ITEM # 26
DATE 11-10-15

COUNCIL ACTION FORM

SUBJECT: ZONING TEXT AMENDMENTS RELATING TO SOLAR ENERGY SYSTEMS

BACKGROUND:

In November, 2009, the City of Ames adopted an ordinance allowing for and regulating solar energy systems. This ordinance allowed for placement of solar panels in residential and non-residential zoning districts, either attached to existing structures or as free-standing structures. The City was a ground breaker at that time in creating this ordinance, modeling it on very few examples that were found nationwide and on our own expectations of what would suit Ames. The full ordinance may be found in Chapter 29 Article 13 Section 29.1309 of Municipal Code at this link.

The ordinance allows for staff approval of most solar energy system (SES) installations, but requires approval from the Zoning Board of Adjustment in certain instances when a higher degree of review is necessary to ensure compatibility. The ordinance considers such systems as accessory to the principal use of a lot. The ordinance allows for a SES to be placed on roof tops or on the ground with small accessory support structures. Typically, the systems must comply with zoning standards e.g. height, setbacks, yard areas as well as the SES specific standards of Section 29.1309. To date, a total of 8 systems have been approved, of which 6 were residential applications, one was a commercial application, and one was placed on a religious institution. All were approved by staff.

Now that the ordinance has been in effect for a number of years, staff is proposing a few tweaks to address customer interests. These tweaks reflect how the ordinance has worked (and not worked) on projects that have already been brought forward and approved. These amendments are also meant to address larger projects (greater than 100 kW) that have been proposed but not yet approved.

In broad terms, the proposed amendments do three things:

1. Increase the non-residential freestanding SES size limitation and the height limits from 4 and 6 feet to 20 feet if placed over a parking area

2. Allow a projection above the height limits for attached systems in residential and non-residential zoning districts.

3. Remove the 10 kW and 100 kW limits on interconnect agreements with the local utility.

The draft language for the amendment is included in Attachment A.

In the first amendment, staff believes an amendment to the free-standing requirements should be made to accommodate the potential use of solar panel arrays to cover parking lots rather than limit their installation to landscaped areas. The proposed amendment raises the maximum heights for free-standing SES in non-residential zoning districts to twenty feet if placed over parking areas. The system is subject to the setback standards of the zoning district (e.g., 20' front and 5' side for HOC; 50' from a street and 20' side for PI). Staff would note that even with this increased height allowance, it does not displace landscaping requirements for parking lots. The SES will need to be sited in a manner that meets landscape standards and solar exposure needs. The maximum coverage is raised to equal the total footprint of a lot. If not over a parking lot, the height and setback limits remain the same as in residential zones.

The second amendment addresses limits on heights when placed on the roof of a structure. Current regulations describe the maximum SES size and height regulations for all systems placed upon a roof, but does not allow for projections above the maximum height of the zoning district. In residential zoning districts, the principal structure sometimes is at or near the maximum height limit allowed in that district. A change is proposed to allow an increase of up to a half-foot (for staff approval) and five feet (for board approval). This residential allowance matches the system size and height standards that are already in place for a system that is below the height limit of the zoning district. See Section 29.1309 (4) for current SES size limits.

In non-residential districts the situation of reaching a height limit is more likely to occur due to the greater likelihood of a flat roof being constructed to more fully utilize the height allowance of the zoning district than a pitched roof. The zones this is most likely to occur are in the commercial zones with a 35 foot height limit and in HOC zoning with the new mixed use buildings. The proposed amendment creates an option for staff approval of up to a ten foot encroachment above the height limit. A 10-foot allowance matches the allowed projections for other types of architectural features.

The third change addresses the maximum rated capacity of any system as 10kW. If proven safe to the satisfaction of the Ames Electric Services, a system of up to 100kW would be allowed. In consultation with the Electric Department, staff is proposing to remove these limits as they are better addressed through the interconnect agreement between the applicant and the utility. The functional limitation of the systems will then be through the sizing standards of the system and interconnect agreements. Concurrent amendments for interconnect agreements are being brought forward to the City Council by Ames Electric. Because the interconnect agreement with the Electric Department requires more extensive review than the zoning permit, staff requires that the interconnect agreement be approved prior to installation, rather than prior to zoning approval.

The proposed language changes can be found in Attachment A.

ALTERNATIVES:

1. The City Council can adopt the three proposed amendments regarding solar energy systems.

2. The City Council can adopt any combination of the three proposed amendments regarding solar energy systems.

3. The City Council can decline to adopt the proposed amendments regarding solar energy systems.

The Planning and Zoning Commission reviewed the proposed text amendment at its November 4, 2015 meeting. The Commission recommended the Council adopt the proposed text amendment on a 7-0 vote.

CITY MANAGER'S RECOMMENDED ACTION:

The proposed amendments for solar energy systems are an attempt to address minor issues that staff has experienced in the six years of implementation. These three amendments will likely not open up a flood of new applications for solar energy (new solar panels are driven more by tax credit policy, utility incentives, and site feasibility than by zoning limits). However, for those solar applications that make sense, these tweaks can make installation more viable in some instances. **The proposed changes help to promote the installation of new SES without undermining compatibility with the surroundings.**

Therefore, it is the recommendation of the City Manager that the City Council act in accordance with Alternative #1, thereby adopting the proposed amendments.

ATTACHMENT A: PROPOSED AMENDMENTS

New language is in **bold**; deleted language is ~~strike through~~.

Section 29.1309 (3).

….

(c) Height. Six (6) feet in height maximum in side and rear yards. Four (4) feet in height maximum in front yards. **There is an exception for systems in non-residential zoning districts, a SES may be twenty (20) feet in height and subject to setbacks if placed over a parking area. Otherwise, height and setback limits are the same as in residential zoning districts.** The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

(d) Freestanding System Size:

(i) Residential Properties. Systems shall not exceed one-tenth (1/10) the footprint of the principal building served or one hundred (100) square feet, whichever is greater.

