

Helping Massachusetts Municipalities Create a Cleaner Energy Future



COMMONWEALTH OF MASSACHUSETTS

*Deval L. Patrick, Governor
Richard K. Sullivan, Jr., Secretary
Mark Sylvia, Commissioner*

Net Metering 101 for Municipalities

*Nathan Phelps, Electric Power Division
Laura Bickel, Legal Division*

Department of Public Utilities (DPU)

Webinar

April 19, 2012

10:00 AM

The webinar will start in a few minutes...



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**Introduction:
Green Communities Division**

*Eric Friedman, Deputy Dir
Director of Leading By Example
Program*

Green Communities Division

Green Communities Division

Serves as the hub for all Massachusetts cities and towns on energy matters



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Green Communities Division

Programs & Resources for Municipalities

- Green Communities Designation and Grant Program
- MassEnergyInsight energy tracking and analysis tool
- Municipal Energy Efficiency Program
- Energy Management Services Technical Assistance
- Clean Energy Results Program
- Website filled with tools & resources
www.mass.gov/doer
- Email updates via listserv – Sign up by sending an email to: join-ene-greencommunities@listserv.state.ma.us



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CONTACTS - REGIONAL COORDINATORS

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:

← **Southeast – LAKEVILLE: Seth Pickering**
Seth.Pickering@state.ma.us

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Recording & Presentation

- The webinar is being recorded and will be available on our website in approximately 48 hours at: www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at: www.mass.gov/energy/greencommunities
- Websites are also listed at end of presentation



Poll Question 1

We would like to know our audience, are you a:

- a) Municipal official**
- b) Energy manager or energy/climate committee member**
- c) A representative from an energy service company**
- a) Other town or school official or volunteer**
- b) Other**



Net Metering 101 for Municipalities



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Disclaimer

Comments reflect our personal observations, and do not necessarily reflect the position of the Commonwealth of Massachusetts, the Department of Public Utilities, or the DPU Commissioners



Department of Public Utilities (DPU)

- **DPU Mission Statement**

- The Department is responsible for oversight of investor-owned electric power, natural gas, and water industries in the Commonwealth; developing alternatives to traditional regulation; monitoring service quality; regulating safety in the transportation and gas pipeline areas; and for the siting of energy facilities. The mission of the Department is to ensure that utility consumers are provided with the most reliable service at the lowest possible cost; to protect the public safety from transportation and gas pipeline related accidents; to oversee the energy facilities siting process; and to ensure that residential ratepayers' rights are protected

- **Commission**

- Ann G. Berwick, Chair
- Jolette A. Westbrook, Commissioner
- David W. Cash, Commissioner



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History of Net Metering in Massachusetts

- Net metering in MA since 1982
 - ≤ 30 kW systems
- Expanded in 1997
 - ≤ 60 kW systems
- Significantly revised by the Green Communities Act in 2008
 - Regulations and tariffs implemented in 2009
- Further amended by Session Law in 2010
 - Regulations implemented; tariffs are being developed
- Legislature currently reviewing potential changes?



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Net Metering: Basic Concept

- Net metering is an incentive program to encourage customers to install distributed generation
 - Customers offset own electricity usage
 - Customers are compensated for any electricity they generate and don't use

