Meeting Minutes
Saco Energy & Sustainability Committee
April 25, 2017

Present: Nick Sampson of ReVision Energy, Howard Carter, Pat Fox, Eric Cote, Bill Mann, UNE student Ashley Bankhead, Charlie Cotsis, Ron Michaud, Joe Hirsch, Mike Garrity and Jacqueline McDonough

Wind Turbine
- Declaring the wind turbine city surplus property is on the city council agenda for June 2017
- T Buck Construction gave Howard Carter a cost estimate of $10,000 to take down the wind turbine
- Pat Fox said an RFP should be put together for the disassembly and removal of the wind turbine

Fuel Usage Spreadsheet
- Jackie McDonough has been working with Dor Bender on a biweekly basis to keep the fuel database up to date
- The up to date fuel usage spreadsheet was sent via email to the committee
- The spreadsheet includes a percent variance which compares the current fiscal year to the prior fiscal year, also included is the usage in therms
- Currently, the most significant fuel usage variance is the heating oil usage at the North Saco Fire Station, which is up 209% compared to last year
- The heating oil usage at the Saco Water Resource Recovery Department is up 61%, this is most likely due to the cold winter this year compared to the warmer winter we had last year
- The City Hall Annex propane usage is up 53%, there is a tenant occupying the building this year, the city should recommend that the tenant utilize the mini split in the building as a heat source
- Pat Fox finds the fuel usage spreadsheet helpful when preparing the budget for public works
- Improvements in the road system as well as GPS trackers, energy efficient vehicles and the anti idling policy have brought down the city’s automobile fuel costs, a savings of over $10,000, compared to the previous year

Police Department Heating System Update
- Did not address at this meeting

School Heating System Updates
- Update given by Mike Garrity
- The design for the Saco middle school heating system is anticipated to be completed by May 2017
- Construction of the heating system is planned to start at the end of the school year 2017
- The new heating system will consist of three boilers and on demand water heaters
- Mike Garrity is looking to reuse the existing hot water coils with the new heating system
- The city of Saco School Department put in a request to the state of Maine Department of Education for school renovation funds and was approved for $980,000
- $400,000 of the $980,000 will be considered a grant by the state of Maine Department of Education and will be forgiven, the city will have to finance the remaining $580,000 (minus the bond appropriation) over ten years
Solar Assessment Review With ReVision Energy

