



WHAT'S THE SCORE?

A Comparative Analysis of Massachusetts Municipal Light
Plants' Clean Energy and Climate Action Performance by The
Massachusetts Climate Action Network

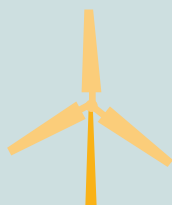


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Letter from the Executive Director



Welcome to the second iteration of the Massachusetts Climate Action Network's (MCAN) Municipal Light Plant Scorecard. MCAN is unique among nonprofit organizations with our focus on municipal light plants (MLPs) and our support of community advocates who promote clean energy, energy efficiency and, increasingly, energy justice in MLP districts. As the climate emergency worsens, MCAN's Chapters remain steadfast in pursuing climate solutions in their MLP communities and, with MCAN's help, continue to hold state decision makers accountable for recently passed climate legislation that regulates MLPs.

The Next Generation Roadmap bill that Gov. Baker signed into law in March 2021 requires MLPs to meet net zero emissions by 2050. MCAN advocates played a huge role in getting this bill over the finish line. The broader policy context for this Scorecard reflects the state's commitment to a clean energy future for all, including MLPs and residents in MLP communities.

We hope this report inspires MLP advocates, staff, managers and light boards to respond to the climate crisis with increased innovation and persistence. We also hope to inspire state policy makers to recognize the full value of MLPs and the need to support them as an important, and often overlooked, part of the Commonwealth's energy sector in transitioning to a clean energy future.

We are living in a time of urgency and possibility. Through this report, we want advocates, MLP staff and light boards, and policy makers to create policy environments that ensure MLPs are able to meet the climate crisis equitably and effectively. While there is much work to be done, MLPs have clearly demonstrated there is a strong foundation upon which to build.



What's the Score?

A Comparative Analysis of Massachusetts Municipal Light Plants' Clean Energy and Climate Action Performance.

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MCAN's Mission:

The Massachusetts Climate Action Network (MCAN), a 501(c)3 non-profit, fights the climate crisis one town at a time, with the help of local MCAN chapters – and you!

MCAN's role as a facilitator of municipal-level action is unique among Massachusetts environmental groups. We empower our local chapters by enhancing communication, promoting town-level projects that improve communities, decreasing climate change-causing pollution, and reducing development time for those projects. MCAN speaks on behalf of all chapters to improve Massachusetts energy and climate policies and programs.

Social Media

Website: <https://www.massclimateaction.org/>



@MassClimate



@massclimateactionnetwork



<https://www.facebook.com/MassClimateAction>

Acknowledgements

This report would not have been possible without the support of many people. MCAN would like to thank the many advocates and experts who provided insight that helped us to develop this Scorecard. In particular, we would like to thank Oriana Reilly as well as the invaluable members of MCAN's MLP Leadership Team.

We would like to thank the staff at Massachusetts Municipal Wholesale Electric Company, Energy New England, and the municipal light plants who took the time to respond to MCAN's questionnaires, review our data, and answer our questions. MCAN's MLP Scorecard is an exercise in transparency, and we are grateful for your willingness to participate.

MCAN would like to thank the many interns who supported us in a multitude of ways while developing and authoring this Scorecard including: Charlotte Guterman, MCAN's 2021 summer communications intern; Tessa Scheid, MCAN's 2021 spring communications intern; Lucy Kitch-Peck, MCAN's 2020 municipal plant fall intern; and Timothy Hines, MCAN's 2020 municipal plant summer intern.

We would especially like to thank our external reviewers, including Kristin Dupre at Abode Energy Management; Bryndis Woods at the Applied Economics Clinic; Amy Boyd at Acadia Center; Jerry Frenkil, who heads MCAN's volunteer Research Group; and Brian Foulds, a deeply knowledgeable clean energy advocate. Your comments and insight were invaluable to this process and enabled us to put forward the strongest, most accurate and effective report possible. Thank you.

Finally, we would like to thank Taryn Aldrich for providing invaluable editing services as well as Katie Metz for her excellent graphic design talent.

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EXECUTIVE SUMMARY



Assessing Progress of Municipal Light Plants in Mitigating Climate Change

Municipal light plants (MLPs) are a critical part of the Commonwealth's efforts to mitigate the worst effects of the climate crisis and transition to a just energy future. The Commonwealth is home to 41 MLPs which serve 50 municipalities and account for approximately 14% of the state's total distributed energy. MLPs' investment in energy efficiency and clean energy directly affects the rate at which the Commonwealth meets statewide climate goals and reductions in greenhouse gas emissions.

While MLPs play a critical role in the state's energy sector, they differ from other types of utilities across the state both in how they operate and how they are regulated. As such, historically, the understanding of MLPs' roles in and progress towards transitioning to clean energy and combating the climate crisis has been limited. Little had been done to assess their progress in mitigating climate change until 2019, when Massachusetts Climate Action Network (MCAN) published its first Scorecard titled "What's the Score: A Comparative Analysis of Massachusetts Municipal Light Plants' Clean Energy and Climate Action Performance." MCAN's Scorecard was a rapid assessment of MLPs' performance in four categories: clean energy, energy efficiency, transparency/leadership, and dirty energy. Each MLP's progress in these categories was scored out of 100. The Scorecard provided advocates in MLP districts with general knowledge of plant operations and programs. Armed with this information, advocates organized themselves and worked with MLP staff to improve MLPs' performance.

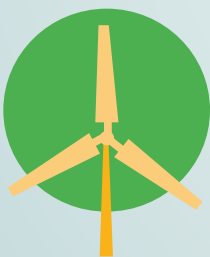
Now, more than two years after publishing our first Scorecard, MCAN is releasing the second iteration. This Scorecard takes lessons learned during and after the publication of the initial report, along with recommendations from advocates and experts, to build upon the work done in 2019. To provide a tool that is effective for advocates and useful to MLP staff, this iteration of the Scorecard has improved data collection

processes and enhanced scoring methods to present a more comprehensive analysis. The outcome is a thorough and detailed report assessing MLPs’ progress in addressing the climate crisis and transitioning to clean, renewable energy.

MCAN’s Data Collection and Scoring Methods for this Report

Data for this Scorecard primarily came from MLP reports and documents submitted to the state government, MLPs’ responses to MCAN questionnaires, and MLPs’ websites. MLPs were given several opportunities to provide information and to revise the data used in this report. Thirty-two of 40 MLPs provided some form of information or feedback for the purposes of this Scorecard.

MCAN evaluated MLPs across four categories:



Energy Transition
50 Points



Energy Efficiency
25 Points



Transparency and Community Engagement
15 points



Policy Context
10 points

MLPs could earn up to 100 points across all categories. Bonus points worth 21 points (with the potential for additional points) were also allocated across these categories.

This report covers 40 of the 41 MLPs across the Commonwealth. Gosnold Electric Light Company was not considered due to its small number of customers and limited energy distribution relative even to other small MLPs.

Results and Conclusions

MCAN's analysis revealed several observations that can help advocates and other stakeholders to advance climate mitigation and clean energy adoption in MLP districts. The conclusions below reflect our primary findings:

- 1 Several MLPs demonstrate leadership and ambition in energy transition and energy efficiency.** While much remains to be done to transition MLPs, several are leading the way by taking bold steps to mitigate climate change and transition to clean energy (relative to other MLPs as well as investor-owned utilities [IOUs]). Their efforts are proof that MLPs' unique structure as community-based, non-profit utilities can serve as an important asset in mitigating climate change when clean energy and energy efficiency are prioritized.
- 2 Many MLPs have yet to recognize the importance of Class I Renewable Energy Credit (REC) retirement and are not meeting the Renewable Portfolio Standard (RPS).** Our analysis found that two MLPs (Concord and Belmont) have met, and exceeded, clean energy targets set forth in the RPS by retiring Class I RECs. Seven additional MLPs retired Class I RECs to some extent but have yet to meet the RPS. Thirty-one of the 40 MLPs had *no* clean energy in their energy mix because they were not retiring Class I RECs. Many of these MLPs used energy derived from clean energy sources; however, they could not take credit for doing so in their energy mix because they did not retire the Class I RECs associated with that energy.
- 3 Many MLPs provide a wide variety of programs that support customers in adopting clean energy technology. However, these programs must be enhanced.** From 100% renewable opt-in programs to the MLP Solar Rebate Program and net metering policies, MLPs provide a wide variety of programs and policies to support their customers in transitioning to clean energy. However, our results indicate that more

is needed to ensure that these policies are strong enough to effectively incentivize this shift. For example, many MLP net metering policies fall short of enabling customers to benefit from installing renewable energy by limiting the size of eligible systems and offering an inadequate price for the excess energy generated. To better encourage clean energy adoption and provide programs that are comparable to policies available in non-MLP communities, these programs and policies must be strengthened.

4

On average, the percentage of total revenue that MLPs spend on energy efficiency is approximately one-twelfth of the revenue percentage that IOUs allocate towards Mass Save. Although many MLPs provide comparable programs to IOUs, the incentives and energy savings (when tracked) are lower, and the additional incentives available to income-eligible residents are more limited. While these discrepancies are partly due to MLPs not prioritizing energy efficiency programs, the primary cause of this disparity is that the state provides more funding to IOUs and the Mass Save program than it does to MLP energy efficiency programs. The level of state oversight is also considerably lower for MLPs than it is for IOUs and Mass Save. Advocates, MLP staff, light boards, MLP associations, state officials, and legislators need to address these gaps. If they do not, the Commonwealth faces the immediate risk of some MLP communities falling well behind the rest of the state in receiving the benefits of energy efficiency.

5

More attention is needed to increase access to MLPs' energy efficiency programs. Our analysis found that opportunities exist across MLPs to increase access to energy efficiency programs. MLPs' implementation of practices and policies that enhance access to energy efficiency has been neither mandated nor closely tracked. Our findings suggest that, even considering voluntary efforts, MLPs can implement additional policies and practices that improve residents' access to energy efficiency programs.

6

The state can do more to support MLPs in the areas of energy transition and energy efficiency. While MLPs have much work to do individually to mitigate climate change and transition to clean energy, there are multiple avenues that the state could and should take to support them in this process. State-provided financial and technical assistance is paramount and should focus on clean energy adoption and energy efficiency. Regulations and incentives should further support MLPs in pursuing these initiatives.

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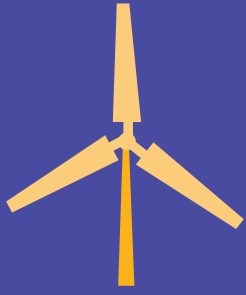
Justice and equity in the energy sector need to be at the center of MLP policy, programs, and operations.

Utility policies and operations carry major implications for issues of justice and equity. Integral aspects of utility operations, such as setting energy rates, investing in energy infrastructure, and developing programs for ratepayers, have the potential to exacerbate or alleviate existing injustices within our communities, state, and country. In the energy sector, these implications span a range of issues including but not limited to environmental justice, environmental racism, energy justice, and equity. As public utilities focused on delivering services to their communities, issues of justice in the energy sector are critical for MLPs. At present, however, these issues are rarely emphasized in MLP policy and advocacy. This relative lack of attention to justice-related issues has led to bad investments in dirty energy and infrastructure that exacerbate injustices and disproportionately harm low-income communities, communities of color, non-English speaking households, and renters. MLP staff, light boards, industry associations, and advocates have a responsibility to center justice and equity in all MLP policy, programs, and operations. In particular, MLP policy designed to mitigate climate change and transition to clean energy must center justice. Failing to do so will only exacerbate existing disparities in clean air and health outcomes, while perpetuating the concentration of environmental burdens in frontline communities.

Recommendations for Future Action

Based on the results of each section in the Scorecard, MCAN recommends steps to strengthen climate change mitigation efforts across MLP districts. These recommendations are intended to support advocates in identifying actions that their MLPs can prioritize to bring about a clean energy, net zero emissions future in their communities. The public utility model is based on the power of residents, as ratepayers, to guide and influence MLP light boards and plants. Public power is ideally about people power.

Most recommendations focus on changes that MLP staff, light board members, and associations can adopt within specific MLP districts. Other recommendations suggest changes to state policies and regulations which would better enable MLPs to achieve climate targets and become leaders in the energy transition. The advancement of climate mitigation in individual MLP districts and at the state level is equally important to ensuring that MLPs effectively transition to clean energy and increase energy efficiency.