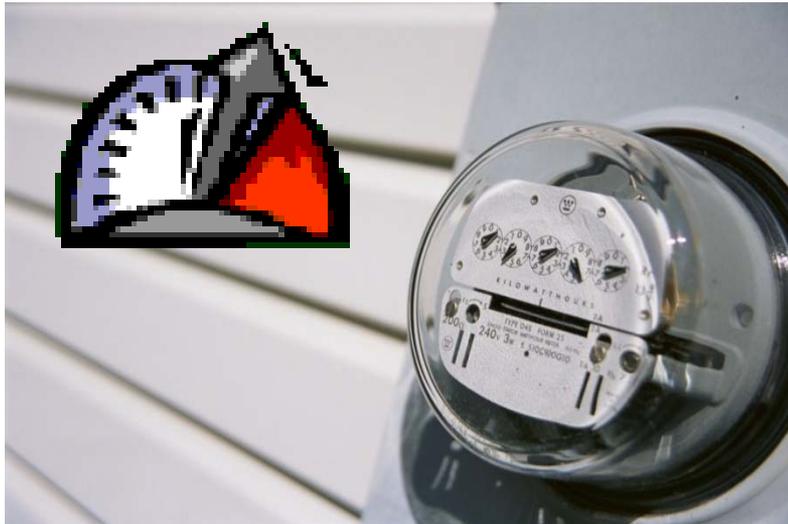


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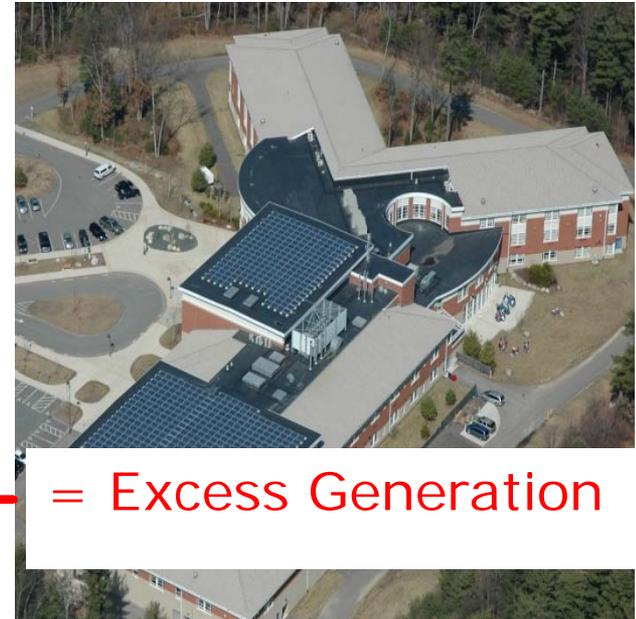
Net Metering: Basic Concept (Cont.)

- If consumption exceeds generation, customer pays for net kWh consumed
- If generation exceeds consumption, customer receives credit on bill for net excess generation



Net Metering Example: Solar PV System on School

- Illustrative Example
- PV System generates 60,000 kWh/month
- School months
 - Electricity usage = 80,000 kWh
 - School is charged for 20,000 kWh
- Summer months
 - Electricity usage = 10,000 kWh
 - School is credited for 50,000 kWh



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Poll Question 2

What has been your experience with net metering to date?

- a) My municipality has entered into a contract with a 3rd party owner to develop a renewable energy project on municipal property within our borders**
- b) My municipality has entered into a contract for net metering credits for a project not located in our geographic boundaries**
- d) My municipality is considering a) above**
- e) My municipality is considering b) above**
- f) Other**



How “Big” can we go?

- Net metering system *can* be bigger than your load
- No minimum load is required
 - Load can be “parasitic”



Wind Turbine at
Jiminy Peak
Mountain Resort
Hancock, MA

How “Big” can we go? (Cont.)

- However, “the maximum amount of generating capacity eligible for net metering by a municipality or other governmental entity shall be **10 megawatts**”
 - c. 359 of the Acts of 2010 & 220 C.M.R. § 8.07(2)



Key Question: Who Can Be a Host Customer?

- 220 C.M.R. § 18.02:
 - Host Customer means a Customer with a Class I, II, or III Net Metering Facility that generates electricity on the Customer's side of the meter
- Intentionally broad definition

