

## Bylaw 17934

### Text Amendment to the Zoning Bylaw for Building Mounted Solar Energy Devices

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#### **Purpose**

To establish regulations for solar collectors that will reduce barriers to their installation while ensuring impacts to adjacent properties are minimized.

#### **Readings**

Bylaw 17934 is ready for three readings after the public hearing has been held. If Council wishes to give three readings during a single meeting, Council must unanimously agree "That Bylaw 17934 be considered for third reading."

#### **Advertising and Signing**

This Bylaw has been advertised in the Edmonton Journal on Friday, March 24, 2017, and Saturday, April 1, 2017. The Bylaw can be passed following third reading.

#### **Position of Administration**

Administration supports this Bylaw.

#### **Report**

Installation of renewable energy devices within Edmonton aligns with the strategic objectives of Edmonton's Community Energy Transition Strategy as it contributes to building local energy resilience and reducing greenhouse gas emissions related to electricity generation from non-renewable sources.

Solar collectors, specifically, building-mounted solar photovoltaic (solar PV) systems are the most prevalent renewable energy device emerging in Edmonton. Options for building-mounted solar PV systems include roof, wall and integrated systems, such as roof shingles, window shading and façades. The most common application of residential solar PV systems is on the roof of a home or garage. Typical residential roof-mounted solar PV systems are mounted parallel to and near the roof structure and do not extend beyond the edge of the roof (eaves) or the roof ridge line.

As of January 2017, 342 solar PV systems were installed in Edmonton, with a total capacity of 2.0 megawatts of electricity, as seen in Attachment 2 – Solar PV Systems and Installed Solar PV Capacity in Edmonton, Dec 2010 – Dec 2016 (EPCOR D&T Inc). The majority of these systems are small roof-mounted systems, with an average size of 35 to 40 square metres and a capacity of 6 kilowatts. While there has been a growing number of solar PV systems installed in Edmonton, there are barriers that work against their broader adoption.

Current Zoning Bylaw 12800 regulations relating to renewable energy devices are unclear. A lack of clarity not only presents challenges with implementation and enforceability of regulations, it also leads to uncertain outcomes and reduces installation of renewable energy devices. The ambiguity around the need for development permits and associated drawings, as well as delays in the permitting process, increases soft costs and often prevents many homeowners from installing these devices. Administration has made efforts to minimize administrative red-tape, especially for small-scale residential projects. However, an amendment to Zoning Bylaw 12800 is necessary to provide greater certainty and transparency to the permit review process and reduce costs.

Edmonton's regulations generally do not reflect current practice in a number of other municipalities in Alberta. A jurisdictional scan of eight municipalities, as shown in Attachment 3 - Cross-Jurisdictional Scan of Alberta Municipalities, found significant commonality in definitions, allowing solar PV systems to only be installed on roofs or walls, allowable projection distances into setbacks for wall mounted systems, height limits for roof mounted systems, and an exemption from obtaining a development permit for low-density residential systems.

Continued refinement of Zoning Bylaw 12800 provides an opportunity to align with best practices, while at the same time ensuring renewable energy devices are developed in a manner that is sensitive to surrounding properties. To achieve these outcomes, Bylaw 17934 proposes the following amendments:

- provide a development permit exemption for roof-mounted solar collectors in low-density residential zones
- consolidate existing Renewable Energy Device definitions
- establish height restrictions
- establish allowable projection into setbacks

The proposed amendments provide greater certainty and assurance of outcomes during the development review process, which in turn will streamline the development permit application process and support local energy resiliency in Edmonton. Further information on the proposed changes can be found in Attachment 4 - Mark-up of Proposed Text Amendment to Zoning Bylaw 12800 and Attachment 5 – Details of Amendment.

### Minor Housekeeping Amendment

This report also contains a minor amendment to reinstate the original 2015, development permit exemption for Urban Gardens on publicly owned lands. The minor amendment will ensure community gardens developed in a public park or in the (PU) Public Utility Zone do not require a development permit.

### **Policy**

Bylaw 17934 supports the following policies:

- Edmonton's Community Energy Transition Strategy

- Tactic 4.2.3 B: Conduct a review to identify barriers to renewable energy that may exist in municipal codes, policies and legislation. Develop strategies to address excessive barriers.

*The Way We Grow*, Edmonton's Municipal Development Plan, Bylaw 15100

- 1.5, Sustainability for Edmonton - Building Edmonton in a way that will move our city toward a sustainable state.

*The Way We Green*, Edmonton's Environmental Strategic Plan

- Objective 6.4, A significant and increasing proportion of Edmonton's energy comes from renewable sources, with as much as reasonably possible produced locally.

### **Corporate Outcomes**

This report contributes to the corporate outcomes "Edmonton is an environmentally sustainable and resilient city" and "Edmontonians are connected to the city in which they live, work and play" as it provides a framework for greenfield and infill development that encourages diverse and attractive landscaping on private properties that reflects the unique landscape qualities of mature communities.

### **Public Consultation**

Public consultation for this project was undertaken in a variety of ways including:

- a workshop held on May 3, 2016, with various community, local utility and solar industry stakeholders; (refer to Attachment 6 - Solar Energy Device Review Stakeholder Meeting Summary)
- an online survey administered through the Insight Community Mixed Topic June 2016 Survey

No major concerns were raised by community and industry stakeholders. Over 2300 people responded to the Insight Community survey. The majority of the respondents indicated support for roof-mounted solar collectors, particularly if the vertical projection did not exceed the maximum allowable height for the zone. This was true for both single storey (65 percent support) and two storey (69 percent support) homes. The survey also indicated majority support (60 percent strongly or somewhat support) for low-density residential roof-mounted solar collectors to be exempt from obtaining a development permit.

The most common concerns expressed by the respondents that were development related was shadowing from collectors that excessively project from the roof or sides of the building and the esthetics of solar collectors mounted to walls that face a street. Other common concerns expressed that were non-development related include proper installation, building safety, and lack of understanding on exporting of excess electricity generated to the grid. Many respondents also indicated that the City should do more to promote and incentivize solar PV, simplify the process as much as possible, and eliminate all permit fees related to solar PV.

A three week circulation to internal and external stakeholders occurred on June 30, 2016. No significant land use concerns or objections were received.

Outside of land use considerations in Zoning Bylaw 12800, Administration identified a regulatory gap for solar collectors that currently exists in the Alberta Building Code. Administration has identified that there may be an opportunity for future regulation of solar collectors through a Code review as the Province moves towards amendments in the Alberta Building Code to address solar collectors. It is unclear how quickly this process will occur. In the interim, Administration will explore how other municipalities regulate solar collectors and will consider the appropriate tool to address solar collector installation.

### **Attachments**

1. Bylaw 17934
2. Solar PV Systems and Installed Solar PV Capacity in Edmonton, Dec 2010 – Dec 2016
3. Cross-Jurisdictional Scan of Alberta Municipalities
4. Mark-up of Proposed Text Amendment to Zoning Bylaw 12800
5. Details of Amendment
6. Solar Energy Device Review Stakeholder Meeting Summary