Recommendations to Enhance MLPs' Energy Transition

1 Incorporate Class I REC retirement into long- and short-term MLP strategies

- a) Adopt plans to strategically accelerate Class I REC retirement
- b) Meet or exceed the RPS over time
- c) Adopt 100% renewable energy opt-in programs for residents
- d) Expand state involvement in REC retirement through incentives or mandates

2 Strengthen and enhance policies that enable residents to transition to clean energy

- a) Strengthen net metering policies
- b) Leverage MLP innovation to enhance battery storage, advanced metering infrastructure (AMI), electric vehicle adoption and infrastructure, and other clean energy technology
- c) Strengthen and expand services that assist low- and moderate-income households in transitioning to clean energy
- d) Increase state investment in MLP clean energy innovation

3 Implement plans to transition away from nuclear energy and gas services

- a) Implement policies and plans specifying no new nuclear energy and establishing a clear timeline for replacing current nuclear sources with safe and clean alternatives
- b) Phase out gas services and accelerate electrification

4 Stop investing in new fossil fuel infrastructure and dirty energy projects

- a) Commit to making no new investments in coal, oil, and natural gas projects or infrastructure
- b) Commit to making no investments in dirty biomass energy
- c) Commit to making no investments in projects that exacerbate environmental injustice



Recommendations to Enhance MLPs' Energy Efficiency

1 Increase the size of energy efficiency programs and rebates

- a) Increase the size of weatherization and heat pump rebates for residents
- b) Work with the state to create and adopt a 0% interest loan program for energy efficiency retrofits
- c) Implement and expand commercial energy efficiency programs and offerings
- d) Increase the percentage of overall revenue allocated to energy efficiency programs

2 Increase equity and access to energy efficiency programs

- a) Provide increased energy efficiency rebates for low- and moderate-income home-owners and renters
- b) Conduct specific outreach to low-income residents and renters who stand to benefit the most from energy efficiency programs
- c) Identify households in MLP districts based on income, race, and language isolation; develop outreach strategies to reduce barriers and raise awareness of program offerings

3 Track savings and progress of energy efficiency programs

- a) Track and report kWh savings from energy efficiency programs in annual Municipal Action Plans (MAPs)
- b) Track and make public energy savings in a way that enables MLPs to be accountable for equity
- c) Set ambitious energy savings goals based on kWh savings and other metrics
- d) Track energy efficiency using additional metrics that account for electrification

4 Increase state support for MLP energy efficiency

- a) Mitigate disparities in energy efficiency programs between MLPs and IOUs
- b) Provide more funding for MLP energy efficiency programs
- c) Allocate funding specifically for MLPs to enhance their energy efficiency incentives
- d) Allocate funding for innovative programs and pilot projects in MLP districts



Recommendations to Enhance Transparency and Community Engagement

1 Ensure that MLPs' websites contain updated information for residents to engage in decision making

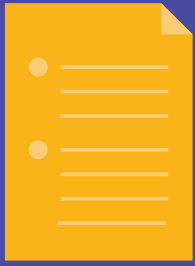
- a) Consistently post and update light board meeting times, meeting minutes, and contact information
- b) Make it standard practice to post policies, reports, and other operations-related information on websites
- c) Work towards increasing transparency and educating residents about MLPs' decision-making processes and internal operations

2 Increase opportunities for community involvement in decision making

- a) Conduct surveys and community forums regularly on issues related to MLP policy and long-term strategies
- b) Solicit feedback and support from community members on proposed energy projects and long-term policies
- c) Develop clear protocols and procedures to substantively incorporate community input into MLPs' policies and strategies

3 Be transparent about clean energy and REC retirement

- a) Post updated power supply charts on websites
- b) Be transparent about REC retirement strategies and explain the implications of REC retirement for the energy mix
- c) Post charts that clearly identify the percentages of energy sources based on the number of RECs retired



Recommendations to Enhance MLP Policy Context

1

Work with towns to establish climate action plans

- a) Work with town government and community members to implement climate action plans
- b) Conduct an inventory of MLP emissions and develop a long-term plan for reducing emissions to net zero by or before 2050

2

Participate in statewide programs focused on increasing efficiency and transitioning to clean energy

- a) Work with towns to attain Green Community Designation
- b) Participate in the Renewable Energy Trust Fund (RETF)
- c) Opt into the Property Assessed Clean Energy (PACE) program

3

Reduce barriers for MLPs to participate in statewide programs

- a) Ensure there are no additional barriers to MLP towns attaining Green Community status
- b) Reduce the barriers and requirements for MLP participation in the Renewable Energy Trust Fund (RETF)
- c) Develop new state-sponsored programs to support MLPs in addressing climate change and increasing energy efficiency

MUNICIPAL LIGHT PLANT SCORES

Municipalities by Rank			Energy Transition	Energy Efficiency	Transparency + Engagement	Policy Context	Total Score	
			50 pts	25 pts	15 pts	10 pts	100 pts	
1	Concord		43	24	21	10		98
2	Belmont		41	26	21	9		97
3	Holyoke		31	24	17	7		79
4	Middleborough		33	21	17	4		75
5	Braintree		37	16	12	4		69
6	Ipswich		16	17	21	11		65
6	Taunton		29	15	17	4		65
8	West Boylston		22	14	21	3		60
9	Reading		15	21	13	5		54
9	Wellesley		31	9	9	5		54
11	Shrewsbury		21	16	13	3		53
12	Chicopee		17	18	12	5		52
12	Wakefield		19	18	13	2		52
14	Norwood		19	14	12	6		51
15	South Hadley		19	13	15	1		48
16	Westfield*		15	18	11	3		47
17	Sterling		21	13	8	2		44
18	Groveland		25	10	6	0		41
19	Hudson*		22	13	2	3		40
19	Templeton		21	10	4	5		40
21	Ashburnham		17	11	6	5		39

MUNICIPAL LIGHT PLANT SCORES

MUNICIPALITIES BY RANK		ENERGY TRANSITION	ENERGY EFFICIENCY	TRANSPARENCY + ENGAGEMENT	POLICY CONTEXT	TOTAL SCORE
		50 PTS	25 PTS	15 PTS	10 PTS	100 PTS
21	HINGHAM*	17	13	4	5	39
23	HOLDEN	20	12	4	2	38
24	GROTON	16	11	4	5	36
24	PEABODY	13	14	8	1	36
26	MARBLEHEAD	16	12	5	2	35
26	PRINCETON	10	13	10	2	35
28	N. ATTLEBOROUGH	11	11	8	3	33
29	PAXTON	14	12	5	1	32
30	HULL	16	9	4	2	31
30	MANSFIELD	16	7	8	0	31
32	LITTLETON*	12	9	4	4	29
33	GEORGETOWN*	12	10	2	4	28
33	ROWLEY	9	10	9	0	28
35	MIDDLETON*	13	8	6	0	27
36	BOYLSTON	12	12	2	0	26
36	DANVERS*	13	9	4	0	26
38	MERRIMAC*	11	9	2	3	25
39	CHESTER	12	4	5	3	24
40	RUSSELL	9	10	2	2	23
N/A	GOSNOLD	N/A	N/A	N/A	N/A	N/A

* indicates MLPs that did not submit questionnaires or provide feedback to MCAN for the purpose of this report

Scoring Disclaimer

In light of substantial revisions to our scoring methodology, **the results presented in this Scorecard cannot be compared to MLP scores released in MCAN's prior report.** The current findings instead offer a snapshot of progress based on the categories and scoring adopted in this iteration. We will limit methodological changes in future reports to allow for direct comparisons.

To provide additional insight and to increase transparency in MLP scores, MCAN's methods, and our data collection strategy, we present scores for each of the four performance categories assessed in this Scorecard and discuss the methods used to score and evaluate each metric within those categories. Our data collection process is detailed in **Appendix B**.

All metrics, and the points allocated to them, were developed by consulting with experts and engaging with advocates. However, some of our decisions about methods were ultimately based on MCAN's mission and values of what constitutes a just energy transition and which metrics best reflect progress towards that transition. Acknowledging that some MLPs may hold different values and have an alternative vision of how best to mitigate climate change and accelerate clean energy adoption, MCAN has been deliberate and transparent in our discussions of each section in this Scorecard. We hope this intentionality will enable MLP staff and stakeholders to identify differences and, in certain instances, explain these differences to their boards, residents, and customers. There is a diversity of perspectives and opinions across MLPs about what to prioritize. Acknowledging this and the infeasibility of incorporating all possible views into this Scorecard, we have tried to be clear and transparent about what we included and excluded in the report so it may serve as a useful tool for advocates, MLP staff, MLP associations, and state officials.

Future Reports

MCAN will continue to evaluate MLPs' progress in mitigating climate change and adopting clean energy through regular iterations of our

Scorecard. We are confident that the methodological updates made for this report will limit the need for future changes. Even so, we look forward to engaging with MLP advocates, staff, associations, and utility experts to continue refining our methodology to ensure we are producing reports that benefit relevant stakeholders.

Although we anticipate limited changes to the established categories in future Scorecard iterations, MCAN will investigate including metrics that incorporate or further account for (1) the adoption and use of advanced metering infrastructure (AMI), (2) the adoption of integrated resource planning (IRP), (3) commercial energy efficiency programs and incentives, (4) electric vehicle adoption and electric vehicle infrastructure, and (5) the level of MLPs' financial investment and ownership of clean energy generation facilities and infrastructure. MCAN will also introduce a category focusing on energy justice, environmental justice, and equity. MCAN intends to consult with environmental justice advocates and scholars, data scientists, and MLP staff to identify important metrics to include in this category. The environmental justice category will stand on its own and will not alter the data tracked in existing categories or how those categories are scored.

BACKGROUND INFORMATION



What is a Municipal Light Plant?

In Massachusetts, there are two types of electric utilities that distribute electricity to consumers: (1) investor-owned utilities (IOUs), which are owned by private shareholders; and (2) municipal light plants (MLPs), which are owned by municipalities. MLPs account for approximately 14% of the electricity distributed in the Commonwealth.¹

Today, there are 41 MLPs providing electric services to 50 communities across Massachusetts (**Figure 1**).² These 41 MLPs are scattered throughout the state and vary substantially in size, geographic context, and the communities they serve. As community-owned entities, MLPs offer community members more control over their utilities as well as increased opportunities to provide input into MLP decision making. This operational independence means that MLPs can differ, sometimes significantly, in their priorities and policies.

1 Annual Electric Power Industry Report, Form EIA-861 detailed data files 2019 (United States Energy Information Administration), accessed May 24, 2021, <https://www.eia.gov/electricity/data/eia861/>.

2 "Massachusetts Municipally-Owned Electric Companies," Mass.gov, accessed May 26, 2021, <https://www.mass.gov/info-details/massachusetts-municipally-owned-electric-companies>.

FIGURE 1 MAP OF MUNICIPAL LIGHT PLANTS IN MASSACHUSETTS



Although MLPs are independent, there is coordination across them through two member-based industry associations: the Massachusetts Municipal Wholesale Electric Company (MMWEC) and Energy New England (ENE). MMWEC is a non-profit public corporation and political subdivision that serves its 20 MLP members (and 11 non-member project participant MLPs) in areas including power procurement and energy efficiency programs.³ Many of MMWEC's efforts center around enhancing joint action among MLPs.⁴ ENE is a municipal cooperative that serves its six Massachusetts-based MLPs that have a share of ownership in the cooperative and 16 non-owner MLP customers in areas such as management, procurement, and energy efficiency.^{5,6} ENE is not designated in the same way as MMWEC but plays a similar role for MLPs. In addition to MMWEC and ENE, MLPs are supported by a professional association called the Municipal Electric Association of Massachusetts (MEAM). MEAM serves 40 MLPs in the Commonwealth in numerous ways, such as by providing technical, accounting, financial, purchasing, and counsel services.⁷ MEAM is also the primary interest group that lobbies the Massachusetts government on MLPs' behalf. **Table 1** outlines MLPs' affiliation with MMWEC and ENE.

Why are MLPs the Preferred Type of Utility?

Overall, MLPs are preferred over other types of utilities across the state. From MCAN's perspective, the benefits of MLPs revolve around the fact that municipal utilities enable customers to be involved in decision making, can prioritize the needs of their community and customers over profits, and are legally permitted to own and operate energy generation.⁸

MLPs are democratic institutions governed by either an elected or appointed light board and are directly responsible to the communities they serve.⁹ As such, in MLP districts, community members can offer input and assume a legitimate role in decision making. Although such engagement is not always exercised, the mere expectation of community participation and available avenues to provide input stands in stark contrast to IOUs.

3 Cammy Peterson et al., "Municipal Light Plants in Massachusetts: Spotlight on Clean Energy Initiatives" (Metropolitan Area Planning Council, July 2016), https://www.mapc.org/wp-content/uploads/2017/10/MAPC_MLP-WhitePaper_Jul2016.pdf, pg 4.

4 "Joint Action," MMWEC (Massachusetts Municipal Wholesale Electric Company), accessed May 26, 2021, <https://www.mmwec.org/who-we-are/mmwec-joint-action/>.

5 "About Us," Energy New England, accessed May 26, 2021, <https://www.ene.org/our-company/>.

6 Cammy Peterson et al., "Municipal Light Plants in Massachusetts: Spotlight on Clean Energy Initiatives" (Metropolitan Area Planning Council, July 2016), https://www.mapc.org/wp-content/uploads/2017/10/MAPC_MLP-WhitePaper_Jul2016.pdf, pg 4.

7 "About Us," Home (Municipal Electric Association of Massachusetts), accessed May 26, 2021, <https://www.meam-ces.org/>.

8 "The Benefits of Public Power," MMWEC 2016 Annual Report (Massachusetts Municipal Wholesale Electric Company, 2016), https://www.mmwec.org/wp-content/uploads/mmwec-2016_2nd_version.pdf, pg 3.