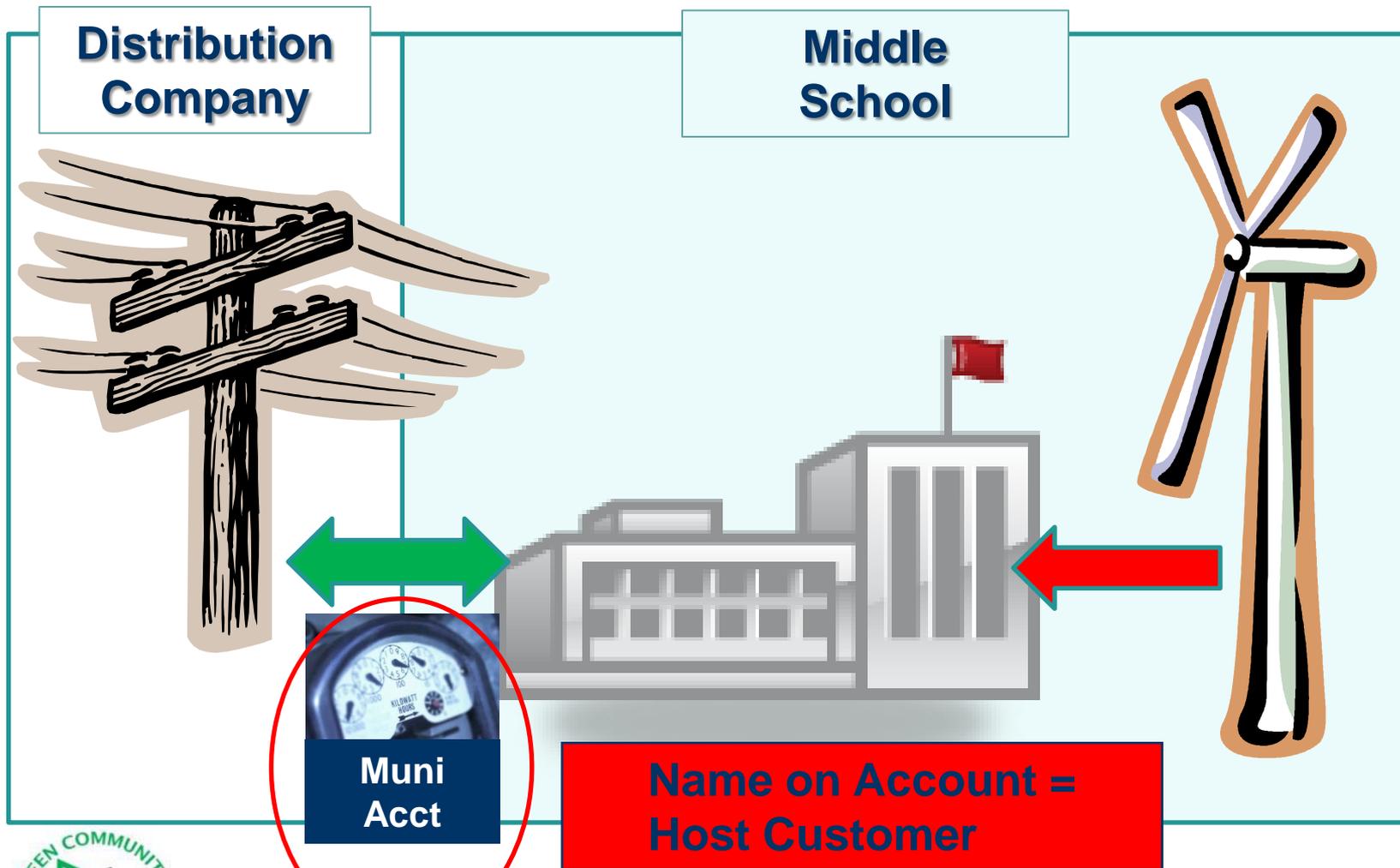


Who Can Be a Host Customer? (Cont.)

- Host Customer **does not** have to own:
 - The net metering facility; or
 - The property on which the facility is located
- Host Customer has
 1. an account with the utility; and
 2. a net metering facility “behind the meter”



Host customer example



Key Question: What is a Net Metering Credit

- Generation is tracked on a meter in kWh, but credits are a monetary amount
 - Excess generation (kWh) results in net metering credits
 - Net metering credit = \$ credit
- Credits offset charges on electricity bills
- Credits never expire (they “rollover”)
- There is a limited provision to “cash-out” credits
 - Distribution Companies – at the time of interconnection – can elect to buy credits from Class III net metering facilities instead of allocating those credits every month



What is a Net Metering Credit (Cont.)

