

# **Going Solar in Yarmouth**

## **February 2020**

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# Committee for Energy Efficiency and Sustainability (CEES)

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- Heather Abbott, Chair
- Toby Ahrens, Vice Chair
- David Ertz
- Scott Sheriff
- Chuck Parker
- David Craig
- Kurt Adams
- Mike Sears
- Peter Fromuth

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# Committee for Energy Efficiency and Sustainability (CEES)

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## TODAY'S PRESENTATION:

- Objectives
- Progress Since June Update
- DG Solar Trends in Maine
- LD 1711 and Net Metering
- Options for the Town
- Comparative Analysis
- Call to Action

# Objectives

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- Reinforce the CEES Commitment to Assist the Town in Adopting Solar as Its Source for Electricity
- Enhance the Council's Understanding of:
  - CEES efforts over the last year
  - Opportunity to save on energy costs while having a positive impact on the environment
  - Benefit to acting quickly



# Background

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- CEEES Presentations in June and September 2019
- Summary
  - Supply to Meet the Load to Town Facilities and Schools
  - Initial Focus on Town-owned Sites
  - 4 Town-owned parcels => Capped Landfill and Sligo Road
  - CMP Pole Yard on Sligo Road – Exercise Option to Purchase



# Trends for Solar Energy Development

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- Legislation at the Federal and State Levels
  - Federal Tax Credits (Phase-out)
  - Maine LD 1711: Promotes Solar Development => Re-defined Net Metering
  - Investor-funded Local Projects with PPAs
- Successful Implementation of Municipal Projects in Maine
- Rampant Developer Activity in the State
- Mitigates Utility-supplied Electricity Price Increases

*More municipalities are looking to solar to supply its electricity.*

# Solar Around the State

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## ■ Installations Before Maine LD 1711

- Belfast (3 Projects)
- Portland
- South Portland (Proposed Phase 2)

*Larger projects  
can be constructed  
post-LD 1711.*

## ■ Projects Benefitting from LD 1711

- Cape Elizabeth (Issued RFP for Its Landfill)
- Cumberland (Capped Landfill – Recent Energization)
- SAD 51 (Planning Stages)
- Falmouth (Evaluating Proposals for Landfill)
- Freeport/Freeport Sewer District (Signed PPA for Remote Project)
- Gray (Planning Stages for Landfill)

## ■ In 2019 CMP received > 250 Interconnection Applications

# Proposed Solar Project for Yarmouth

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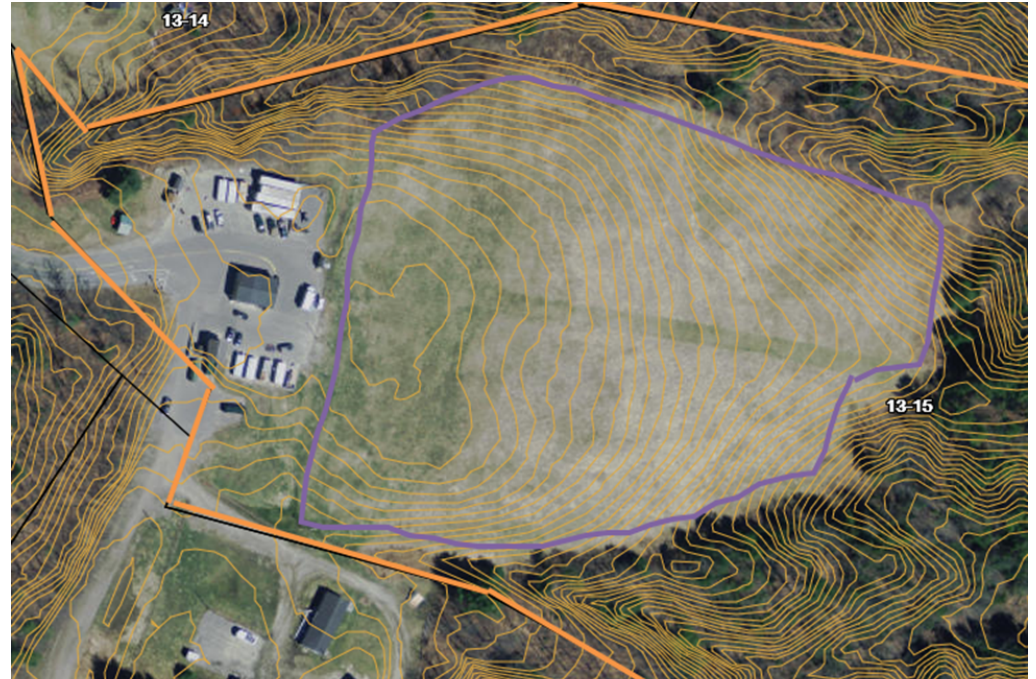
- Power Consumption in 2019
  - Town Accounts: 1.66 million kWh
  - School Dept. Accounts: 1.3 kWh
  - Annual Total: 3 million kWh
- Annual Costs
  - Town Accounts: \$140K
  - School Dept. Accounts: \$175K (\$79K Demand Charges)
  - Annual Total: \$315K
- Goal: Project Would Generate Enough Power to Offset 85% of the Town's CMP Bills



