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**Subject:**

FW: recommendations

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**From:** Snyder, Craig

**Sent:** Wednesday, November 6, 2019 11:47 AM

**To:** Kabat, Tim

**Cc:** Gilliam, Ken; Griswold, Caley; ZZ Council Members

**Subject:** RE: recommendations

Mayor Kabat and City Council members,

I apologize ahead of time for the lengthy e-mail below in regards to roof top solar systems in La Crosse.

The issue of rooftop solar installations has become one of a good deal of contention and I would like to offer an explanation of the views of the LCFD FPBS division prior to next weeks City Council meeting. First off I would like to address the issue of roof setbacks and access. The National Fire Prevention Code chapter 11.12 governs Photovoltaic Roof Systems and is very specific about the safety standards required. The Code in no way is intended to prohibit the installation of solar systems, but rather to allow for the systems to be installed in a safe manner which protects the property owner as well as fire crews who may be called to the property to fight a fire and need to access the roof area. That being said, the Code also gives the Authority Having Jurisdiction (AHJ) the ability to modify the requirements based upon tactics the FD uses, the makeup of the roof, and the location of the system on the rooftop. This essentially means we can take the systems on a case by case basis and allow for greater or lesser rooftop coverage after applying the Code standards while still maintain a degree of safety.

The requirement to provide a structural engineering report is also not intended to prohibit the installation of these systems, but again, is there to protect the property owner and provide them with critical information whether their particular roof can handle the addition of the system. For example, we have had three solar system permits come into our office in the past 30 days. The company, Ethos Energy, had a structural engineering report done on the roof system to see if it would allow for the addition of the solar systems. **Three out of three roofs failed the engineering analysis** and were given options on how to improve the roof structure to handle the addition of the solar system. Had we issued a permit without the analysis, the roofs may have been compromised, losing their structural stability and causing potential safety issues or structural integrity issues later. The homeowners in these cases would likely have come back to the city as the liable party because we allowed them to install the systems. Building Inspectors approve permits and plans, however, Building inspectors are not structural engineers. Although they age of a home may affect the engineering report, it is not the only factor involved. I had one solar installer tell me that the weight of the rooftop solar system can be equated to an additional layer of shingles on a roof. The Uniform Dwelling Code (which is enforced in Wisconsin) states that a rooftop cannot have more than 2 layers of shingles on a dwelling. If a particular dwelling already has two layers of shingles then that roof has met its limit in weight and structural stability. The addition of a rooftop solar system may not pass an engineering report due to the two layers of shingles already being on the roof and this scenario is very common in our area. Other factors affecting roof system integrity may include previous roof or roof system damage, modifications to a roof system after construction (satellite systems, ventilation systems, cable and internet connections, additional insulation, etc.) or rooftop modifications completed without permits (additions, rooftops built directly over another rooftop, chimney removal etc.).

A couple of solar companies and customers have called me to argue that "no one but La Crosse is requiring this engineering analysis". This is simply not true. In the City of La Crosse we are fortunate to have a full time Building and Life Safety Division to review these types of systems and plans. Other cities in Wisconsin similar to La Crosse, such as West Allis, Fond du Lac, Platteville, Oshkosh, Janesville, and Brookfield all require engineering plans prior to issuing a

rooftop solar systems permit. In fact, in cities of similar or larger size to La Crosse, this is the norm, not the exception. The one thing these municipalities all have in common is that they all have city staffed, full time building and life safety divisions. Unfortunately we cannot control what other smaller municipalities without full time inspection/life safety divisions are enforcing or what they do in Minnesota.

Again I apologize for the lengthy email, but I felt it was necessary to get the information out to all of you prior to the Council Meeting next week. If you have any additional questions or concerns, please do not hesitate to contact me. Thank you.

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