- For governmental entities, credits for wind, solar, and agricultural facilities are close to the retail rate

<u>Credit Calculation</u>		<u>Units</u>	<u>Class I</u>	<u>Class I- Wind, Solar, and AG</u>	<u>Class II</u>	<u>Class III</u>
Facility Size or Unit Size (Govt)			≤ 60 kW	≤ 60 kW	>60 kW - ≤ 1 MW	>1 MW - ≤2 MW
	Customer Charge	\$/month				
Delivery	Distribution Charge	¢/kWh		✓	✓	*
	Transmission Charge	¢/kWh		✓	✓	✓
	Transition Charge	¢/kWh		✓	✓	✓
	System Benefit Charge					
	DSM (EE)	¢/kWh				
	RE	¢/kWh				
Supply	Basic Service	¢/kWh		✓	✓	✓
Generation	Average Monthly Clearing Price at the ISO-NE	¢/kWh	✓			
		* Only applies to municipal or governmental Class III				



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Example: Calculation of Net Metering Credits

$$\text{Electricity (kWh)} \times \text{Rate (\$/kWh)} = \text{NMC (\$)}$$

- Calculation of credits depends on the Host Customer's rate class
 - Look at your electric bill
- Illustrative Example:
 - Excess of 100 kWh
 - Components of rate class = \$0.10/kWh
 - Credit = \$10



Landfill in Easthampton, MA

Key Question: What can we do with Net Metering Credits?

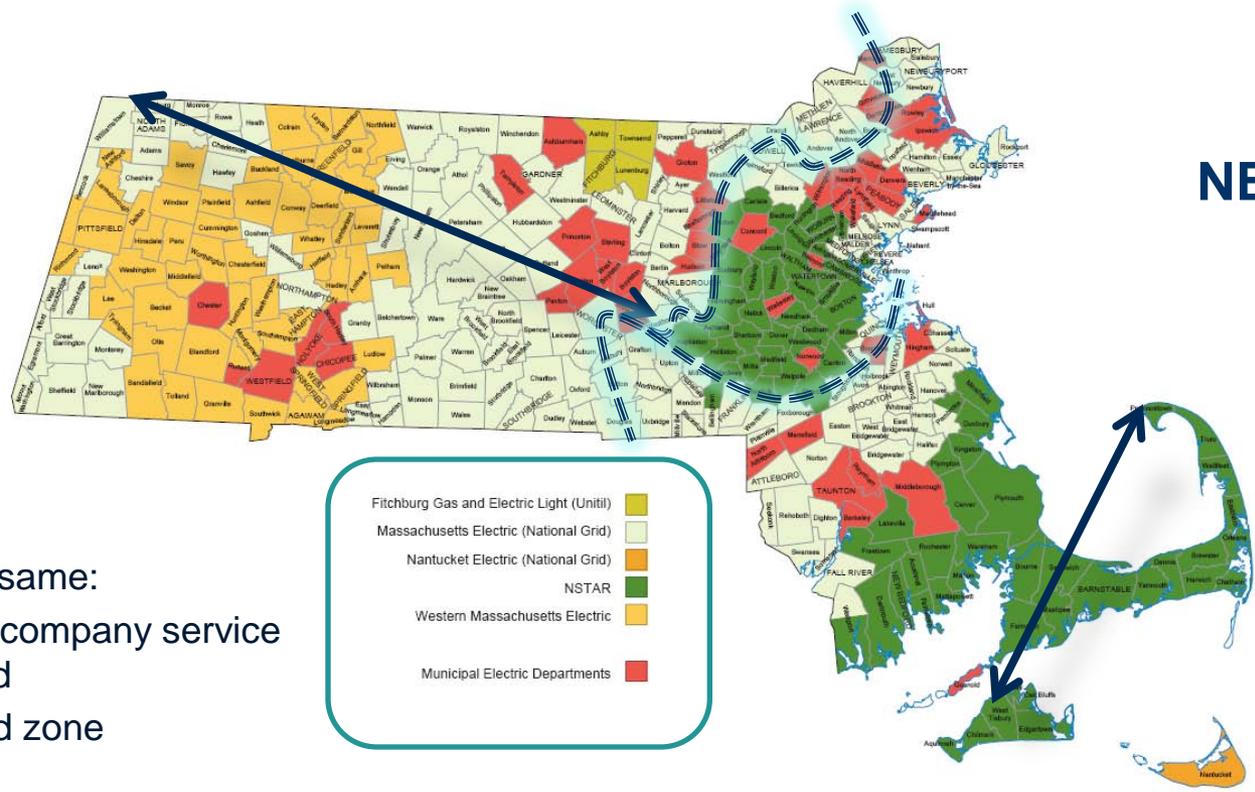
- Option 1
 - Use the credit for the Host Customer's electric bill
- Option 2
 - Host Customer can allocate credits to different accounts (yours or other customers)
 - Thus, generation in one location can offset electricity costs in another location (a.k.a. virtual net metering)
 - There is no limit to the number of customers or accounts that can receive credits from a Host Customer