9 "Massachusetts Municipally-Owned Electric Companies," Mass.gov, accessed May 26, 2021, <https://www.mass.gov/info-details/massachusetts-municipally-owned-electric-companies>

TABLE 1

MLPS AND THEIR ENGAGEMENT WITH MMWEC AND ENE

MLPS SERVED BY MMWEC	
MEMBERS ¹¹	NON-MEMBER PARTICIPANTS ¹²
ASHBURNHAM MUNICIPAL LIGHT PLANT	BRAINTREE ELECTRIC LIGHT DEPARTMENT
BOYLSTON MUNICIPAL LIGHT DEPARTMENT	DANVERS ELECTRIC DIVISION
CHICOPEE ELECTRIC LIGHT	GEORGETOWN MUNICIPAL LIGHT DEPARTMENT
GROTON ELECTRIC LIGHT DEPARTMENT	HINGHAM MUNICIPAL LIGHTING PLANT
HOLDEN MUNICIPAL LIGHT DEPARTMENT	HUDSON LIGHT & POWER DEPARTMENT
HOLYOKE GAS & ELECTRIC	LITTLETON ELECTRIC LIGHT & WATER
HULL MUNICIPAL LIGHT PLANT	MIDDLEBOROUGH GAS & ELECTRIC DEPARTMENT
IPSWICH ELECTRIC LIGHT DEPARTMENT	MIDDLETON ELECTRIC LIGHT DEPARTMENT
HULL MUNICIPAL LIGHT PLANT	MIDDLEBOROUGH GAS & ELECTRIC DEPARTMENT
IPSWICH ELECTRIC LIGHT DEPARTMENT	MIDDLETON ELECTRIC LIGHT DEPARTMENT
MANSFIELD MUNICIPAL ELECTRIC DEPARTMENT	NORTH ATTLEBOROUGH ELECTRIC DEPARTMENT
MARBLEHEAD MUNICIPAL LIGHT DEPARTMENT	READING MUNICIPAL LIGHT DEPARTMENT

MLPS SERVED BY ENE ¹⁰	
OWNERS	NON-OWNER CUSTOMERS
BRAINTREE ELECTRIC LIGHT DEPARTMENT	ROWLEY MUNICIPAL LIGHTING PLANT
CONCORD MUNICIPAL LIGHT PLANT	READING MUNICIPAL LIGHT DEPARTMENT
HINGHAM MUNICIPAL LIGHTING PLANT	BELMONT MUNICIPAL LIGHT DEPARTMENT
TAUNTON MUNICIPAL LIGHTING PLANT	HUDSON LIGHT & POWER DEPARTMENT
WELLESLEY MUNICIPAL LIGHT PLANT	NORTH ATTLEBOROUGH ELECTRIC DEPARTMENT
	NORWOOD MUNICIPAL LIGHT DEPARTMENT
	MANSFIELD MUNICIPAL ELECTRIC DEPARTMENT
	GROVELAND ELECTRIC DEPARTMENT
	MANSFIELD MUNICIPAL ELECTRIC DEPARTMENT
	GROVELAND ELECTRIC DEPARTMENT
	MIDDLETON ELECTRIC LIGHT DEPARTMENT
	LITTLETON ELECTRIC LIGHT & WATER

TABLE 1

MLPS AND THEIR ENGAGEMENT WITH MMWEC AND ENE

MLPS SERVED BY MMWEC		MLPS SERVED BY ENE ¹⁰	
MEMBERS ¹¹	NON-MEMBER PARTICIPANTS ¹²	OWNERS	NON-OWNER CUSTOMERS
PAXTON MUNICIPAL LIGHT DEPARTMENT	WESTFIELD GAS & ELECTRIC		CHESTER MUNICIPAL ELECTRIC LIGHT DEPARTMENT
PEABODY MUNICIPAL LIGHT PLANT			MIDDLEBOROUGH GAS & ELECTRIC DEPARTMENT
PRINCETON MUNICIPAL LIGHT DEPARTMENT			MERRIMAC MUNICIPAL LIGHT DEPARTMENT
RUSSELL MUNICIPAL LIGHT DEPARTMENT			DANVERS ELECTRIC DIVISION
SHREWSBURY ELECTRIC & CABLE OPERATIONS			GEORGETOWN MUNICIPAL LIGHT DEPARTMENT
SOUTH HADLEY ELECTRIC LIGHT DEPARTMENT			WESTFIELD GAS & ELECTRIC
STERLING MUNICIPAL LIGHT DEPARTMENT			
TEMPLETON MUNICIPAL LIGHT & WATER PLANT			
WAKEFIELD MUNICIPAL GAS & LIGHT DEPARTMENT			
WEST BOYLSTON MUNICIPAL LIGHT PLANT			

¹⁰ "About Energy New England," ENE, accessed August, 2021, <https://www.ene.org/about-us/>.

¹¹ "Who We Serve," MMWEC, accessed August 2021, <https://www.mmwec.org/who-we-serve/>.

¹² "Project Participants," MMWEC, accessed August 2021, <https://www.mmwec.org/who-we-serve/project-participants/>

Because MLPs are non-profit organizations, their operations are not strictly based on maximizing profits; MLPs can identify and meet community needs and priorities without consistently accommodating shareholders. This critical feature of MLPs has many potential benefits. The public nature of MLPs is one of several reasons why MLPs have lower rates than IOUs. Additionally, MLPs are able to invest in various projects or policies that residents support without performing a direct comparison of costs and profit margins.

Finally, unlike IOUs, MLPs are permitted to own and operate energy generation facilities.¹³ In other words, MLPs have the legal jurisdiction to invest in renewable energy generation and clean technology projects. Ownership of energy generation that prioritizes clean energy greatly enhances the tools and impact that municipal utilities can have on mitigating climate change.

Understanding Regulatory Differences Between MLPs and IOUs

As a result of the structural differences between IOUs and MLPs, as well as the divergent approaches that lawmakers have taken in regulating these two types of utilities, the environmental policies that govern IOUs are different from those governing MLPs. Below is an overview of several relevant climate policies that have been enacted in the Commonwealth and their relationships to MLPs.

Renewable Portfolio Standards

In 2003, Massachusetts was one of the first U.S. states to adopt a renewable portfolio standard (RPS). According to the Department of Energy Resources (DOER), “The Massachusetts Renewable Energy Portfolio Standard requires retail electricity suppliers ... [to] obtain a percentage of the electricity they serve to their customers from qualifying renewable energy facilities.”¹⁴ This percentage of renewable energy started at 1% and has increased incrementally on an annual basis. The minimum RPS percentage was 14% in 2019 and is 18% in 2021.¹⁵

¹³ Cammy Peterson et al., “Municipal Light Plants in Massachusetts: Spotlight on Clean Energy Initiatives” (Metropolitan Area Planning Council, July 2016), https://www.mapc.org/wp-content/uploads/2017/10/MAPC_MLP-WhitePaper_Jul2016.pdf, pg 5.

¹⁴ “Program Summaries: Program Summaries Summaries of All the Renewable and Alternative Energy Portfolio Standard Programs.” (Commonwealth of Massachusetts), accessed May 26, 2021, <https://www.mass.gov/service-details/program-summaries>.

¹⁵ “14.07: Renewable Energy Portfolio Standard - Class I,” 225 CMR 14.00: RENEWABLE ENERGY PORTFOLIO STANDARD - CLASS I (Department of Energy Resources, n.d.), <https://www.mass.gov/doc/rps-class-i-regulations-clean/download>, pg 36.

A utility's renewable energy percentage is determined by the ownership, and retirement of, Class I renewable energy credits (RECs). RECs represent "the positive environmental attributes associated with energy production ... one REC is created each time a qualified facility generates one megawatt-hour (MWh) of electricity."¹⁶ Facilities whose energy qualifies for Class I RECs are those that began operating after 1997 and generate electricity using any of the following technologies:

- Solar photovoltaic
- Solar thermal electric
- Wind energy
- Small hydropower
- Landfill methane and anaerobic digester gas
- Marine or hydrokinetic energy
- Geothermal energy
- Eligible biomass fuel

Whereas IOUs and competitive suppliers must adhere to the RPS, MLPs do not.¹⁷ Clean energy adoption and integration into energy mixes have therefore not been uniform across the Commonwealth's MLPs.

Clean Energy Standard

In 2018, Massachusetts added to the RPS by establishing the Clean Energy Standard (CES). Similar to the RPS, the CES "sets a minimum percentage of electricity sales that utilities and competitive retail suppliers must procure from clean energy sources. The minimum percentage begins at 16% in 2018, and increases 2% annually to 80% in 2050."¹⁸ Energy sources that are eligible for the CES include all Class I resources as well as other technologies that meet specified emissions and age requirements. In other words, the CES is an extension of the RPS.¹⁹ As is the case with the RPS, MLPs are exempt from requirements to meet the CES.²⁰

The Energy Diversity Act and An Act to Advance Clean Energy

In 2016, Governor Charlie Baker signed into law the Energy Diversity Act which, for the first time, mandated that the state's electric distribution companies procure 1,600 MW of offshore wind procurement. This goal was expanded in 2018 when Massachusetts passed An Act to Advance Clean Energy, which called for studies on the benefits of procuring 1,600

¹⁶ "Program Summaries: Program Summaries Summaries of All the Renewable and Alternative Energy Portfolio Standard Programs." (Commonwealth of Massachusetts), accessed May 26, 2021, <https://www.mass.gov/service-details/program-summaries>.

¹⁷ "14.07: Renewable Energy Portfolio Standard - Class I," 225 CMR 14.00: RENEWABLE ENERGY PORTFOLIO STANDARD - CLASS I (Department of Energy Resources, n.d.), <https://www.mass.gov/doc/rps-class-i-regulations-clean/download>, pg 9

¹⁸ "Program Summaries: Program Summaries Summaries of All the Renewable and Alternative Energy Portfolio Standard Programs." (Commonwealth of Massachusetts), accessed May 26, 2021, <https://www.mass.gov/service-details/program-summaries>.

¹⁹ Ibid.

²⁰ "(4) Clean Energy Standard," 310 CMR 7.75 CLEAN ENERGY STANDARD (Department of Energy Resources, July 10, 2020), <https://www.mass.gov/doc/310-cmr-775-clean-energy-standard-amendments-july-2020/download>, pg 6.

MW of offshore wind procurement in addition to the initial 1,600 MW procured.²¹

These procurement goals, which are beneficial in attracting offshore wind developers and providing clear directions for utilities to procure a critical clean energy resource, do not include MLPs.²² While this does not preclude MLPs from procuring offshore wind, it does not require them to procure energy from offshore projects, as it does for IOUs.

Global Warming Solutions Act

In 2008, the Commonwealth passed the Global Warming Solutions Act. This act was the first law to set a legally binding statewide greenhouse gas reduction goal (a reduction of 80% below statewide greenhouse gas emissions by 2050). It also established a requirement for greenhouse gas emissions to be reported to the state. This Act marked a historic achievement at the time and an important step in Massachusetts climate policy.^{23, 24}

Green Community Act

The Green Community Act was another influential piece of legislation passed in 2008 which aimed, in part, to support the Commonwealth in achieving the newly established goal through the Global Warming Solutions Act. Notably for the purposes of this report, the Green Community Act drastically expanded energy efficiency efforts in the state while also establishing the Green Communities Program.²⁵

Section 19 of the Act charts the path for establishing energy efficiency programs administered by distribution and municipal aggregators. It specifies that program plans must be approved by state agencies, identifies specific funding sources (coming from state programs and mandatory charges to customers) and, importantly, allocates a percentage of spending to low-income residents.²⁶ This section was the foundation of the program now called Mass Save.

Notably, MLPs were not included in this section and thus are not required to establish energy efficiency programs that adhere to the specified guidelines.²⁷ As an additional effect, funding for MLPs from specified sources was not guaranteed.

21 "Offshore Wind Study" (Massachusetts Department of Energy Resources, May 2019), <https://www.mass.gov/doc/offshore-wind-study/download>, pg 1.

22 "Section 21," An Act to Advance Clean Energy (Commonwealth of Massachusetts, 2018), <https://malegislature.gov/Laws/SessionLaws/Acts/2018/Chapter227>.

23 "Global Warming Solutions Act Background." Massachusetts Executive Office of Energy and Environmental Affairs. Accessed May 26, 2021. <https://www.mass.gov/service-details/global-warming-solutions-act-background>.

24 "An Act Establishing the Global Warming Solutions Act," Chapter 298 (Commonwealth of Massachusetts, 2008), <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter298>, Chapter 21N Section 2.

25 "Global Warming Solutions Act Background." Massachusetts Executive Office of Energy and Environmental Affairs. Accessed May 26, 2021. <https://www.mass.gov/service-details/global-warming-solutions-act-background>.

26 "An Act Relative to Green Communities," Chapter 169 (Commonwealth of Massachusetts, 2008), <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter169>, Section 19.

27 Ibid.

In addition to energy efficiency, the Act launched the Green Community program. The law stipulated that the state was required to develop a program that would “provide technical and financial assistance, in the form of grants and loans, to municipalities and other local governmental bodies that qualify as green communities.”²⁸ The Department later specified criteria that towns must satisfy to qualify as a Green Community.²⁹ MLPs were included in this program; however, the criteria they must meet differ from those of other municipalities.³⁰

Next-Generation Climate Bill

In 2021, Governor Baker signed An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy into law. For numerous reasons, this legislation was historic and made substantial progress in advancing efforts to mitigate the climate crisis. Notable advancements include increasing the state’s emissions targets to net zero by 2050,³¹ implementing incremental and sector-specific targets,³² and enabling the adoption of a net zero stretch energy code.³³ For the purposes of this report, the most important policy advancement of this legislation was the adoption of an MLP Greenhouse Gas Emissions Standard (GGES). This mandate requires that MLPs be powered by 50% non-emitting energy by 2030, 75% non-emitting by 2040, and net zero by 2050.³⁴ This guidance marks the first time in the Commonwealth’s history that MLPs have been required to meet a standard emissions level.

While this emissions standard represents meaningful progress, substantial differences remain in the standards that IOUs and MLPs must meet. The GGES has looser requirements and is less prescriptive than the RPS and other IOU regulations. For example, the GGES includes more energy sources compared with IOU regulations. In addition to all energy sources that qualify for the Class I and Class II RPS, the GGES includes energy types such as nuclear energy and “efficient” natural gas facilities that meet certain criteria.³⁵ The GGES also does not specify what percentage of non-emitting energy resources should come from Class I sources (i.e., new, clean energy sources such as solar and wind energy).

²⁸ Ibid. Section 10(d)

²⁹ “Becoming a Designated Green Community” (Green Communities Division), accessed May 26, 2021, <https://www.mass.gov/guides/becoming-a-designated-green-community>.

³⁰ “Program Guidance,” Green Communities Designation and Grant Program (Green Communities Division, June 2020), <https://www.mass.gov/doc/green-communities-program-guidance/download>.