# Capped Town Landfill

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- Capped in 1984
- Clay Soil Cap –18 inches
- Access through Town's Transfer Station
- Total Area: 4.5 Acres
- Site Characteristics
  - Existing (cleared) site with no other potential uses
  - No floodplain issues
  - Zoning: RR suitable use
  - Upgrade to 3-Phase power along East Main St.- 0.5 mi
  - Steep slopes to the south
- Capacity – 550 kW
- Annual Generation: 40% of Town facilities load



# Sligo Road Site

- Access Sligo Road/YWD
- Adjacent to CMP Pole Yard
- Total Area: 34.35 Acres
  - Area available to support solar array reduced by Shoreland District/Flood Hazard Area
  - Capacity: 1.9 MW DC
  - Annual Generation: 2.3MM kwh (75% of total load)
- Other Considerations
  - Upgrade to 3-Phase ~0.5 miles from the West Main St.
  - Zoning: RR – suitable use
  - Ledge: Unknown
  - Wetlands: Significant



# CMP Pole Yard

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- Town's Option to Purchase Parcel from CMP
  - 2001 – Hurdle Was the Unlimited Liability with Owning a Contaminated Site
  - Recently Engaged CMP to Revisit Exercising Option
  - Willingness to Work with the Town
  - Good Public Relations
  - Low Risk Use of the Site
- Restricted Covenant
  - Maine DEP Approval Required for Any Use of Site
  - Positive Feedback => Good Use of the Site
  - Initial Opinion - Clearing Allowed in Upland Area; No Setbacks for Drainage Ditch

# CMP – Town of Yarmouth Deal Summary

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## ■ Background

- 2001: CMP conveyed the Town 34-acre parcel on Sligo Rd.
- Reserved the 15-acre contaminated site (Pole Yard), subject to a restrictive covenant (the “Covenant”) regulated by the DEP -- limits the parcel’s purpose to “non-residential passive recreational use”
- Town has an option to purchase the parcel

## ■ Transaction Summary

- Town would exercise the option to purchase the Pole Yard for \$1, subject to certain conditions, including DEP approval of expanding the restrictive covenant to allow for the development, construction and operation of a solar facility on the site
- DEP has indicated conceptual agreement with this transaction



# CMP – Town of Yarmouth Deal Summary (cont'd)

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## Outstanding Issues of Significance

- Third Party Tort Liability: CMP requests that the Town indemnify CMP for third-party tort liability up to an insured amount (typically \$1 million in the aggregate). *This is commercial and typical for brownfield development.*
- Release of Future Remediation Costs: CMP requests that it be released from all future remediation costs at or arising from Pole Yard contamination.