What can we do with Net Metering Credits? (Cont.)

WCMA

NEMA

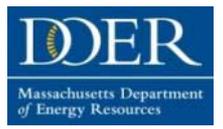


Allocation only in same:

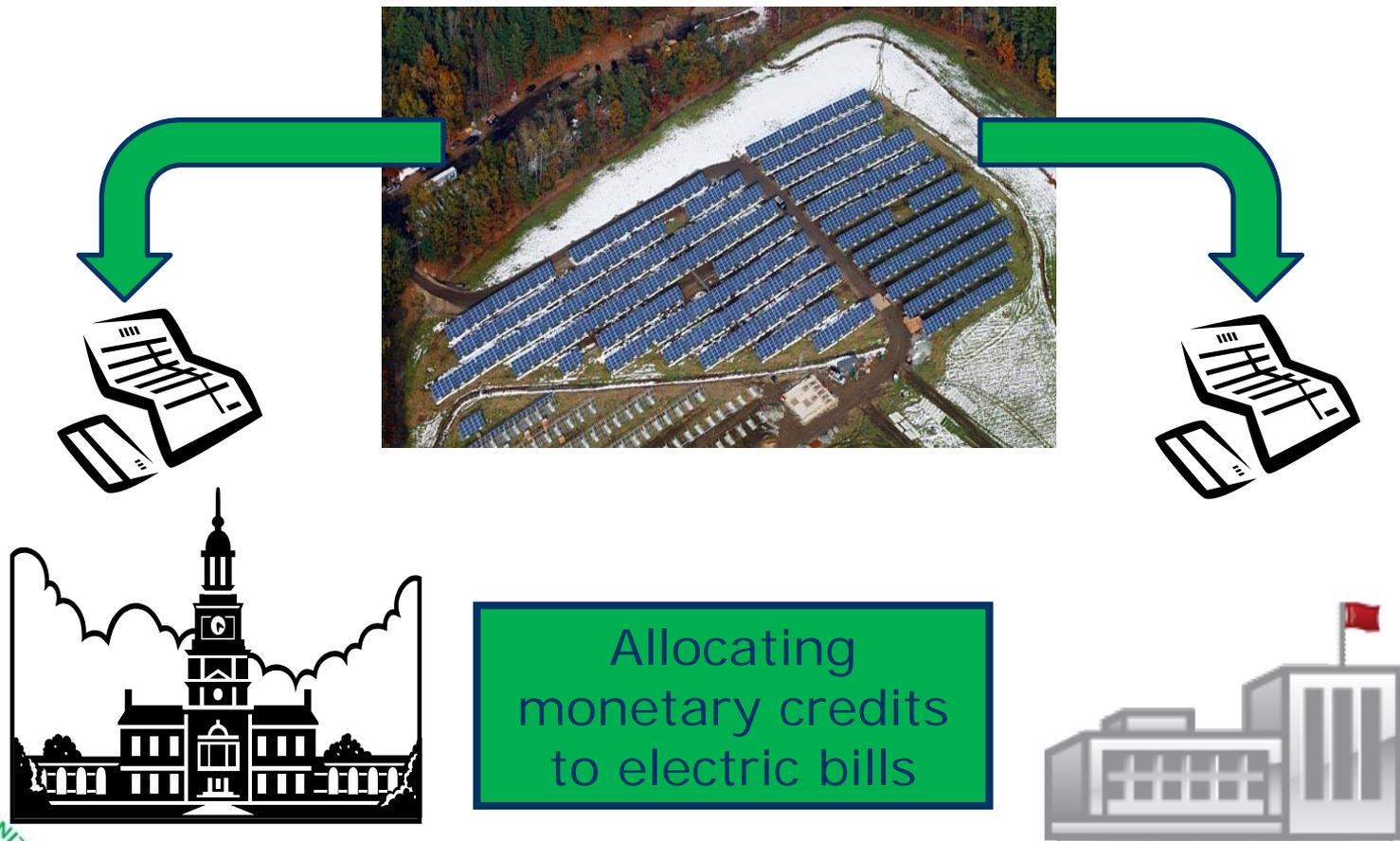
- (1) Distribution company service territory; and
- (2) ISO-NE load zone



