Energy 101

A webinar from MCAN, CLF, and Mass Power Forward
What is MCAN?

MCAN was founded in 2000, and helps town level groups take action on climate locally. We are a network of organizations (our chapters) and advocates at the town and city level who work to make community level change and turn that into state and national level change.
David Ismay
Senior Attorney

CONSERVATION LAW FOUNDATION

www.clf.org

SUPPORT CLF

CLF is a member supported organization. The best way to support CLF is to join the thousands of people who trust our organization to protect New England’s environment by making a gift today.

Since 1966, CLF has relied on contributions from its members to do the work of preserving our natural resources, building healthy communities and promoting a vibrant economy. From Connecticut to Maine, your contribution to CLF ensures that we can be everywhere we need to be to protect your New England, making it a great place to live, work and play for generations to come.
• Overview of Electric Power System
• What Do Munis Do?
• What’re the RPS and the CES?
How electricity is produced, transported, and delivered to consumers
How electricity is produced, transported, and delivered to consumers

High-Voltage Power (Wholesale)

Local Distribution (Retail)
Consumers
(“Load”)

High-Voltage
Power
(Wholesale)

Local Distribution
(Retail)
High-Voltage Power (Wholesale)

Cool & New & Green

Local Distribution (Retail)
Components of Electricity Pricing
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Components of Electricity Pricing

Percentage of Delivery Services Cost: 47.6%

Cost of Electricity Breakdown:
- Delivery Services: 72.15%
- Supplier Services:
  - Generation Charge: 79.40
- Total Cost of Electricity: 151.55

Thank you for going paperless.
High-Voltage Power (Wholesale)

Local Distribution (Retail)
Components of Electricity Pricing

52.4 %
Managed by ISO-NE

High-Voltage Power (Wholesale)

Local Distribution (Retail)
• Overview of Electric Power System
• What Do Munis Do?
• What’re the RPS and the CES?
A: Everything!

A Muni is a mini-utility! It can own the whole “stack,” from generation to the lines on your street.
“Traditional” Cost-of-Service

Vertically-Integrated Monopoly Utility
(Investor-Owned; regulated by DPU)

- GENERATION
- TRANSMISSION
- DISTRIBUTION
- RETAIL
“Traditional” Cost-of-Service

Vertically Integrated Monopoly Utility (Investor-Owned; reg by DPU)

“Restructured” Market-Based

GENERATION
TRANSMISSION
DISTRIBUTION
RETAIL
"Traditional" Cost-of-Service

Vertically-Integrated Monopoly Utility (Investor-Owned, reg by DPU)

GENERATION

TRANSMISSION

DISTRIBUTION

RETAIL

"Restructured" Market-Based

IPPs (regulated by ISO)

TOs (reg by ISO)

EDCs ("utilities" reg by DPU)

Retail Sellers (EDCs + Others reg by DPU)
“Traditional” Cost-of-Service

Vertically-Integrated Monopoly Utility (Investor-Owned, reg by DPU)

Municipal Light Plants!

“Restructured” Market-Based

IPPs (regulated by ISO)

TOs (reg by ISO)

EDC “utilities” (reg by DPU)

EDCs + Others (reg by DPU)
MLPs either buy all - or buy some + generate some - electricity; and all deliver and sell to local customers.
2016 HMLP Energy Supply

- Nuclear: 48%
- Hydro/Wind/Solar: 29%
- Fossil: 14%
- Landfill: 5%
- Own/Buy: 4%
- Contract System Power: 20.00%
- ISO Energy Interchange: 24.65%
- Millstone: 34.44%
- NYPA: 4.72%
- Spruce Mountain Wind: 3.05%
- Saddleback Ridge Wind, LLC: 2.68%
- NuGen-Harrington St. PV: 1.38%
- Potter CC: 0.01%
- Watson Units: 2.49%
- Stony Brook Peaking: 0.08%
- Stony Brook Intermed: 2.05%
- Granby Landfill: 1.17%
- Comm. New Bedford Landfill: 2.67%
- NextEra Energy (MA HUB): 16.98%
- Exelon (MA HUB): 11.48%
2016 HMLP Energy Supply

Spot: 48%
ISO Energy Interchange: 20.00%

Nuclear: 29%
Millstone: 34.44%
Seabrook: 24.65%

Hydro/Wind/Solar: 14%
Brown Bear (Miller Hydro): 2.16%
Spruce Mountain Wind: 3.05%
Saddleback Ridge Wind, LLC: 2.68%

Fossil: 5%
Potter: 0.01%
Watson Units: 2.49%
Stony Brook Peaking: 0.08%
Stony Brook Intermed.: 2.05%
Granby Landfill: 1.17%
Comm. New Bedford Landfill: 2.67%

Landfill: 4%
Exelon (MA HUB): 11.48%
NextEra Energy (MA HUB): 16.98%

Contract System Power:

Long-Term
• Overview of Electric Power System
• What Do Munis Do?
• What’re the RPS and the CES?
RPS and CES

• Requirement for all sellers of electricity to sell a certain % of renewable or clean electricity annually
• Higher % required each year
• 80% clean by 2050
RPS and CES

• Requirement for all sellers of electricity - EXCEPT Munis - to sell a certain % of renewable or clean electricity annually

• Higher % required each year

80% clean by 2050
1 MWh = 1 REC

ISO New England REC Database

RECs = $
RPS and CES
Utilities required to turn-in RECs/CECs at end of each year (12% in 2017)

• Utilities **buy** RECs/CECs (**cost**)
• Renewable generation **sells** RECs/CECs (**income**)

Because MLPs don’t have to turn in RECs, they sell them (**income**)... . . .

. . . . I pay, they don’t! 😞
2016 HMLP Energy Supply

- Nuclear: 34.44%
- Hydro/Wind/Solar: 17.56%
- Fossil: 4.72%
- Landfill: 3.05%
- ISO Energy Interchange: 20.00%
- Millstone: 24.65%
- NYPA: 2.68%
- Brown-Beckwourth Hydro: 12.85%
- Spruce Mountain Wind: 2.68%
- Addle River Ridge Wind, LLC: 2.68%
- NuGen-Harrington St. PV: 1.38%
- Potter CC: 0.01%
- Warren Units: 2.49%
- Stony Brook Peaking: 0.08%
- Stony Brook Intermediate: 2.05%
- Granby Landfill: 1.17%
- Comm. New Bedford Landfill: 2.67%

2016 RPS = 11%
2016 HMLP = 18%

#RPS

- Exelon (MA HUB): 4.81%
- NextEra Energy (MA HUB): 16.98%
- ISO Energy Interchange: 20.00%
- #RPS: 23.65%
- #RPS: 4%
Bringing MLPs into the Fold  
(Comply with GWSA)  

• Loss of revenue from RECs  
  (~ $1 million)  
• Existing nuclear?  
• Some MLPs are way behind!
Electricity Supply ~ 96% cleaner!
Questions?

Email addresses:

Carol carololdham@massclimateaction.net

Oriana orianareilly@massclimateaction.net