³¹ “An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy,” Chapter 8 (Commonwealth of Massachusetts, 2021), <https://malegislature.gov/Laws/SessionLaws/Acts/2021/Chapter8>, Section 5(b).

³² Ibid. Sections 3A(a) & 5(b)

³³ Ibid. Sections 31(14)

³⁴ Ibid. Sections 11F3/4 (b)

³⁵ Ibid. Sections 11F3/4 (c) (i)-(ii)

TABLE 2

COMPARING IOU AND MLP REGULATORY REQUIREMENTS

FOCUS

CLEAN ENERGY REGULATIONS

ENERGY EFFICIENCY REGULATIONS

SPECIFIC PROGRAMS	INVESTOR-OWNED UTILITIES	MUNICIPAL LIGHT PLANTS
REQUIRED TO MEET RPS	✓	✗
REQUIRED TO MEET CES	✓	✗
REQUIRED TO CONTRACT FOR A MINIMUM CAPACITY OF CLEAN ENERGY	✓	✗
REQUIRED TO MEET MLP GGES	✗	✓
REQUIRED TO SUBMIT ACTION PLANS	✓	✓
REQUIRED TO OBTAIN ACTION PLAN APPROVAL FROM THE DPU ^{36 37}	✓	✗
REQUIRED TO ALLOCATE % OF ENERGY EFFICIENCY FUNDING TO LOW-INCOME RESIDENTS	✓	✗
MANDATORY CUSTOMER CHARGE OF 2.5 MILLS PER KILOWATT-HOUR	✓	✗
MANDATORY CHARGE OF 0.5 MILL PER KILOWATT-HOUR TO RENEWABLE ENERGY TRUST FUND (RETF)	✓	OPT-IN

³⁶ IOUs submit Coalition Action Plans as part of their Energy Efficiency Investment Plan.

³⁷ "Guideline Interpreting 225 CMR 4.00" (Massachusetts Department of Energy Resources, February 20, 2020), <https://www.mass.gov/doc/rcs-guideline-revised-2202020/download>, pg 6.

IOUs versus MLPs:

Understanding the Regulatory Differences in Clean Energy and Energy Efficiency

An overview of relevant state clean energy and climate policies further highlights variation in how IOUs and MLPs are regulated. **Table 2** summarizes several differences between MLPs and IOUs with respect to clean energy and energy efficiency.

Justice Within the Energy Sector

There is increased recognition that the energy sector, including MLPs, plays a role in both perpetuating and alleviating long-standing justice issues. There are key concepts that have been developed that help frame and focus the dynamics between issues of justice and equity within the energy sector. These concepts include environmental justice, environmental racism, energy equity, and energy justice. MCAN defines these terms in the following ways:

Environmental justice:

All people and communities have the right to equal environmental protection under the law and the right to live, work, and play in communities that are safe, healthy, and free of life-threatening conditions.

Environmental racism:

Actions and decisions that result, whether by conscious design or institutional neglect, in the disproportionate exposure of people of color to environmental hazards and environmental health burdens.

Energy equity:

The distribution of costs and benefits of an energy system (e.g., an electric grid) and the accessibility to affordable energy and programs across customers in a region or utility service territory.

Energy justice:

The goal of achieving equity in both social and economic participation in the energy system while remediating social, economic, and health burdens on groups historically harmed by the energy system (“frontline communities”).

Energy justice refers to the problems emerging from energy production and consumption, including energy poverty; the fair distribution of benefits and hazards; and the right of everyone concerned to be informed and involved in making decisions about their energy consumption, costs, and clean energy options. Energy justice ensures people have a say in what energy systems to build, where to build them, and how to distribute associated benefits and risks.³⁸ The movement towards energy justice begins with answering several questions: *where* are the injustices, *who* is affected, *how* are they affected, and *what* can we do about it?³⁹ By identifying these issues, injustices can be addressed and rectified.

The concept of energy justice is heavily inspired by the environmental justice movement, which is grounded in larger issues of representation, economic relations between the public and private sectors, and demographic groups.⁴⁰

These dynamics are present to varying degrees across all utilities in the Commonwealth and cannot be ignored in a discussion of MLPs and progress on climate mitigation and the clean energy transition. Addressing systemic biases in the energy sector that perpetuate energy inequities will reveal the often-invisible drivers that – if left unexamined – will undermine progress towards a just transition.

38 Clark A. Miller, Alastair Iles, and Christopher F. Jones, “The Social Dimensions of Energy Transitions,” *Science as Culture* 22, no. 2 (2013): pp. 135-148, <https://doi.org/10.1080/09505431.2013.786989>.

39 Raphael J. Heffron, Darren McCauley, and Benjamin K. Sovacool, “Resolving Society’s Energy Trilemma through the Energy Justice Metric,” *Energy Policy* (Elsevier, September 19, 2015), <https://www.sciencedirect.com/science/article/abs/pii/S030142151530077X>.

40 Michael Carnegie LaBelle, “In Pursuit of Energy Justice,” *Energy Policy* (Elsevier, March 28, 2017), <https://www.sciencedirect.com/science/article/abs/pii/S0301421517302082>.

Terminology: Energy Mix and Power Supply

Other important definitions for this Scorecard relate to the energy that is used by MLPs. In multiple instances, this Scorecard distinguishes between an MLP's power supply and energy mix. For the purposes of this report, these distinctions are based on the following definitions.

Power supply:

The combination of the various energy sources used to meet demand within MLPs. The power supply is based solely on the actual energy being used by an MLP; it does not account for environmental attributes (i.e., RECs) of an energy source and whether that source was retired by the MLP, sold, or purchased by another entity.

Energy mix:

The energy mix represents the legally accepted method of quantifying the percentage of fuel types, clean energy, and non-emitting energy based on the number of MWh retired that are given MA Class I attributes, MA Class II attributes, or emission-free energy attributes. In the utility sector, RECs represent the renewable characteristic of energy generation. When decoupled from energy generation (i.e., they are sold or are not purchased directly with the energy), that generation – no matter the source – cannot be represented as clean or non-emitting energy.⁴¹

⁴² The clean and renewable characteristic of an energy source is only considered when RECs are retired. In accordance with this legal practice, an MLP's energy mix reflects its actual mix based on the number and types of RECs that have been retired.

⁴¹ Todd Jones, Robin Quarrier, and Maya Kelty, "The Legal Basis for Renewable Energy Certificates" (Center for Resource Solutions, June 17, 2015), <http://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf>.

⁴² "Renewable Energy Certificates (RECs)," Green Power Partnership (Environmental Protection Agency, May 13, 2019), <https://www.epa.gov/greenpower/renewable-energy-certificates-recs>.

Scope of this Report

The aim of this Scorecard is to compare MLPs' progress in particular areas of policy and operation that are critical to mitigating climate change and transitioning to clean energy. Specifically, we assess progress in the contexts of energy transition, energy efficiency, transparency and community engagement, and policy context. An evaluation of MLPs

within these categories is necessary given the knowledge gaps around what MLPs are doing to address these issues.

This report seeks to present a comprehensive analysis of MLPs' efforts related to climate mitigation; however, this Scorecard does not track or otherwise account for areas of practice not directly related to climate change mitigation that may be important to MLPs and their customers. In particular, we did not factor in MLP rates, reliability of service, or customer service in general. MCAN acknowledges that these are key aspects of MLP operations and that the results presented in this report do not reflect efforts in these areas.

EVALUATING MUNICIPAL LIGHT PLANTS



Introduction

MCAN was intentional in developing the data collection process and scoring methods for this Scorecard. Recognizing the need to be transparent about our process, we refer to our methods in multiple instances and with varying levels of detail throughout this report. The following subsections present an overview of our data collection and scoring methods as well as a discussion of how these processes differ from those adopted in the prior Scorecard. Further information about our methods can be found in **Appendix A**, **Appendix B**, and in the Scoring Methods section of each performance category in **Chapter 4**.

Data Collection

Most data for this Scorecard were obtained from three sources: government documents, MLPs' responses to MCAN questionnaires, and MLPs' websites. Government documents were retrieved from the Massachusetts Department of Environmental Protection (DEP), Department of Energy Resources (DOER), and Department of Public Utilities (DPU). Documents were either retrieved directly from the respective Department's website or through direct outreach to a Department officer. Government documents relevant to this Scorecard include but are not limited to 2019 DPU Annual Reports, 2019 and 2017 AQ31 Reports, 2020 Municipal Action Plans (MAPs), and Lists of Qualified Generation Units.

A second important source of information was a series of MCAN questionnaires sent directly to MLPs. In this process, we granted MLPs several opportunities to provide information to MCAN that would help us understand their light plant's progress in the categories included in this Scorecard. The questionnaire process spanned 9 months. In June 2020, all MLPs were notified that MCAN planned to send a questionnaire to inform our upcoming Scorecard. Questionnaires were distributed a week later on June 18, 2020. From June to August 2020, extensive outreach (via phone and email) was conducted to ensure that all MLPs were aware of the questionnaire and that their questions or concerns were addressed. Additional email and phone outreach was conducted in January 2021 to all MLPs that had yet to respond to the questionnaire.

During this second round of outreach, each MLP received at least two emails and one phone call. They were given a deadline of February 1, 2021 to complete the survey. Twenty-six of 40 MLPs considered in this Scorecard responded to our survey during this period. Gosnold Electric Light Company was not considered in this report because of its small number of customers and limited energy distribution relative to other small MLPs.

The 40 MLPs were again contacted on February 17, 2021 with a request to complete a follow-up questionnaire. For the 26 MLPs that had responded to the initial questionnaire, this follow-up survey consisted of four questions that clarified some areas in the original questionnaire. For the remaining 14 MLPs, the follow-up survey was a much shorter, less complex version of the original. MLPs were asked to submit their follow-up responses by February 26, 2021. Four MLPs that had not yet completed the original survey responded along with 22 MLPs that had completed the original survey. In total, 30 MLPs submitted information to MCAN for this report over the 9-month data collection period, representing approximately three-quarters of Massachusetts' MLPs.

In addition to government documents and questionnaire responses from MLPs, each MLP's website provided data for numerous categories. Websites enabled us to gather primary information directly from MLPs as well as to verify information reported in government documents and in the questionnaire. Website searches were conducted methodically for each category. The data collection process for the metrics in each of the four performance categories, along with a full description of each web search, is described in **Appendix B**.

Data Verification

To ensure data accuracy to the fullest extent possible, MCAN conducted a two-week review process during which each MLP and its respective industry association (either MMWEC or ENE) could review and suggest revisions to the information we had collected. MCAN evaluated each of the suggested revisions and incorporated as many as possible while remaining consistent with our data collection methodology across all MLPs. Each MLP received a full description of MCAN's decision to either include or exclude each piece of information submitted for consider-

ation. Twenty-eight MLPs submitted revisions, of which MCAN accepted the vast majority. When suggested changes did not align with MCAN's methodology, MLPs were provided a description of why a revision could not be considered in this report.

In total, 32 of the 40 MLPs included in this report provided information and/or feedback on the data in this Scorecard.

Data Limitations

Our data collection and verification processes ensured an overall high level of accuracy. However, constraints exist in the data and our analysis. Most notably, when MLPs declined to respond to either of MCAN's questionnaires, limited resources were available from which to gather the data required for a select number of categories. Our data verification process provided MLPs that had not responded to either questionnaire an opportunity to suggest corrections to our results; however, not all MLPs responded. **Appendix C** describes our data limitations in more detail.

Scoring Methodology

MCAN evaluated MLPs in four categories for this report: (1) Energy Transition; (2) Energy Efficiency; (3) Transparency and Community Engagement and (4) Policy Context. MLPs could earn up to 100 points across all categories. Possible bonus points worth 21 points (with the potential for additional points) were allocated across the four categories. **Table 3** summarizes the point distribution, including bonus points.

The scoring methodology for each category was developed based on the broad set of criteria outlined below; a more detailed description appears in **Appendix A**. These criteria were used to assign a score to each MLP. Our data are generally current as of **early January 2021**. Certain categories, such as those used to determine an MLP's energy mix, were informed by the most recent data from 2020 or 2019.

TABLE 3

SCORING DISTRIBUTION BY CATEGORY

CATEGORY	TOTAL POINTS	POSSIBLE BONUS POINTS
ENERGY TRANSITION	50	8
ENERGY EFFICIENCY	25	3+
TRANSPARENCY AND COMMUNITY ENGAGEMENT	15	8
POLICY CONTEXT	10	2
TOTAL	100	21+

Note: + Indicates that additional bonus points are available

Energy Transition (50 points)

MLPs could receive up to 50 points for their energy transition efforts. Points were awarded based on nine subcategories intended to determine whether MLPs were transitioning to clean energy at a pace comparable to the rest of the state; measure the extent to which non-emitting sources constituted MLPs' energy mixes; and identify the extent to which MLPs have adopted, and enabled their residents to adopt, clean energy technologies while transitioning away from polluting and harmful technologies. Bonus points were available for programs and factors that were relevant to these categories but not factored into the nine subcategories.

Energy Efficiency (25 Points)

MLPs could receive up to 25 points for their efforts to increase energy efficiency. Points were awarded based on the availability and strength of free audits, energy rebates, and loans; the level of MLPs' investment in energy efficiency efforts; the effectiveness of MLPs' programs based on the energy saved; and, importantly, the extent to which energy effi-

ciency programs were responsive to issues of accessibility for low-income residents, non-English speakers, and renters. Bonus points were awarded for energy efficiency promotion, commercial energy efficiency programs, efforts to enhance energy efficiency for local municipalities, and any additional program(s) focused on energy efficiency or demand response that was not included in our methodology.