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What can we do with Net Metering Credits? (Cont.)



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Key Question: What Qualifies as a “Public” Project

“Net Metering Facility of a Municipality or Other Governmental Entity” is a Class II or III Net Metering Facility:

- that is owned by a “public entity;”
- that is operated by a “public entity;” or
- of which the “public entity” is assigned 100% of the output.



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Public Projects (Cont.)



- **Municipality**
 - City or Town
- **Other Governmental Entity**
 - Includes state and federal departments & agencies
 - Other entities must demonstrate three characteristics to DPU:
 1. Officers are popularly elected or appointed;
 2. Transparency (e.g. records are publicly accessible); and
 3. Ability to levy taxes and/or issue tax-exempt debt



Public Projects (Cont.)

- “Public entities” must be the Host Customer
 - “Output” = energy
- Net metering credits of a “public entity” can only be allocated to other “public entities”
 - Allows “governmental entities” to work together on projects



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Key Question: Can a 3rd Party own the Facility?

- Third-Party Ownership is permissible in MA
 - See 220 C.M.R. 18.09(5)
 - Allows for power purchase agreements (PPAs) for distributed generation
- Very common for governmental projects in order to monetize federal tax credits and depreciation



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Key Question: How Much Net Metering in MA?

- Statute and Regulations:
 - 1% cap on “private” projects
 - 2% cap on “public” projects
- Caps are based on the distribution company’s peak demand
- Must be implemented in tariffs
 - Process is ongoing

The reason not every “public” entity will be able to develop 10 MW



Is There a Net Metering “Queue?”

- No, not yet
- The DPU is required to implement a “System of Assurance”
 - The System of Assurance will enable customers to know whether they will be able to net meter in the future
- Implementation is ongoing



Review & Recap

- Net Metering is a limited incentive
 - Each “public” entity is limited to 10 MW
 - Total amount of net metering is capped
- DPU’s regulations aim to ensure that “public” entities are the main beneficiary of “public” projects
 - Must be the Host Customer; and
 - Restrict the allocation of net metering credits



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Poll Question 3

Have you received unsolicited proposals for entering into net metering credit purchasing agreements?