***Remediation by CMP was one-foot of cover on areas of contamination.***

# CMP Pole Yard/Sligo Road Project

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- Annex 6-7 Acres from Town's Parcel
- Pole Yard: 405 kW DC (310 kW AC)
- Sligo Road: 1,300 kW DC (992 kW AC)
- Annual Generation: 2.1 million kWh
- Estimated PPA Price: \$0.11/kWh



# CMP Pole Yard/Sligo Road Project (Cont'd)

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- Amortize Cost of 3-Phase Upgrade
- Power Purchase Agreement
  - Execute EPC Contract
  - Investor to Capitalize Project
  - Execute a 20-year PPA
  - Lease Town Land for \$1
  - Tax Credits and RECs to Investor
  - O&M Agreement between Investor and Contractor
  - No additional cost to Town
- Buy-out Option
  - Can Be Exercised at Milestones
    - Starting at Year 7 (FMV ~70% of Investment)
    - Intervals of 5 starting at Year 10

# CMP Pole Yard/Sligo Road Project

- Annex 3-4  
Acres from  
Town's Parcel
- Pole Yard:  
1,080 kW DC  
(830 kW AC)
- Sligo Road:  
620 kW DC  
(480 kW AC)
- Estimated PPA  
Price:  
\$0.12-0.125/  
kWh
- Annual  
Generation: 2.1  
million kWh





# Pole Yard/Sligo Road - Financial

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- ReVision Proposal
  - Term: 20 Years
  - Price: \$0.11 per kWh
  - 1.5% Annual Escalation
  - 85% of Total Electricity Costs
  - Option for Ownership
- Interconnection – CMP Pre-app
- Solar Installation
  - Size – 1,700 kW DC
  - Annual Output – 2.1 million kWh
- Net Metering
  - Credit (Yr. 1) - \$0.128/kWh
  - 2.5% Annual Escalation
- Savings = Credit Value-PPA Price

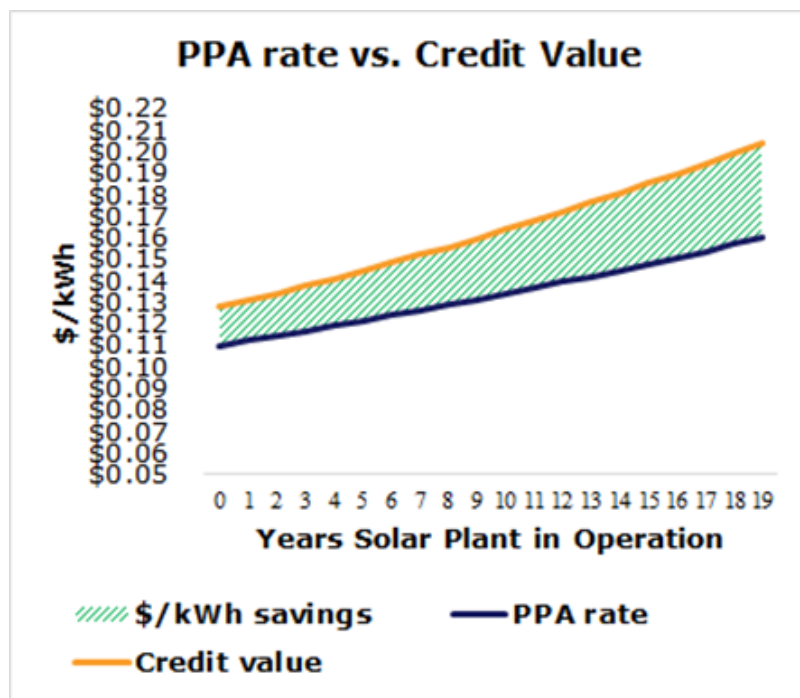
## Energy rate projections

Expected annual credit value increase		2.5%
Year 1 credit value (\$/kWh)	\$	0.1280
Year 5 credit value (\$/kWh)	\$	0.1413
Year 10 credit value (\$/kWh)	\$	0.1599
Year 15 credit value (\$/kWh)	\$	0.1809
Year 20 credit value (\$/kWh)	\$	0.2046