Transparency and Community Engagement (15 Points)

MLPs could receive up to 15 points for the steps they took to be transparent and engage their residents, particularly on issues of renewable energy and energy efficiency. Points were primarily distributed between subcategories indicating whether MLPs provided important information (e.g., light board meeting minutes) and materials on their websites; and whether MLPs had recently engaged their community on issues of renewable energy or energy efficiency, including the extent to which such information had guided or affected MLP policy. Several bonus points were awarded to MLPs that were transparent about REC retirement and the renewable nature of their portfolio based on the number of RECs retired in 2019.

Policy Context (10 Points)

This category, in which MLPs could receive up to 10 points, reflects MLPs' and local governments' efforts to create a policy context that facilitates the transition to a clean energy future. Points were awarded based on whether MLPs and MLP-served municipalities participated in opt-in statewide programs that enhance capacity for action on climate change as well as whether MLPs had adopted comprehensive climate plans focused on reducing greenhouse gas emissions. Bonus points were awarded to MLPs whose municipalities had opted into Mass Development's Property Assessed Clean Energy (PACE) program and to MLPs whose municipalities had standing committees that addressed issues related to energy and climate change.

Limitations in Scoring

MCAN firmly believes that our scoring methods are comprehensive and provide an accurate snapshot of MLPs and the progress that has

been made. However, limitations exist in our approach. Most notably, our methodology did not sufficiently score MLPs' efforts to address environmental justice, energy justice, and equity. While steps were taken to introduce these concepts into parts of this assessment, MCAN is committed to highlighting these issues in following iterations of this Scorecard. Limitations are discussed further in the following sections as applicable and in **Appendix C**.

Updates from 2019's Scorecard

As a result of countless discussions with MLP staff, experts, and advocates, several steps have been taken to update the methodology and data collection process compared to MCAN's 2019 MLP Scorecard. These adaptations were intended to (1) enhance the value of MCAN's Scorecard for advocates, light boards, MLP staff, MLP associations, and state officials; (2) clearly articulate MLPs' progress; and (3) provide a more in-depth understanding of the efforts that have been made in each MLP district.

Updates to the Methodology

Our methodology was updated in several areas to achieve the desired objectives. First, when possible, MCAN converted prior binary variables to categorical variables to better distinguish MLPs. When examining programs or policies, MCAN aimed to incorporate more attributes and details of each policy and program into the scoring. Second, MCAN added categories that have become more relevant and removed categories deemed less important. These decisions were based on changes to the policy context within which MLPs operate, the emergence of new areas of focus in environmental advocacy, and developments in MCAN's understanding of best practices in measuring the efforts being made in MLP districts. Finally, MCAN altered the overarching categories to be more explicit about our general areas of interest. In particular, we combined the categories of "Clean Energy" and "Dirty Energy" from the 2019 report into one category, "Energy Transition." We also divided the 2019 "Transparency and Leadership" category into two for this report: "Transparency and Community Engagement" and "Policy Context."

Updates to Data Collection

To realize our overall objectives, MCAN's data collection process was altered in a few significant ways from the 2019 report. First, we increased the amount of data taken directly from government resources that had not been available for the 2019 Scorecard. Such resources include the unreviewed AQ31/32 Reports and MAPs. Second, we increased the number of formal opportunities for MLPs to provide information while greatly limiting the amount of information included based on meetings, unrecorded conversations, pamphlets, and other less reliable sources. When MLPs did not respond to MCAN's questionnaire, we were explicit about the process by which we conducted searches to obtain relevant information not available through government documents.

Importantly, the changes to our methodology and data collection render the current scoring results **incomparable to MCAN's 2019 Scorecard**. Our methodology is likely to evolve further in subsequent iterations of the Scorecard. However, we are confident that our present advancements will enable future iterations to be directly comparable to this report.

Diversity of Municipal Light Plants

MLP districts are incredibly diverse. They vary, sometimes substantially, in their governance structure and processes, resources, services provided, and service area size (i.e., number of customers and total energy distributed). In addition, the districts served by MLPs differ in their needs, priorities, municipal policies, resident demographics, and economic profiles.

The variation in MLP size is especially important to consider. Simple linear regressions of other measurable differences between MLPs, such as median district income and financial reserves, showed that these factors were not statistically significant in determining scoring outcomes. MLP size (measured by number of customers and energy distributed) was found to be somewhat significant. However, the regression also demonstrated a poor fit, indicating that other factors (e.g., information

included in scoring) were more important than size in determining our results (see **Appendix D**)

Residential MLP electricity rates did not appear to have a statistically significant impact on MLPs' overall scores. This observation dispels the frequently stated notion that MLPs cannot effectively increase energy efficiency or transition to clean energy without increasing rates significantly. While some policies and practices undoubtedly affect rates overall, initial models indicate that ambitious steps to combating climate change can be taken without drastically increasing the costs that customers pay for their electricity.

Despite the diversity of districts, evaluating MLPs as a group of actors provides insight into specific contributions these public utilities are making in key performance areas – including energy efficiency, a just transition, and transparency. The unique characteristics of individual MLP districts also provide the local context through which our final scoring can be better understood, district by district.

BREAKING DOWN THE SCORES

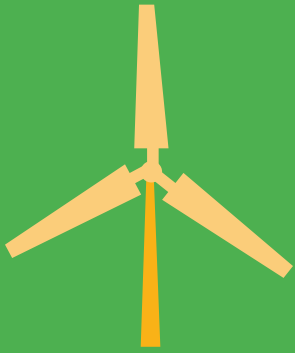


Section Overview

To provide an in-depth analysis of the results of this Scorecard, the following sections break down each of the four categories used to score MLPs: Energy Transition, Energy Efficiency, Transparency and Community Engagement, and Policy Context. We provide the following in each section:

-
- ① An introduction outlining the importance and justification for including the category in our analysis
 - ② A description and breakdown of the scoring method used for the category
 - ③ An overview of MLPs' scores in the category
 - ④ An analysis of our results and observations
 - ⑤ Recommendations for how MLP stakeholders can enhance efforts in the category
-

These sections offer MLP stakeholders a clear understanding of the data gathered and scored for this Scorecard, MLPs' progress in each category, and potential next steps to build on the progress thus far.



Energy Transition

(50 points)

Introduction

An energy transition is underway in Massachusetts. With the adoption and acceleration of the RPS, adoption of a net zero target by 2050, and aggressive interim targets for 2030 and 2040, the Commonwealth is taking significant steps to drastically reduce emissions and transition to clean energy. For the state to effectively accomplish this transition, *every part of the electricity sector* must be a part of it.

MLPs represent 14% of the energy grid in the Commonwealth. Unlike IOUs, MLPs are not required to adhere to the RPS. In fact, prior to the adoption of *An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy*, they were not required by the state to meet any emissions standards for clean or non-emitting energy. The lack of regulatory oversight and policy levers has meant that MLPs vary in their level of emphasis on reducing emissions and transitioning their operations.

MLPs are well positioned to lead the energy transition for numerous reasons. As public entities, MLPs are responsible for addressing the needs and desires of their customers and communities. They also have more flexibility to be ambitious in developing strategies for a clean energy transition because they are non-profit utilities not beholden to shareholders or profit margins. Finally, MLPs can own energy generation

facilities, which enhances their capacity to directly contribute to the development and diffusion of clean energy projects.

This section examines each MLP's progress in transitioning to clean and non-emitting energy. Specifically, this section assesses MLP progress in the energy transition by identifying (1) MLPs' efforts to transition to clean energy; (2) MLPs' adoption of non-emitting sources; and (3) the extent to which MLPs have adopted, and enabled their residents to adopt, clean energy technologies while transitioning away from polluting and harmful technologies. Following a discussion of MCAN's scoring methods and an analysis of the results, this section outlines recommendations for MLPs to enhance their efforts in the energy transition moving forward.

Energy Transition Scoring Methods

In scoring the progress that MLPs have made in energy transition, MCAN acknowledges the unique nature of individual MLPs while recognizing the importance of identifying progress relative to statewide goals. The data used to score MLPs in this section provide a comprehensive snapshot of MLPs' progress. However, they may not include all dimensions of energy transition in which MLPs are involved. **Table 4** describes the metrics included in our scoring and summarizes how MLPs were scored.

The percentage of clean and non-emitting energy in MLPs' energy mixes played a significant role in the scoring of this category. MCAN analyzed and scored the percentage of clean energy in MLPs' energy mixes, using the 2019 RPS of 14% clean energy as a standard target. Progress in the percentage of clean energy between 2017 and 2019 was measured against the change in the RPS over that same period (i.e., an increase of 2%). The data used to determine these scores were drawn from MLPs' 2017 and 2019 AQ31 reports submitted to the DEP. At the time of the Scorecard's publication, the 2019 AQ31 reports had not been reviewed by the DEP.

Given considerable variation in the percentage of non-emitting energy in energy mixes across MLPs, MCAN compared MLPs to each other in

this category on a scale of 0–100%. To determine non-emitting energy for MLPs, MCAN included RECs and emissions-free energy credits (EFECs) that would be eligible for consideration by the DEP in the AQ31 report.⁴³ This includes non-emitting MWh from municipally owned generators, MWh from a generator with which an MLP has an electricity contract, and MWh that are eligible for the Massachusetts RPS (either Class I or Class II).⁴⁴ MWh that qualified as Class II RECs in other Northeastern states and were purchased without the energy were not considered.

43 "AQ 31 Optional Greenhouse Gas Emissions Reporting Form and Spreadsheet for Municipal Retail Sellers of Electricity" (Massachusetts Department of Environmental Protection, n.d.), <https://www.mass.gov/doc/instructions-aq31-optional-ghg-reporting-for-municipal-retail-sellers/download>, pg 3, No. 6.

44 Ibid.

TABLE 4 ENERGY TRANSITION SCORING METRICS AND CATEGORIES

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
PERCENTAGE OF CLEAN ENERGY	10	Number of Class I RECs retired compared to total energy sold in 2019	Scored on a scale between 0% and 14% (14% being equal to the 2019 RPS level): $\geq 14.00\%$ yielded full points; $< 0.5\%$ yielded zero points
RETIRED CLASS I RECS	5	If the number of Class I RECs retired was greater than zero in 2019	If MLPs retired any Class I RECs, they received full points in this category
CLEAN ENERGY % CHANGE (2017-2019)	5	Number of Class I RECs retired in 2017 and 2019 compared to total energy sold in the respective years	Scored based on the rate of change in the percentage of clean energy between 2017 and 2019: an increase in % clean energy of 2% (equal to the increase in the RPS between 2017 and 2019) yielded full points.
PERCENTAGE OF NON-EMITTING ENERGY	10	Number of non-emitting MWh retired compared to total energy sold in 2019	Scored on a scale of 0–100%: MLPs with $\geq 80\%$ non-emitting energy received full points; those with 0% non-emitting energy received zero points

TABLE 4**ENERGY TRANSITION SCORING METRICS AND CATEGORIES**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
CLEAN RENEWABLE SITING PER CAPITA (kW/CUSTOMER)	3	Number of kW of Class I renewables installed in MLP districts per customer	Scored on a range between 1.0 kW and 0.0 kW per customer, with MLPs with ≥ 1.0 kW per customer receiving full points
MLP SOLAR REBATE PROGRAM SPENDING (\$/CUSTOMER)	2	Dollar amount spent through the MLP Solar Rebate Program to date	Scored within a range of \$0.01/customer and \$5.00/customer; MLPs that spent $\geq \$5$ /customer received full points
NET METERING POLICY	5	Existence of a policy, size of residential system capacity limit, existence of aggregate capacity limit, and \$/kWh credited to customers for excess energy	Scored based on the existence of a net metering policy as well as characteristics found to affect policy strength. Methods for assessing policy characteristics were derived using regulations in 220 CMR 18.
BATTERY STORAGE ADOPTION	5	Utility-scale battery storage installed or planned; whether the battery's source of energy was solar, grid mix, or both	Scored on whether utility-scale batteries were installed or planned and the battery's energy source. Full points were awarded for installed batteries connected to solar.
PLANS FOR GAS SERVICES AND NUCLEAR ENERGY CONTRACTS	5	Stated plans for nuclear energy contracts and, when relevant, gas services	Scored on whether MLPs planned to decrease, not change, or increase nuclear energy in their energy mix and gas services. Full points were awarded for plans to decrease nuclear or when nuclear was not present in the energy mix.
TOTAL	50 + BONUS POINTS		

TABLE 4**ENERGY TRANSITION SCORING METRICS AND CATEGORIES****BONUS**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
IMPLEMENTING ADVANCED METERING INFRASTRUCTURE (AMI)	1	Evidence of having adopted (or adopting) AMI	Full points awarded for MLPs that showed evidence of having adopted, or being in the process of adopting, AMI
ELECTRIC VEHICLE CHARGING REBATE	1	Existence of rebate	Full points awarded for MLPs that offered rebates for charging infrastructure
MOR-ELECTRIC VEHICLE (EV) REBATES PER CUSTOMER	1	How many MOR-EV rebates were processed during 2019 and 2020	Full points awarded if greater than the average number of MOR-EV rebates per customer were processed in the MLP's district
100% CLEAN ENERGY OPT-IN PROGRAM	1	Existence of an opt-in program that allowed residents to become 100% renewable by retiring RECs	Full points awarded for MLPs that offered a 100% clean energy program
BATTERY STORAGE: INSTALLED WITH MORE PLANNED	2	If MLPs had already installed battery storage and were planning to install more	Full points awarded to MLPs planning to install more utility-scale battery storage
PERCENT OF CLEAN ENERGY 10% GREATER THAN RPS	2	If MLPs have a clean energy percentage greater than 10% above the RPS	Full points awarded to MLPs that have greater than 24% clean energy
TOTAL	8		

MCAN used the legally accepted practice of tracking the number of RECs and EFECs that MLPs retired to determine the percentage of clean and non-emitting energy. In the utility sector, RECs represent the renewable characteristic of energy generation. EFECs represent the emissions-free characteristics of non-renewable resources (e.g., nuclear energy). When decoupled from energy generation (i.e., RECs are sold or are not purchased directly with the accompanying energy), that generation – no matter the source – **cannot be represented as clean energy**.^{45, 46} The clean and renewable characteristic of an energy source is only considered when RECs are retired. The clean energy of MLPs, and their progress in clean energy as measured in this Scorecard, was based on the number of RECs that MLPs retired in 2019. Similarly, when determining non-emitting energy, only the non-emitting MWh that were retired by MLPs (including Class I RECs, Class II RECs, and EFECs) were considered.