(ii) Non-Residential Properties. Systems shall not exceed ~~one-half (1/2) of~~ the footprint of the principal building served.

….

Section 29.1309 (4).

…

(e) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached **except for projections allowed in (g) below**.

(f) The building must have a conforming principal use.

(g) Roof attached systems may be mounted on principal and accessory building roofs provided they conform to the maximum height standards established in the zone. Additionally, systems shall be mounted parallel to the pitch of the roof and be no higher than 6 inches from the roof surface except that systems not meeting the flush mount requirement may be allowed subject to approval of a Solar Energy System Special Use Permit, provided they do not project more than 5 feet from the roof surface. A system or a portion of a system not visible from abutting street rights of way is exempt from the flush mount requirement, but no part of the system shall project higher than 5 feet from the roof surface.

….

Section 29.1309 (5)

….

(b) For roof mounting, no part of the system shall project more than ten (10) feet from the roof.

(c) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend more than 20 percent into any required front setback.

(d) No part of the system shall exceed the maximum height permitted in the zone, for the structure to which it is attached **except for the projections allowed in (b) and (c) above**.

….

Section 29.1309 (15)

(15) **Interconnection:** Interconnected Solar Energy Systems are allowed subject to the standards in this section. ~~Evidence of a signed interconnection agreement with the applicable electric utility shall be submitted to the Department of Planning & Housing prior to approval of any interconnected solar energy system.~~ The applicant is encouraged to work with the applicable utility before purchasing equipment. ~~The maximum allowable rated capacity of an interconnected Solar Energy System is 10 kW, or 10,000 Watts unless evidence from the applicable utility has demonstrated that safe interconnection can be achieved and the need is for on-ste usage for the principal use of the property. Any system over 100 kW is not allowed.~~

ORDINANCE NO.

AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF AMES, IOWA, BY REPEALING SECTIONS 29.1309(3),(c),(d)(i)(ii), 29.1309(4),(e),(f),(g), 29.1309(5),(b),(c),(d)AND 29.1309(15) AND ENACTING NEW SECTIONS 29.1309(3),(c),(d)(i)(ii), 29.1309(4),(e),(f),(g), 29.1309(5),(b),(c),(d)AND 29.1309(15)THEREOF, FOR THE PURPOSE OF AMENDMENTS RELATING TO SOLAR ENERGY SYSTEMS; REPEALING ANY AND ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT TO THE EXTENT OF SUCH CONFLICT; AND ESTABLISHING AN EFFECTIVE DATE.

BE IT ENACTED, by the City Council for the City of Ames, Iowa, that:

Section One. The Municipal Code of the City of Ames, Iowa shall be and the same is hereby amended by enacting new Sections 29.1309(3),(c),(d)(i)(ii), 29.1309(4),(e),(f),(g), 29.1309(5),(b),(c),(d)AND 29.1309(15) as follows:

"Sec. 29.1309 SOLAR ENERGY SYSTEMS.

….

(3) **Freestanding Solar Energy Systems:**

….

(c) Height. Six (6) feet in height maximum in side and rear yards. Four (4) feet in height maximum in front yards. There is an exception for systems in non-residential zoning districts, a SES may be twenty (20) feet in height and subject to setbacks if placed over a parking area. Otherwise, height and setback limits are the same as in residential zoning districts. The height shall be measured from the grade at system base to the highest peak, including the highest position of any adjustable system.

(d) Freestanding System Size:

(i) Residential Properties. Systems shall not exceed one-tenth (1/10) the footprint of the principal building served or one hundred (100) square feet, whichever is greater.

(ii) Non-Residential Properties. Systems shall not exceed the footprint of the principal building served.

….

(4) **Residential Attached Solar Energy Systems** are permitted to be located on the roof or attached to a building, subject to all of the following:

…

(e) Systems shall not exceed the maximum height in the zone, for the structure to which it is attached except for projections allowed in (g) below.

(f) The building must have a conforming principal use.

(g) Roof attached systems may be mounted on principal and accessory building roofs provided they conform to the maximum height standards established in the zone. Additionally, systems shall be mounted parallel to the pitch of the roof and be no higher than 6 inches from the roof surface except that systems not meeting the flush mount requirement may be allowed subject to approval of a Solar Energy System Special Use Permit, provided they do not project more than 5 feet from the roof surface. A system or a portion of a system not visible from abutting street rights of way is exempt from the flush mount requirement, but no part of the system shall project higher than 5 feet from the roof surface.

….

(5) **Non-Residential Attached Solar Energy Systems** are permitted on the roof of, or attached to a non-residential building, subject to all of the following:

….

(b) For roof mounting, no part of the system shall project more than ten (10) feet from the roof.

(c) No part of the system shall extend more than 50 percent into any required side or rear setback. No part of the system shall extend more than 20 percent into any required front setback.

(d) No part of the system shall exceed the maximum height permitted in the zone, for the structure to which it is attached except for the projections allowed in (b) and (c) above.

….

Section 29.1309 (15)

….

(15) **Interconnection:** Interconnected Solar Energy Systems are allowed subject to the standards in this section. The applicant is encouraged to work with the applicable utility before purchasing equipment.

…."

Section Two. All ordinances, or parts of ordinances, in conflict herewith are hereby repealed to the extent of such conflict, if any.

Section Three. This ordinance shall be in full force and effect from and after its passage and publication as required by law.

Passed this _____ day of _____, _____.

_____ _____

Diane R. Voss, City Clerk Ann H. Campbell, Mayor