- a) Yes
- b) No



Disclaimer

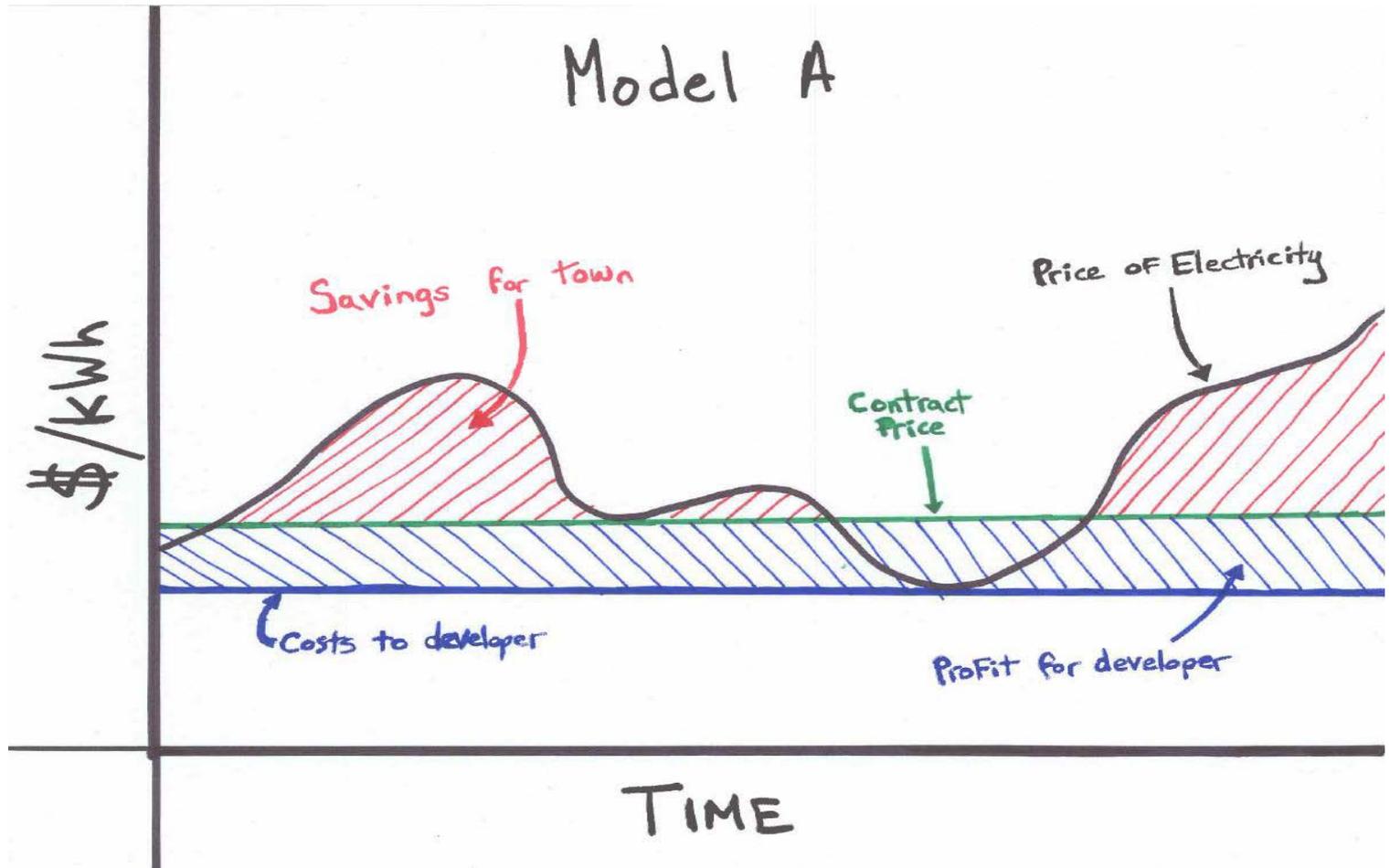
- The next two slides are for illustrative and informational purposes only
- Each situation is different
- All customers – including Host Customers – are encouraged to seek independent professional advice on their options