It is worth noting that MLPs, through their capacity to own energy generation, have invested in clean energy projects across the Commonwealth and the Northeast.^{47, 48, 49} However, MCAN and other statewide actors maintain that the RECs for these projects must be retired by MLPs on an annual basis in order for the projects' renewable characteristics to be accounted for as part of an MLP's energy mix. If the Scorecard were to represent any RECs that came from these projects and had been sold by MLPs, we would be double counting; that is, the RECs would have been purchased by an IOU or another actor and thus already accounted for in the energy sector.

MLPs' efforts to adopt clean technology represent another key component of this analysis. These data include projects undertaken by MLPs to install clean technology (e.g., utility-scale battery technology) as well as information on the availability and strength of programs and policies that enable customers to transition to clean technology. In our scoring, MCAN emphasized programs and policies that support residents in transitioning to renewable energy (e.g., the MLP Solar Rebate Program and Net Metering Policies). We also included programs that support the transition to electric vehicles in the Bonus section. This section also scores the progress made in technology adoption by tracking the clean renewable capacity in MLP districts as well as (in the Bonus section)

45 Todd Jones, Robin Quarrier, and Maya Keltz, "The Legal Basis for Renewable Energy Certificates" (Center for Resource Solutions, June 17, 2015), <http://resource-solutions.org/wp-content/uploads/2015/07/The-Legal-Basis-for-RECs.pdf>.

46 "Renewable Energy Certificates (RECs)," Green Power Partnership (Environmental Protection Agency, May 13, 2019), <https://www.epa.gov/greenpower/renewable-energy-certificates-recs>.

47 "Spruce Mountain Wind" (Patriot Renewables, LLC), accessed May 26, 2021, <https://www.patriotrenewables.com/projects/spruce-mountain-wind/>.

48 "Wind" (Massachusetts Wholesale Electric Company), accessed May 26, 2021, <https://www.mmwec.org/how-we-are-green/wind-2/>.

49 D. E. Shaw Renewable Investments, "Energy New England and D. E. Shaw Renewable Investments Complete 50 MW Solar Agreement," (Cision PR Newswire, September 28, 2020), <https://www.prnewswire.com/news-releases/energy-new-england-and-d-e-shaw-renewable-investments-complete-50-mw-solar-agreement-301138544.html>.

the adoption of electric vehicles, which was done by tracking the total number of MOR-EV Rebates processed between 2019 and 2020.⁵⁰ The ranges used for some of the metrics were established specifically in order to identify differences between MLPs. For example, when scoring the clean renewable capacity in MLP districts, MLPs were scored on a scale from 0.00 kW – 1.00 kW per customer. Similarly, investment in the MLP rebate program was assessed on a scale of \$0.01–\$5.00 per customer. While these ranges appear arbitrary, upon evaluating MLP data, the ranges were found to provide a distribution that enables a clear understanding of MLPs’ progress and level of spending through the program relative to each other. Using the number of customers in the denominator controlled for MLP district sizes.

In other instances, ranges and characteristics were established for explicit reasons. For example, net metering policies were assessed on policy characteristics congruent with state regulations in 220 CMR 18 to which IOUs are required to adhere. One exception is the system capacity limit for residential solar: MLPs received 1 point if they had a residential system limit greater than 10 kW. This was based on available information that average solar systems range between 2 kW and 20 kW and that a 10-kW system will produce slightly more energy than the average household uses.^{51, 52} To ensure that net metering policies are not restricting solar installation, any limits should be well above the average to accommodate larger systems.

Finally, MCAN accounted for MLPs’ intentions and efforts to transition away from gas services (where applicable) and harmful energy sources, specifically nuclear energy. While existing regulations consider nuclear energy a non-emitting energy source, MCAN contends that the high risk nuclear poses to local communities living near nuclear facilities and nuclear waste sites – which are disproportionately communities of color and low-income communities – do not coincide with MCAN’s vision of a just energy future. As such, MCAN considers it necessary for MLPs to reduce dependence on nuclear energy over time, and we score MLPs’ intentions to do so. All energy transition scores are summarized in **Table 5**.

50 While we believe that using MOR-EV rebates processed in MLP communities between 2019 and 2020 is the most effective proxy readily available for electric vehicle adoption, we acknowledge that some limitations exist in this dataset (as outlined in Appendix C). To accommodate for some variance and the potential inclusion of non-electric alternative vehicles that may have been included in the dataset, we scored this metric based on the average adoption across MLPs. In this way, minor inaccuracies in the data would be less likely to influence scoring.

51 Nate Hausman, Emma Krause, and Kaitlin Kelly, “A Massachusetts Homeowner’s Guide to Solar: Leases, Loans, and PPAs” (Massachusetts Department of Energy Resources, n.d.), <https://www.mass.gov/files/documents/2016/12/rm/ma-home-owners-guide-to-solar-financing-2-3.pdf>, pg 3.

52 “Solar Sizing” (Eversource), accessed May 26, 2021, <https://www.eversource.com/content/wma/residential/save-money-energy/explore-alternatives/learn-about-solar-energy/is-solar-right-for-you/solar-sizing>.

TABLE 5

MLP SCORES IN ENERGY TRANSITION

Municipal Utility	Clean Energy	Clean Energy % Change	Class 1 Rec Retirement	Non-Emitting Energy	Renewable Siting	MLP Solar Rebate Program	Net Metering Policy	Storage Plans	Nuclear Plans	Bonus	Energy Transition Score		
	10 pts	5 pts	5 pts	10 pts	3 pts	2 pts	5 pts	5 pts	5 pts	8 pts	50 pts		
Concord	10	5	5	6	3	2	4	3	0	5		43	
Belmont	10	5	5	4	0	2	4	2	5	4		41	
Braintree	7	5	5	6	1	1	3	5	2	2		37	
Middleborough	2	5	5	4	2	1	3	3	5	3		33	
Holyoke	0	0	0	10	3	1	3	5	5	4		31	
Wellesley	5	5	5	2	0	2	4	3	2	3		31	
Taunton	1	3	5	4	3	1	4	4	0	4		29	
Groveland	4	3	5	2	3	1	2	0	5	0		25	
Hudson*	0	0	0	10	2	1	4	0	2	3		22	
West Boylston	0	0	0	6	2	1	3	5	2	3		22	
Shrewsbury	0	0	5	4	1	2	3	0	2	4		21	
Sterling	0	0	0	6	3	1	2	5	2	2		21	
Templeton	0	0	0	6	3	2	3	4	2	1		21	
Holden	1	3	5	6	0	1	3	0	0	1		20	
Norwood	0	0	0	2	0	1	4	4	5	3		19	
South Hadley	0	0	0	10	0	2	3	0	2	2		19	
Wakefield	0	0	0	6	0	2	3	4	2	2		19	
Ashburnham	0	0	0	4	3	1	2	5	2	0		17	
Chicopee	0	0	0	2	2	1	3	2	5	2		17	
Hingham*	0	0	0	6	0	2	4	2	0	3		17	
Groton	0	0	0	4	2	1	4	0	2	3		16	

TABLE 5

MLP SCORES IN ENERGY TRANSITION

MUNICIPAL UTILITY	CLEAN ENERGY	CLEAN ENERGY % CHANGE	CLASS 1 REC RETIREMENT	NON-EMITTING ENERGY	RENEWABLE SITING	MLP SOLAR REBATE PROGRAM	NET METERING POLICY	STORAGE PLANS	NUCLEAR PLANS	BONUS	ENERGY TRANSITION SCORE		
	10 PTS	5 PTS	5 PTS	10 PTS	3 PTS	2 PTS	5 PTS	5 PTS	5 PTS	8 PTS	50 PTS		
HULL	0	0	0	6	1	0	5	0	2	2		16	
IPSWICH	0	0	0	4	2	2	3	0	2	3		16	
MANSFIELD	0	0	0	6	1	2	4	0	0	3		16	
MARBLEHEAD	0	0	0	4	0	1	4	2	2	3		16	
READING	0	0	0	2	0	2	3	4	2	2		15	
WESTFIELD*	0	0	0	6	2	1	4	0	0	2		15	
PAXTON	0	0	0	8	0	1	2	0	2	1		14	
DANVERS*	0	0	0	6	1	1	3	0	0	2		13	
MIDDLETON*	0	0	0	6	3	1	0	3	0	0		13	
PEABODY	0	0	0	4	0	0	4	2	2	1		13	
BOYLSTON	0	0	0	6	0	1	2	0	2	1		12	
CHESTER	0	0	0	2	3	0	2	0	5	0		12	
GEORGETOWN*	0	0	0	6	0	1	4	0	0	1		12	
LITTLETON*	0	0	0	2	3	2	2	0	0	3		12	
MERRIMAC*	0	0	0	2	1	1	2	0	5	0		11	
N. ATTLEBOROUGH	0	0	0	4	0	1	3	0	2	1		11	
PRINCETON	0	0	0	2	3	1	0	0	2	2		10	
ROWLEY	0	0	0	2	2	2	3	0	0	0		9	
RUSSELL	0	0	0	2	3	0	2	0	2	0		9	
GOSNOLD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	

* indicates MLPs that did not submit questionnaires or provide feedback to MCAN for the purpose of this report

Results and Observations

Summary of Energy Transition Scores

The results above provide a useful snapshot of MLPs' performance, relative to each other, in actions that enhance and enable a clean energy transition. The average energy transition score was 19.2 points and the median score was 16.5 points. Most MLPs (24 out of 40) earned between 10 and 20 points. Six MLPs scored between 20 and 30 points, and seven received a score of 30 points or more. Concord, Belmont, and Braintree were the top three scorers in energy transition with 43, 41, and 37 points, respectively.

The overall scores in this section suggest that, while several MLPs are taking leadership and have made substantial progress, more work is needed to ensure that all MLPs effectively carry out a rapid energy transition. To provide an in-depth assessment of energy transition scores and their implications, the following subsections discuss the results of relevant subcategories and share key observations that help us better understand what specific actions must be taken to enhance MLPs' efforts to transition to clean, renewable energy.

Clean Energy

Overall, 31 of the 40 MLPs did not have any clean energy in their energy mix. While many of these MLPs used energy from clean energy sources, they did not retire Class I RECs; therefore, **they could not receive credit for these resources in their energy portfolio.** Our analysis demonstrates that the majority of MLPs have yet to incorporate Class I REC retirements into their strategies for transitioning to clean energy.

Of the nine MLPs that had clean energy in their energy mix, several made **significant progress and demonstrated leadership in the clean energy transition** (see **Table 6**). Two MLPs (Belmont and Concord) met and exceeded the 2019 RPS standard of 14% clean energy. Approximately 16.5% of Belmont's energy mix was clean energy and approximately 43% of Concord's energy mix was clean energy. These percentages, particularly that of Concord, clearly indicate that **MLPs are and can be leaders in the transition to clean energy** when they choose to adopt a strategy that combines Class I REC retirement with clean energy procurement.

In addition to Concord and Belmont, several other MLPs made significant progress integrating clean energy into their energy mix. As outlined in **Table 6**, eight MLPs increased the percentage of clean energy between 2017 and 2019. Five – Concord, Belmont, Braintree, Wellesley, and Middleborough – increased their percentage of clean energy at a pace faster than the RPS.

Considerable work remains to be done to increase the percentage of clean energy across MLPs and ensure that the entire Commonwealth rapidly transitions to clean energy. Even so, significant improvements are being made. These data reveal that MLPs are capable of leading in clean energy if they adopt aggressive policies and integrate Class I REC retirement.

TABLE 6

MLPS WITH CLEAN ENERGY IN 2019

NOTE:

* MLPs THAT MET OR
EXCEEDED THE 2019 RPS
OF 14%

** MLPs THAT INCREASED
THE PERCENTAGE OF CLEAN
ENERGY AT A RATE FASTER
THAN THE RPS BETWEEN
2017 AND 2019.

MUNICIPAL UTILITY	PERCENTAGE OF CLEAN ENERGY	PERCENTAGE CHANGE BETWEEN 2017 AND 2019
CONCORD	42.80% *	+35.79% **
BELMONT	16.56% *	+11.21% **
BRAINTREE	10.38%	+10.38% **
WELLESLEY	6.88%	+3.60% **
GROVELAND	5.08%	+1.71%
MIDDLEBOROUGH	2.64%	+2.64% **
TAUNTON	1.81%	+1.65%
HOLDEN	0.88%	+0.88%
SHREWSBURY	0.12%	-0.17%

Non-Emitting Energy

Some MLPs have invested considerably in non-emitting energy sources such as nuclear energy and hydropower, positioning themselves to be leaders in transitioning away from fossil fuels. As shown in **Figure 2**, three MLPs – Holyoke, South Hadley, and Hudson – had more than 80% non-emitting energy in their total energy mix. Holyoke’s energy mix was approximately 85% non-emitting, South Hadley’s energy mix was approximately 90% non-emitting, and Hudson’s energy mix was approximately 94% non-emitting. We observed a substantial drop-off following these three MLPs, with the remaining MLPs falling into the ranges of 40%–60%, 20%–40%, and 0%–20%.