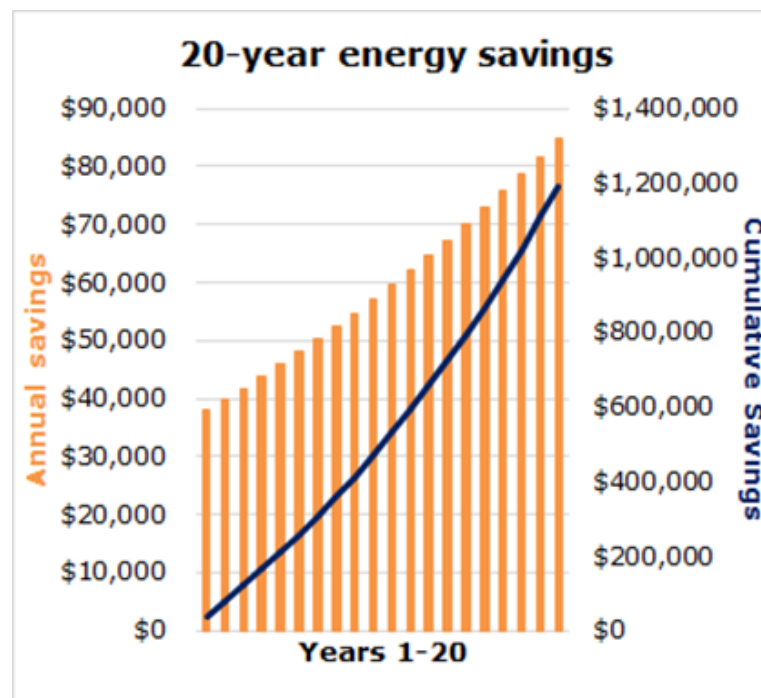
# Pole Yard/Sligo Road - Financial

PPA Price = \$0.11/kWh

- Year 1 Savings = \$38,000
- 20 Year Savings = \$1.19 Million



**Assume Ownership Year 7:**  
Year 1 Savings = \$38,000



20 Year Savings = \$2.5 million  
30 Year Savings = \$6.7 million

# Remote Generation Alternative

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- ReVision Pro Forma Proposal
  - Term: 20 Years
  - Price: \$0.09 per kWh
  - 1.5% Annual Escalation
  - 85% of Total Electricity Costs
  - No Option for Ownership
  - Extensions Available
- Solar Installation
  - Location: TBD
  - Size – 1,270 kW AC
  - Annual Output – 2.1 million kWh
- Net Metering
  - Credit Value - \$0.128/kWh
  - 2.5% Annual Escalation
- Savings = Credit Value-PPA Price