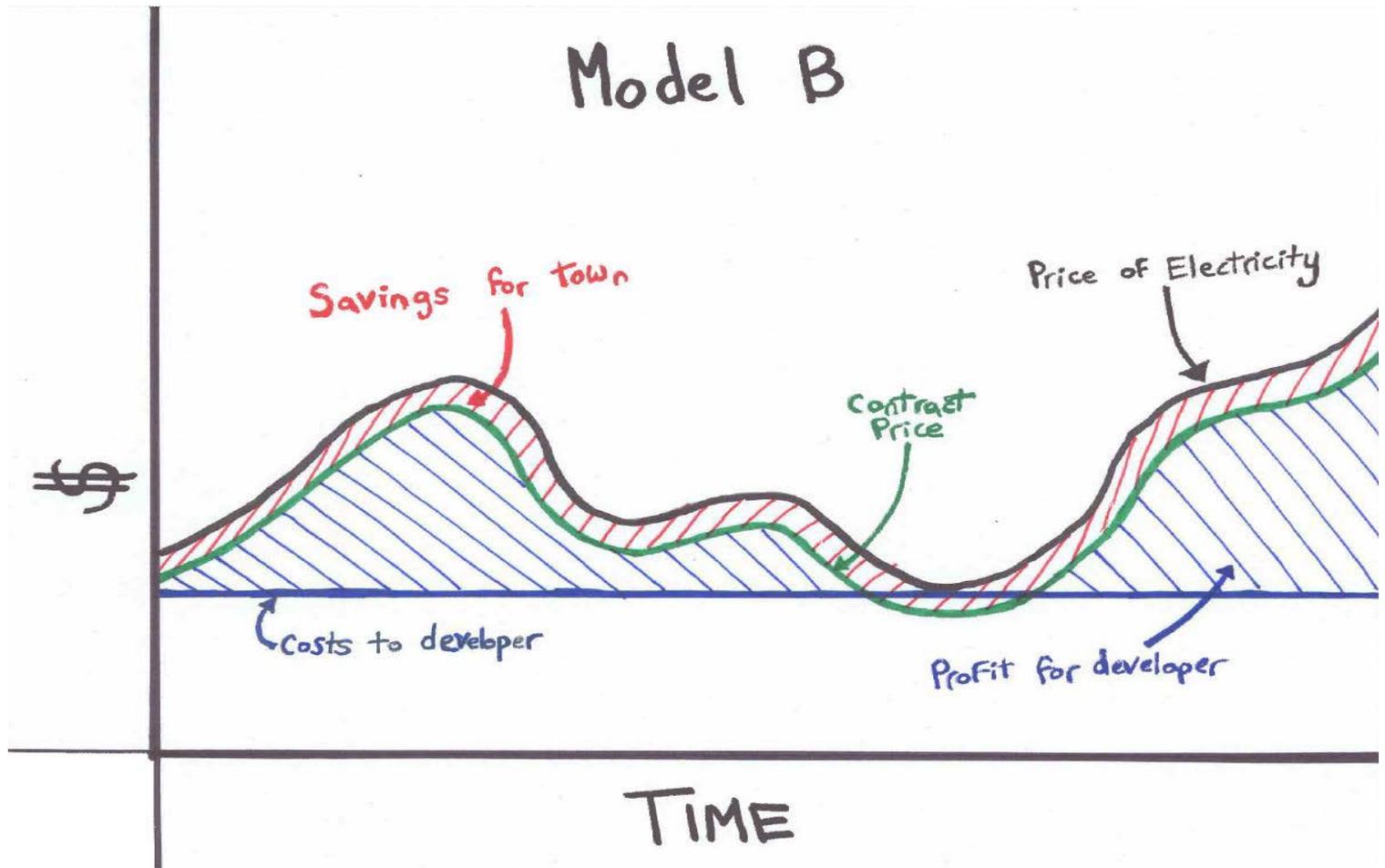
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Illustrative Example: Model A



Illustrative Example: Model B



Considerations

- What is the best deal for you?
 - How much benefit are you getting?
 - How much benefit could you be getting?
- “Public” entities are usually attractive net metering partners:
 - Access to special benefits under net metering
 - Stability of partnership



Q&A



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THANK YOU!

- The webinar was recorded and will be available for viewing at your convenience on our website at:
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