- Presentation given by Nick Sampson
- Jo Sorrell and Geoff Sparrow of ReVision Energy met with Howard Carter on Friday, March 17\textsuperscript{th} to look at potential solar sites throughout the city of Saco
- Established in 2003, ReVision Energy is a turnkey solar contracting company that has installed over 6,000 solar energy systems
- ReVision Energy is a certified benefit corporation
- Their mission is to help people and businesses transition away from fossil fuels to sustainable solar energy
- Maine receives 30% more sunlight than the world’s largest solar market Germany
- In the United States, Maine ranks in the top 4 for rooftop solar potential which means there is a generous amount of roof space for solar panel placement
- Currently, there is a 30% solar investment federal tax credit
- ReVision Energy’s power purchase agreement (PPA) is designed to help municipalities indirectly take advantage of tax incentives
- There are no upfront capital investment requirements under a PPA agreement
- With a PPA agreement, a third party private investor (i.e. ReVision Energy) finances, builds, owns and operates the solar array system for 6-30 years
- At year seven of the PPA agreement a municipality has the option to purchase the solar array at 40-60% of the original cost
- Maine has lower electricity rates than the rest of New England
- If the municipality does not buy the solar array in year 7 the escalation rate will increase
- The solar investment federal tax credit is scheduled to drop to 26% in the year 2020
- The solar array investor:
  - Provides capital
  - Builds, owns and operates the solar array system for 6 years or more
  - Recoups investment through the solar investment federal tax credit, depreciation and benefits, energy payments from the host, grants and rebates
- The host (municipality):
  - Provides roof/ground space
  - Net meters with utility
  - All electricity produced from the solar array can offset up to 9 of the host’s accounts
  - Has the option to buy out equipment after year 7
- The Public Utilities Commission (PUC) has issued its final ruling on the state’s net metering structure, in 2018 the credit drops to 90% and will decline by 10% each year thereafter
- A municipality can lock in the 90% net metering credit for 15 years if the solar array is fully installed in the year 2018
- Two solar bills are currently being worked on and would overrule the PUC ruling on net metering, if passed by legislation
- One of the bills is sponsored by Representative Seth Berry of Bowdoinham, this bill would preserve the full financial incentives of net metering, and offer rebates to help more homes and businesses generate electricity from the sun
- For the city of Saco, ReVision Energy is focusing on small general service accounts because Central Maine Power is currently charging small general service accounts at a higher rate per kWh
- ReVision Energy’s proposed solar array for the city of Saco:
  - System location: 29 Lund Rd
  - System style: rooftop
- System size: 84kw
- Annual generation: 92,192 kWh (calculated by the pitch of the roof, shading analysis and 30 years of weather data)
- Municipal load offset: 38%
- Annual carbon offset: 96,986
- Total project cost: $200,638
- Year 7 buyout amount: $100,319
- The solar array system at 29 Lund Road would have six inverters which could be installed on the outside of the building or inside near the electrical service
- Howard Carter said ReVision Energy has not yet looked at Saco schools to see if they would be a good candidate for a solar array system
- Ron Michaud wants to make sure the rooftop at 29 Lund Road is sturdy enough for the solar array system and won’t cost the city money for building repairs and maintenance
- If a roof has half of its expected life left, ReVision Energy recommends replacing the roof before the installation of a solar array system
- Howard Carter likes the Industrial Park Road pump station site because the solar array system would be located in a highly visible area on the Industrial Park Road, more citizens would be able to see the city’s clean energy initiative
- Nick Sampson mentioned that the city could post pictures on the city website of the solar array system being installed so citizens could see the progress
- Bill Mann would like ReVision Energy to put together cost information for the Industrial Park Road site
- Proposed PPA pricing for the city of Saco (can choose between 3 different rate structures):
  - Competitive:
    - PPA price: 11 cents per kWh
    - Annual PPA price increase in year 2: 2%
    - Year 7 PPA price increase: 4 cents per kWh
    - Buyout in year 7: $100,339
  - Standard:
    - PPA price: 13 cents per kWh
    - Annual PPA price increase in year 2: 2%
    - Buyout in year 7: $90,287
  - Flat rate:
    - PPA price: 15 cents per kWh
    - Annual PPA price increase in year 2: 0%
    - Buyout in year 7: $80,255
- Solar array systems typically have a payback period of around 15 years if the system is purchased outright
- If entered into a PPA agreement, the payback period is roughly 7 years after the purchase of the solar array system in year 7
- Operating and maintenance major costs are inverter replacements, inverters roughly last about 20 years and panels are expected to last 40 years
- Panels are made of tempered glass and shed snow similar to metal roof, no moving parts, a simple and robust system
- When a municipality buys out a solar array system and ends the PPA agreement (no earlier than year 7), the municipality would be responsible for all operating and maintenance costs thereon
- If a municipality decides to not purchase a solar array system in year seven, the municipality would continue to pay per kWh based on the power purchase agreement (PPA) rate schedule
• If a municipality decides they do not want the solar array system anymore and want to end the PPA agreement, ReVision Energy will come and take down the solar array system at the municipality’s expense.

**Action Items**

• Nick Sampson of ReVision Energy to gather the following information for the energy committee:
  - A proposal for a solar array system at the Industrial Park Road pump station site
  - Identify the 9 accounts that would be offset by the solar array system at 29 Lund Road

**Next meeting May 23, 2017**