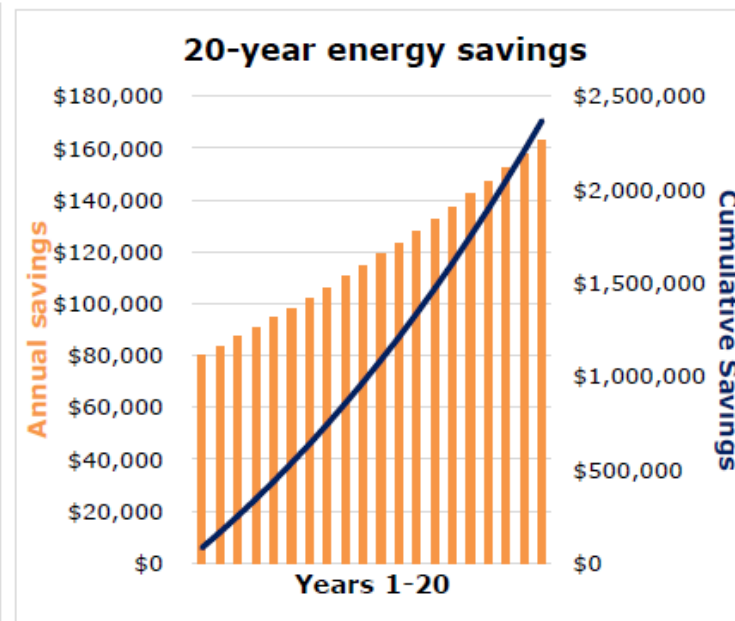
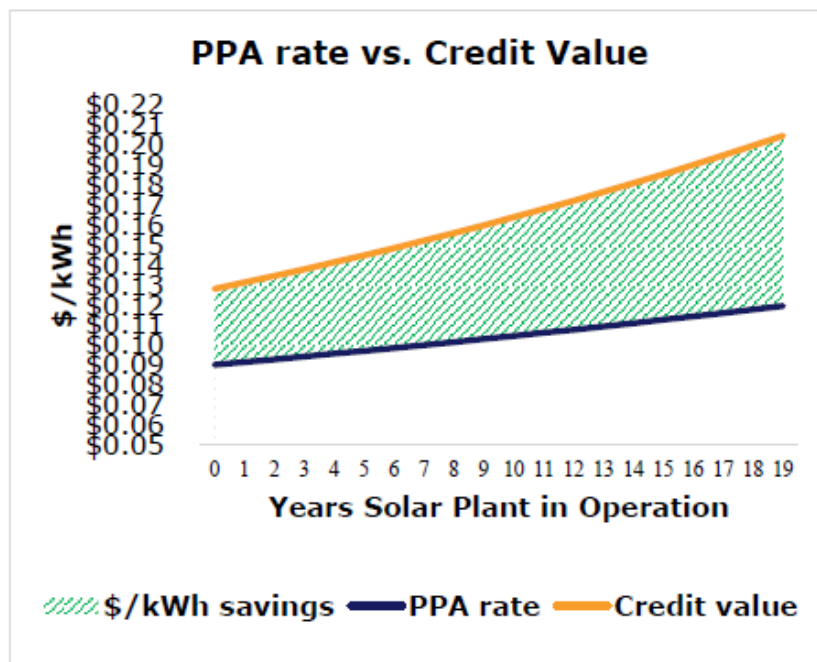


***Proposal valid until  
February 29, 2020***

# Remote Generation Alternative

PPA Price: \$0.09/kWh

- Year 1 Savings = \$80,000
- 20-year Savings = \$2.37 Million



***Proposal valid until February 29, 2020***

**Yarmouth CEES**

# Comparison of Alternatives

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- CMP Pole Yard/Sligo Road (\$0.11/kWh)
  - 20-year Savings - \$1.19 million; Buy-out - \$2.5 million
  - CMP: Finalize terms of Exercising the Option; Purchase Insurance Policy
  - Maine DEP: Confirm Site Development Questions; Proceed to Prepare for Site Development Plan for Solar
  - Wetland Delineation Assessment in Spring 2020
- Remote Generation (\$0.09/kWh)
  - 20-year Savings - \$2.37 million; Renewable
  - Confirm/Refine Historical Consumption and Costs Data
  - Prepare RFP
- Municipal Consortium (Interested Parties but Has a Longer Timeline)

# Call to Action

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- Town Council to Identify Preferred Option
- Goal: Secure a PPA in 2020
- Phase-out of Federal Tax Credit (26%)
- Pole Yard/Sligo Road (Land Use/Demonstrative/Visible)
  - Authorize ~\$5K for Attorney Fees to Engage CMP and Finalize Terms for Exercising Option
  - Authorize ~\$15K to Hire Environmental Firm to Conduct Wetland Assessment and Consult with DEP Re: Use of the Site

OR

- Remote Generation (Maximize Savings with Less Risk, Faster/Simpler Implementation)
  - Authorize Town Staff to Prepare and Issue a RFP

***YARMOUTH GOES SOLAR***