⁵³ MCAN was unable to determine the sources of Russell’s non-emitting energy because they did not submit a DPU Annual Report in 201

While there was variability in which energy sources constituted the non-emitting portion of MLPs’ energy mix – spanning from nuclear energy to hydropower to wind and solar – nuclear energy was one of the primary sources for many MLPs. As observed in **Table 7**, while 10 MLPs did not use nuclear energy in 2019, **nuclear accounted for over 75% of the remaining 29 MLPs’ total non-emitting energy on average⁵³.**

FIGURE 2 PERCENTAGE OF NON-EMITTING SOURCES IN FUEL MIX

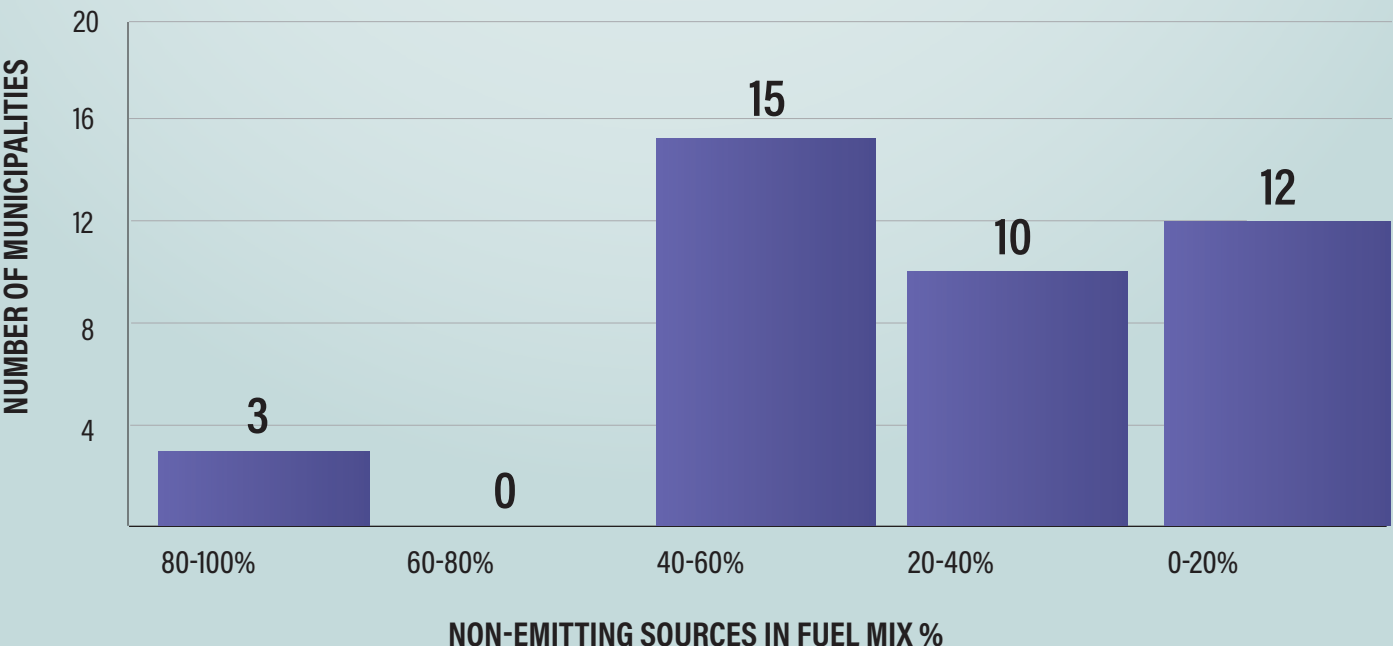


TABLE 7

PERCENTAGE OF NUCLEAR IN MLPS' ENERGY MIX

MUNICIPAL UTILITY	PERCENTAGE OF NUCLEAR ENERGY IN ENERGY MIX	NUCLEAR PERCENTAGE OF TOTAL NON-EMITTING ENERGY	MUNICIPAL UTILITY	PERCENTAGE OF NUCLEAR ENERGY IN ENERGY MIX	NUCLEAR PERCENTAGE OF TOTAL NON-EMITTING ENERGY
ASHBURNHAM	29.65%	77.68%	MERRIMAC	0%	0%
BELMONT	0%	0%	MIDDLEBOROUGH	24.73%	64.84%
BOYLSTON	36.77%	83.49%	MIDDLETON	42.21%	80.35%
BRAINTREE	20.03%	48.44%	N. ATTLEBOROUGH	26.59%	81.05%
CHESTER	0%	0%	NORWOOD	0%	0%
CHICOPEE	0%	0%	PAXTON	52.19%	86.16%
CONCORD	0%	0%	PEABODY	31.61%	86.40%
DANVERS	49.84%	92.41%	PRINCETON	0%	0%
GEORGETOWN	26.72%	66.37%	READING	16.84%	85.00%
GROTON	23.43%	76.11%	ROWLEY	0%	0%
GROVELAND	0%	0%	RUSSELL	N/A	N/A
HINGHAM	31.81%	68.18%	SHREWSBURY	30.37%	83.46%
HOLDEN	48.40%	85.00%	SOUTH HADLEY	83.33%	92.33%
HOLYOKE	29.04%	34.04%	STERLING	40.33%	87.06%
HUDSON	84.55%	89.82%	TAUNTON	3.42%	16.18%
HULL	44.42%	79.82%	TEMPLETON	44.80%	89.24%
IPSWICH	16.17%	70.47%	WAKEFIELD	36.30%	84.80%
LITTLETON	7.10%	69.58%	WELLESLEY	0%	0%
MANSFIELD	49.18%	91.09%	WEST BOYLSTON	49.01%	89.18%
MARBLEHEAD	29.44%	75.64%	WESTFIELD	41.01%	89.56%

NOTE: CALCULATIONS BASED ON 2019 DATA SUBMITTED IN MLP ANNUAL REPORTS TO THE DPU. NUCLEAR CONTRACTS WERE DIVIDED BY MLPS' TOTAL RETAIL ELECTRICITY SOLD TO DERIVE THE PERCENTAGE. PERCENTAGES DO NOT INCLUDE NUCLEAR ENERGY FROM THE GRID MIX.

When setting aside energy type, the overall results show that many MLPs are exceeding, or keeping pace with, IOUs in their efforts to decarbonize their energy mix, which had an estimated non-emitting percentage of 45% in 2019.^{54, 55} However, some MLPs remain heavily reliant on fossil fuels. The implementation of the first-of-its-kind emissions standard for MLPs marks an important step towards ensuring that progress is made across all MLPs.

54 "2019 Net Energy and Peak Load by Source," Energy, Load, and Demand Reports (ISO-NE, October 16, 2020), <https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/net-ener-peak-load>.

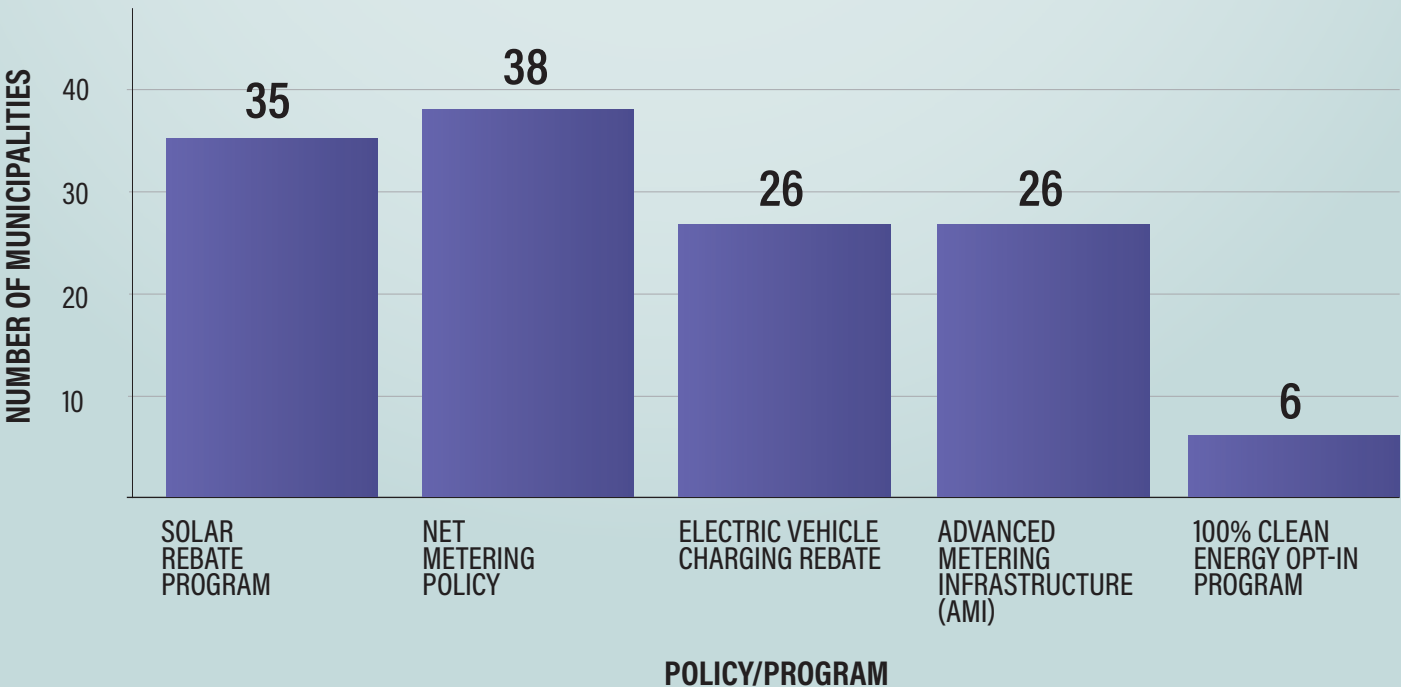
55 Based on general data from ISO-NE and accounting for sources that MCAN considers to be non-emitting (e.g., nuclear, hydro, solar, wind, and landfill gas)

Energy Transition Programs and Policies

As depicted in **Figure 3**, MLPs support a range of programs that help their residents transition to renewable energy and clean technology.

Equally important to the availability of programs for customers is the level of investment and the strength of these policies in MLP districts. When considering policy strength and investment, the results are more scattered. Such variation can be observed by looking at spending through the MLP Solar Rebate Program. While the median amount spent was

FIGURE 3 ENERGY TRANSITION REBATES AND PROGRAM PARTICIPATION



just over \$3.00 per customer, thirteen MLPs spent more than \$5.00 per customer, as of the publication of this report. The remaining twenty-two participating MLPs spent between \$0.01–\$5.00 per customer.^{56, 57} Concord, Ipswich, and Littleton spent more per customer than any other MLP, spending \$26.41, \$19.94, and \$11.07 per customer, respectively.

⁵⁶ While Holyoke did not participate in the program, they were awarded one point in this category because of the unique solar loan program that they provide to residential customers.

⁵⁷ The data received from DOER was up-to-date as of August, 2021.

The strength of net metering policies among MLPs based on the characteristics we monitored also varied widely. As outlined in **Figure 4**, when factoring in aggregate capacity limits, residential capacity limits, and the policy’s excess generation credit, **Hull was the only MLP to receive full points**. Most MLPs met either one or two of our criteria, and nine MLPs’ net metering policies did not meet any.

The most common aspect on which MLPs fell short was providing a strong excess generation credit, with only nine MLPs providing a credit equal to or greater than the residential rate (**Figure 5**). Nearly half of all MLPs with net metering policies had residential system capacity limits greater than 10 kW and/or no aggregate residential capacity limits.

In other areas measuring efforts to provide programs and policies that help transition residents to clean energy, we observed substantial

FIGURE 4 NET METERING POLICY CHARACTERISTICS SATISFIED

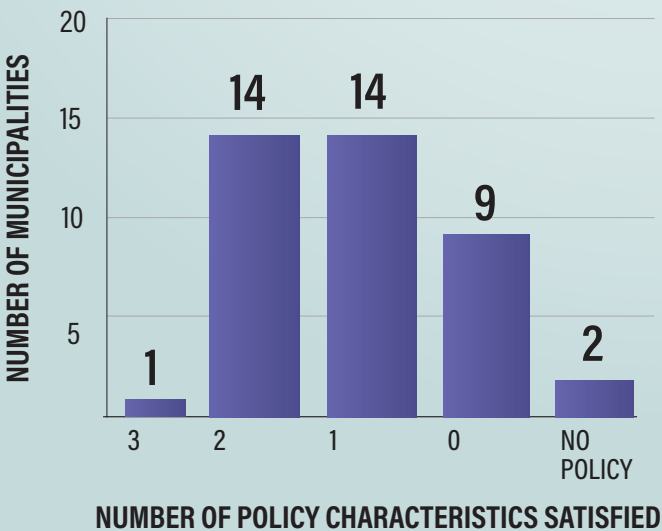
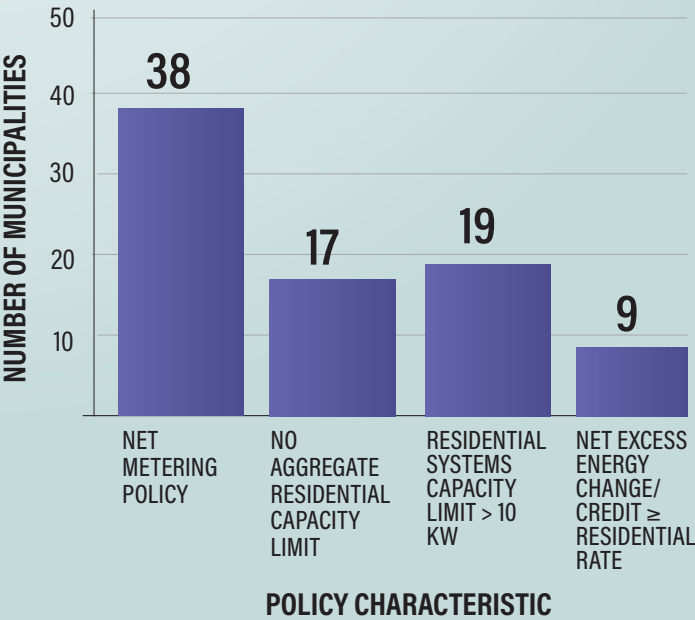


FIGURE 5 NET METERING POLICY CHARACTERISTICS



progress. Well over half of MLPs offered an electric vehicle charging rebate and have installed (or are in the process of installing) Advanced Metering Infrastructure (AMI). Electric vehicle infrastructure is a critical part of the transportation sector's electrification and the transition to clean transportation technology (e.g., electric vehicles). Efforts made by MLPs to incorporate incentives and rebates for electric vehicles and electric vehicle infrastructure into their energy transition efforts will go a long way in facilitating an equitable and efficient clean energy transition. The same is true of including AMI, which involves installing smart meters, communication networks, and data management systems that enable two-way communication between utilities and customers. AMI greatly enhances MLPs' resiliency and capacity to integrate distributed resources.⁵⁸ The relatively widespread inclusion of this infrastructure in MLP operations is promising and could be immensely helpful in their efforts to integrate more clean energy resources.

