

## City of Red Lodge Energy Projects Council Committees Update, 1/26/16

Katelynn Essig, Montana Energy Corps Member, City Sustainability Coordinator

### Light Emitting Diode (LED) Streetlights

- Proposed replacement of 14 new decorative streetlights on Broadway Avenue from 8<sup>th</sup> Street to 3<sup>rd</sup> Street.
- First test light replaced, adjacent to Chamber.
- Current light 70W metal halide, replacement light 30W LED.
- Performance and cost to be evaluated in February after a month. Will review results with Mayor and Council for determination to proceed with retrofit of remaining lights.
- Replacement bulbs for all lights: \$48 per light
  - $\$144 \times 14 \text{ count} = \$2,016 + \$1,000 \text{ installation} = \mathbf{\$3,016}$
- Monthly costs should decrease from \$202 (December 2015) to less than \$100; will save over \$1,200 a year
- Payback would therefore take less than 2.5 years.
- Replacement not expected for 10 years.
- LED lighting appears cooler and whiter, akin to moonlight. The result is a higher light quality that improves safety because of depth of field and peripheral vision enhancements without distorting color.
- If the 24 old historic lights on Broadway Ave owned by Northwestern Energy were purchased back, there could be savings of \$6,000 a year.



### LED Lighting Retrofit for City Buildings

- Energy Audit conducted by Northwestern Energy completed January 2016 for Fire Station, City Hall, Police Station and Public Works buildings.
- Audit included assessment of lighting, boilers, and water heating units.
- Boilers and water tanks in good condition since they have been replaced within recent years.
- Report to be prepared for the City by March will include current energy costs; recommended lighting modifications including bulb replacement, motion sensors and other energy savings strategies; installation costs and projected energy savings.
- Better lighting will also improve safety conditions at the main Public Works Building.
- Rebates available from Northwestern Energy if the inventoried City buildings are retrofitted together.
- The Library has previously completed an energy audit and installed energy efficient lighting. Their energy costs have lowered by 50%
- Will attempt to have energy audits also conducted at the water and sewer plants.

### Electric Vehicle Charging Stations

- Recommended location is the public restroom parking lot area given its visibility, proximity to businesses downtown, and availability of multiple new parking spaces.
- Layout would include charging stations for four spaces.
- Signage options will include use by non-charging vehicles during high activity events.
- Librarian, Art's Guild and Mayor Williams are positive about the project location.



- Northwestern Energy to determine if the transformer near the Gazebo has enough power for the stations and will approve an application for installation of conduit and meter.
- Tesla confirmed to supply two Tesla chargers, two universal chargers and \$2,500 for installation, upon confirmation of installation costs by Red Lodge Electric.
- Yellowstone-Teton Clean Cities has a \$5,000 rebate grant for installation that requires the purchase of renewable energy credits of \$2 for every 100KW used. The average electric car battery is 14KW so seven cars could be fully charged for only \$2; a minimal investment.
- Application to be sent to Yellowstone-Teton Clean Cities after receipt of installation estimate from Red Lodge Electric.
- Goal is to install in May 2016. No anticipated installation costs for the City.

### **Solar Panel Retrofit Analysis for City Buildings**

- Draft analysis completed for Library, City Hall, Police, and Public Works buildings
- Outstanding issues include the need to determine the setback rules from the roof peak, eave and sides; only 50KW can go on each meter; and solar panels cannot be installed in one location to offset electricity use in other locations. Further analysis will occur in the coming months.
- A community solar project was briefly mentioned at the Northern Plains Resource Council Annual Meeting by a solar installer in Billings. Northwestern Energy is discussing doing one more community solar project in addition to Missoula, Bozeman, and Deer Lodge. It would more than likely still be a small-scale project and no discussion will be made until Spring.

### **Recycling**

- Scoping cost-effective measures for Recycling center has been set aside due to the cost of recycling materials dropping significantly.
- Single stream recycling is planned to become available for City residents by Republic Services.
  - Single stream recycling refers to a system in which all eligible recyclables are fully mixed in a collection truck instead of being sorted by a resident into separate commodities. A 96 Gallon recycling bin, similar to the trash bin, will be available to residents for a monthly fee.
  - Currently this service is being offered to businesses with \$5 going back to Beartooth Industries for each contract.
  - Additional consideration of Beartooth Industries will have to be discussed when the program rolls out to residents.
- Will work with Republic Services to develop a strategy for program implementation, including a public relations program if necessary.

### **High School Green Team – Solar Project**

- The Red Lodge High School Green Team was awarded a \$42,500 grant from Northwestern Energy to install solar panels at the high school. We are now working to raise the additional \$7,500.
- Strategies to raise the funds include: grants from local organizations completed by Green Team members; fundraising events including a film night, raffle, and LED lightbulb purchase; and seeking out renewable energy companies for donations

### **Home Weatherization**

- Completed the weatherization of 10 homes in Red Lodge over the MLK holiday weekend with the 9 other Energy Corps members.
- Weatherization included weather-stripping for doors, plastic on windows, thermostats, water-heater tank wraps, faucet aerators, efficient shower heads and CFL light bulbs