
CAPE ELIZABETH POLICE DEPARTMENT INTEROFFICE MEMORANDUM

TO: MICHAEL MCGOVERN, TOWN MANAGER
FROM: CHIEF NEIL R. WILLIAMS
SUBJECT: SOLAR LIGHTING
DATE: SEPTEMBER 4, 2013

I had been asked to look into the future of solar lighting for the Town of Cape Elizabeth. I must admit that lighting is not my specialty however; I researched what was available to me.

Frankly, solar lighting in general, is a very expensive proposal to undertake. I would think that if any lighting is looked at it would first start with the Town parking lots, as well as, the outside fixtures on Town Buildings.

In pricing out fixtures for these areas I quickly found that one middle of the road solar fixture for a parking area started at \$2,200, not installed and not with a pole. The other issue that comes with having solar lighting is that power capacity for these lights has storage for 2 or 3 days depending on how brightly they burn. Winter time may limit how much power capacity they can earn with our shortened days.

With that being said my research has found that the way to go is LED lighting. The lights for parking areas cost about \$500, come with a lengthy warranty, last over ten years, can be mounted to existing poles, and come in a variety of wattage.

I read one case study done by Maine DOT. They replaced all 105 tower units on I-295 with LED lighting and feel they will be saving \$135,000 annually. They have also had comments from motorists that the lighting is much brighter and safer than the older high pressure sodium fixtures.

Greg Marles, Director of Facilities, has already moved forward with several lighting projects throughout the Town and Schools with an effort to reduce electrical consumption. Here is a list of projects that have been completed:

- Town center lighting conversion to LED
- Donald Richards Pool entry lights conversion to LED
- High School parking lights in various located conversion to LED
- High School entry lighting conversion to LED
- Middle School entry lighting conversion to LED
- Thomas Memorial Library flag pole lighting conversion to LED
- Town Hall side and main entry conversion to LED
- Pond Cove entry lighting conversion to LED
- All school interior lighting conversion to T-8 25 watt lamps
- All school gymnasiums conversion to T-5 high bay lighting
- Central fire exterior lighting conversion to LED
- Police Station exterior lighting conversion to LED (selected locations)

- Community Service entry lighting conversion to LED
- Officers row at Fort Williams porch and entry conversion to LED

On a larger scale I know that the Town would like to move forward and try to lower the energy consumption in regards to the street lights along the roadways. We did take on a controversial task several years ago where we removed numerous street lights. This has allowed us to keep the street light line item in the budget down to \$53, 000.

With that being said I have been following LD 1251, "An Act to Lower Costs to Municipalities and Reduce Energy Consumption through Increased Competition in the Municipal Street Light Market." The bill was adopted and sent to the PUC for Rule Making, but as of this date I don't believe the PUC has looked at it.

This bill was proposed to give Municipalities three options: 1. Utility- provided services (same as we have now) 2. Municipally-owned, utility-installed (utility would install Municipalities fixtures and Municipality would be responsible for service to after installation) 3. Municipally-owned, installed and maintained (Municipality would have a contractual agreement concerning the use of the pole.) It is unknown to me if all of the options were adopted.

However, down the road this bill may give the Town of Cape Elizabeth some options to look at. At least we may be able to have LED lighting placed on the poles, which is not an option with Central Maine Power at this time.

Respectfully,



Neil R. Williams

Chief of Police