildings; the potential challenges with freeze/thawing; and mandates on reflective roofs and state standards in the US.

B. Kelly noted that staff are looking at the work of the United States Environmental Protection Agency (USEPA), a few municipalities in the United States, and southern cities around the abatement of the urban heat island effect. He stated that their target is to reduce ambient temperature in high temperature situations by 2 to 4 degrees Celsius through the employment of multiple measures.

4. Urban Heat Island Publication

A) Susan Hall, Vice President, LURA Consulting and Sandra Znajda, Senior Associate, LURA Consulting re: Urban Heat Island Publication

S. Hall and S. Znajda provided a presentation titled Urban Heat Islands Public Information Document. A copy of the presentation was provided to the Committee prior to the meeting as Attachment 7 to the agenda.

B. Kelly provided an additional handout of Land Surface Temperature maps for the eight Durham Region municipalities, dated September 21, 2017 as

supplementary material to the draft Keeping Our Cool: Managing Urban Heat Islands in Durham Region report that was provided to the Committee through email prior to the meeting.

Highlights from the presentation included:

- Outline
- Purpose and Audience
- Key Messages
- Document Overview
- Urban Heat Islands (UHI): The Basics
- UHIs in Durham Region
- Reducing the UHI Effect
- Your Feedback

S. Znajda advised that the purpose of this research is to raise awareness and educate readers around the phenomenon of Urban Heat Islands including the causes and impacts. She stated that the urban heat island effects will be exacerbated by projected climate changes and urban growth within Durham Region and that action needs to be taken to lessen and prevent the impacts of UHIs in Durham Region.

S. Hall and S. Znajda responded to questions from the Committee regarding the potential negative environmental effects from reducing urban heat islands; any unintended consequences; and why some rural areas of the Land Surface Temperature maps would indicate a high land surface temperature when there are no buildings and pavement to create an UHI.

B. Bridgeman responded to questions regarding the growth in Seaton and whether the recommendations in the presentations can be implemented to some of the plans that Durham Region has already undertaken; and if there is anything the Committee can do going forward to have landowners incorporate these initiatives.

S. Hall and S. Znajda asked for feedback on the presentation and asked the following questions:

- Content: Would any additional information help the reader better understand urban heat islands?
- Tone: Does it adequately reach the target audience?
- Maps: Are the examples provided sufficiently clear?

Comments from the Committee included:

- Inclusion of multiple pictures;
- Identification of parks; lands; and greenspaces;

- Time of day the Land Surface Temperature maps were taken; direction of the wind; immediate weather prior to the snapshot and then compared to a week later;
- Bring the maps down to street level;
- Accessibility of the maps once uploaded onto the Regional website such as the issue of colour as some residents are color-blind;
- European data:
 - What have European cities done where density is greater;
- Southern hemisphere information;
- Taking from the work that the US has done since they have established standards and mandates;
- Relevance of asthma and will it increase from UHIs;
- Three facilities identified in Durham with white roofs (GO train east rail facility in Whitby, expansion of the Oshawa mall and the Costco in Oshawa); and
- Ask individuals who have retrofitted their businesses or homes with reflective roofs how it is going and if they've noticed any significant changes

5. Other Business

A) Ford CEO: Take back the streets

J. Solly informed the Committee of the recent speech made by the president of Ford in the US on January 9, 2018. He stated that Ford is taking a user-centered, systems-level design approach to mobility. He also stated that Ford is strengthening its automotive business and making a strategic shift to capitalize on opportunities with respect to the broader mobility space which will also include walking and cycling.

B) Sustainable Communities Award

G. H. Cubitt and B. Kelly attended the Federation of Canadian Municipalities Sustainable Communities Conference on February 8, 2018 in Ottawa, where they accepted the Sustainable Communities Award for the Region of Durham's Community Climate Adaptation Plan on behalf of the Region of Durham. This award recognizes and celebrates sustainability leaders and trailblazers in municipalities across Canada.

C. Rochon provided a TED-talk on the Region of Durham's Community Climate Adaptation Plan at the conference that was very well received.

C) Durham Climate Change Symposium

B. Kelly informed the Committee that the Durham Climate Change Symposium was oversubscribed which included a wait-list on February 9, 2018 and that it was very successful and well received. He noted that the morning's session allowed the Advisory Committees to address two gaps in the DCCAP which will result in the re-launch of the Agricultural Task Force and re-invigorating the Food Security Task Force. B. Kelly gave recognition to the Durham Environmental Advisory Committee and the Durham Agricultural Advisory Committee.

D) Ontario Centres of Excellence Funding

M. Vroegh announced that the Ontario Centres of Excellence made a presentation in December 2017 regarding their Target Greenhouse Gas Emissions Program and \$51 million of funding that went towards Ontario industrial programs to reduce GHG emissions. He stated that they also kicked off a \$200 million fund for 2018 and the first two rounds of submissions had concluded in January 2018. Submissions included: the Low carbon fuel project at St. Mary's Cement; Gold Corp., an Electric Gold Mine in Northern Ontario utilizing electric vehicles instead of diesel vehicles; General Motors (GM) and Walker Environmental, taking landfill gas from the Thorold site and piping it underground to the GM Welland site; and Anaerobic Digester with StormFisher, producing renewable natural gas into the Union Gas pipeline.

6. Date of Next Meeting

The next regular meeting of the Durham Region Roundtable on Climate Change will be held on Friday, March 9, 2018 starting at 1:00 PM in Room LL-C, Regional Headquarters Building, 605 Rossland Road East, Whitby.

7. Adjournment

Moved by Councillor Ballinger, Seconded by B. Neil,
That the meeting be adjourned.

CARRIED

The meeting adjourned at 2:56 PM.

R. Gauder, Chair, Durham Region
Roundtable on Climate Change

S. Penak, Committee Clerk