Clean Technology Adoption

Results in the categories measuring clean technology adoption showed substantial variation across MLPs. When looking at clean energy installed in MLP districts per capita, we observed that 12 MLPs had installed greater than 1.0 kW of clean energy per customer whereas 14 had installed less than 0.33 kW per customer; the remaining MLPs fell somewhere in between. Of the MLPs that had installed more than 1.0 kW of clean energy per customer, some MLPs installed considerably more than others. Most notably, Chester, Russell, and Holyoke installed approximately 8.68 kW, 6.56 kW, and 3.54 kW of clean energy per customer, respectively.

The adoption of battery storage technology also varied. As illustrated in **Figure 6**, 10 MLPs had already adopted utility-scale battery technology, four of which were planning to install more. Additionally, the storage systems in five of these 10 MLPs were either partially or completely powered by solar energy. Battery storage offers a prime opportunity for MLPs to leverage their flexibility and innovative capacity to lead the Commonwealth's energy transition.

FIGURE 6 BATTERY TECHNOLOGY ADOPTION

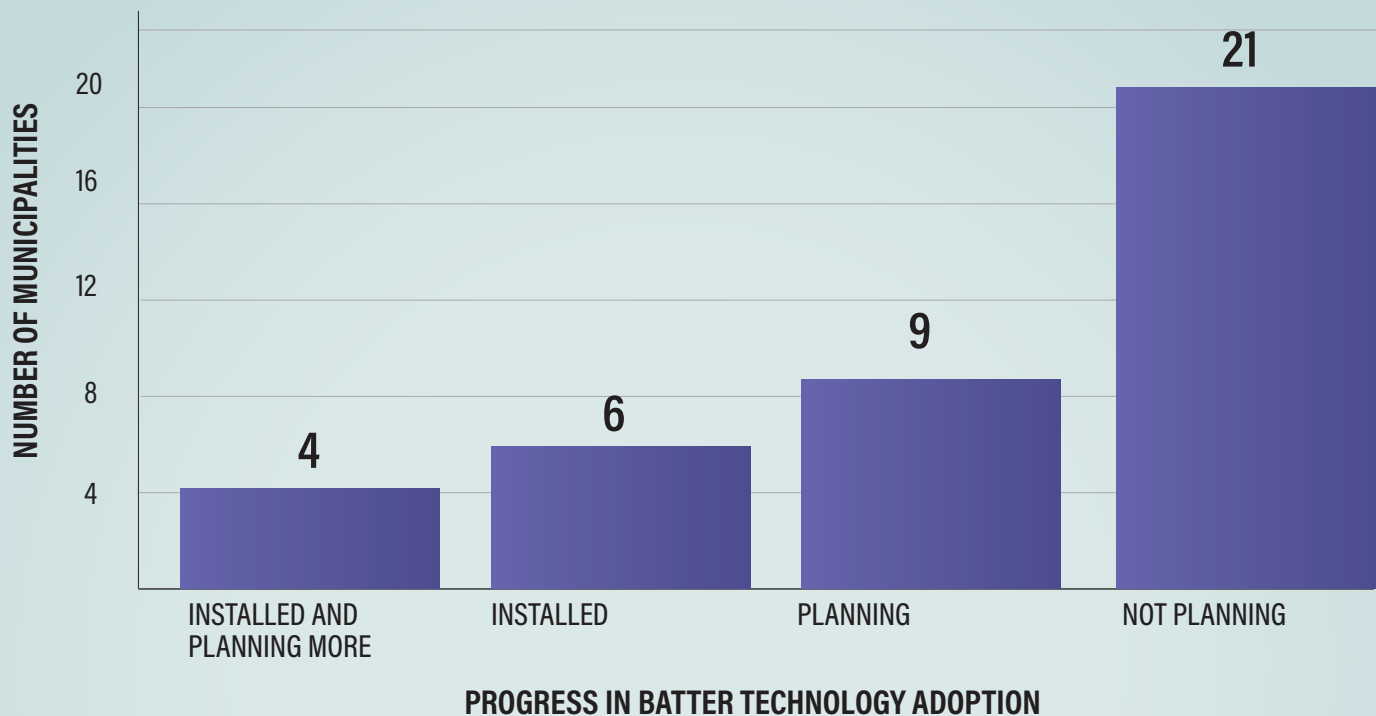
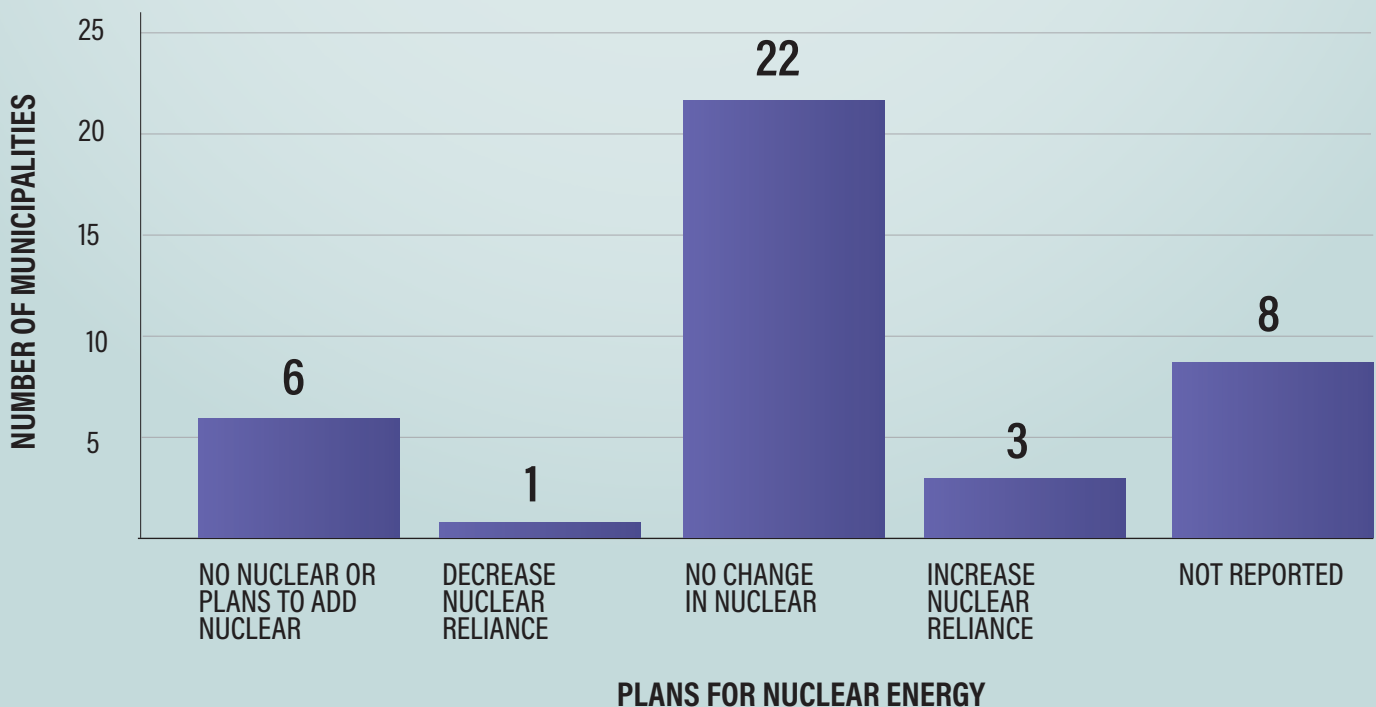


FIGURE 7 FUTURE PLANS FOR NUCLEAR ENERGY



Plans for Gas Services and Nuclear Energy

Figure 7 presents a summary of MLPs' future plans with respect to nuclear energy in their energy mix. The data demonstrate that a majority of MLPs are unlikely to either decrease or increase their dependence on nuclear energy in the future. One possible explanation for this trend is that some MLPs have long-term contracts for nuclear power that will not allow them to decrease nuclear power in the near future. It is nevertheless necessary for MLPs to develop long- and short-term strategies to transition away from their over-reliance on nuclear energy.

While most MLPs had nuclear in their energy mix, six had no nuclear energy and provided no evidence that this would change. A handful of MLPs intended to increase nuclear power in the future.

Only four MLPs provide gas services to their customers. Among them, only Holyoke had clear intentions and an action plan in place to decrease gas services through concerted electrification. Wakefield and Middleborough did not plan to increase or decrease their gas services, and Westfield did not report its intentions in this regard.

MCAN's Recommendations for an Effective Energy Transition

Based on our results, MCAN recommends that MLP staff, MLP associations, state officials, and advocates consider taking the following steps to enhance the energy transition in MLP districts:

- 1 Incorporate Class I REC retirement into long- and short-term MLP strategies**
 - ▶ Adopt plans to strategically accelerate Class I REC retirement
 - ▶ Meet or exceed the RPS over time
 - ▶ Adopt 100% renewable energy opt-in programs for residents

- ▶ Expand state involvement in REC retirement through incentives or mandates

While MLPs have made considerable strides in developing and contracting for energy from clean energy sources, this progress is not and cannot reasonably be attributed to MLPs' energy mix because they are not retiring the Class I RECs associated with it. The retirement of Class I RECs from the MLPs' power supply is an integral part of any utility's energy transition. Advocates, MLP light boards, MLP staff, MLP associations, and state agencies should work together to identify best practices for effectively integrating Class I REC retirement into MLP operations. Specifically, stakeholders should aim to incorporate **consistent and continually increasing Class I REC retirement into long- and short-term plans and budgets**. In doing so, MLPs should aim to increase the number of RECs retired year-over-year at a pace that meets or exceeds that of the RPS; 100% renewable energy opt-in programs for residents and businesses can contribute to Class I REC retirement goals while providing customers with a cleaner electricity option.

If MLPs do not retire RECs for clean energy, then approximately 14% of the Commonwealth's electricity will not be transitioning to clean energy at a pace that aligns with the rest of the state. This discrepancy will influence the Commonwealth's overall ability to transition to clean energy. As such, the state government has a role to play in enhancing the rate at which MLPs retire Class I RECs. State involvement could come in the form of a clean energy standard for MLPs, as was done for IOUs through the creation of the RPS, which has been shown to be highly effective. Alternatively, the state could provide incentives or create programs to support MLPs in Class I REC retirement. Regardless of the approach, the Commonwealth has a responsibility to ensure that communities are not being left behind in the clean energy transition.

2

Strengthen and enhance policies that enable residents to transition to clean energy

- ▶ Strengthen net metering policies
- ▶ Leverage MLP innovation to enhance battery storage, advanced metering infrastructure (AMI), electric vehicle adoption and infrastructure, and other clean energy technology

- ▶ Strengthen and expand services that assist low- and moderate-income households in transitioning to clean energy
- ▶ Increase state investment in MLP clean energy innovation

MLPs offer a variety of programs that enable residents to transition to clean energy. Even so, ongoing work is required to strengthen these programs and ensure they are on par with programs available in non-MLP regions. This need is most evident in MLP residential net metering policies. For net metering to be effective, MCAN recommends that **MLPs align their net metering policies with statewide regulations outlined in 220 CMR 18**. Accordingly, we encourage MLPs to eliminate or increase the aggregate residential capacity limit, increase the residential system capacity limit to above 10 kW, and increase the net excess generation charge to be equal to or greater than the residential rate. MCAN acknowledges that these improvements may not be feasible without state assistance; however, we encourage all MLPs to investigate what can be reasonably achieved.

MLPs have shown that they can be leaders in the energy transition by being early adopters of technology and by developing programs that enable their customers to be early adopters as well. Some areas in which MLPs can continue to lead are battery technology adoption and AMI. MCAN recommends that MLPs coordinate with each other to devise strategies to increase such adoption and potentially identify joint goals. Doing so would be particularly useful in cleaning peak demand for MLPs across the Commonwealth. Similarly, MLPs should work together to identify effective ways to install and utilize AMI. If properly collected and assessed, data derived from AMI could be immensely useful in MLPs' efforts to transition to clean energy. MMWEC and ENE are the ideal entities to facilitate industry-wide efforts in battery technology adoption, AMI installation and management, and other collaborative efforts if they are directed by members and participating MLPs to do so.

Equity and justice must be central to MLP energy transition programs. To achieve this, every clean energy program or policy that MLPs implement must be designed with a clear understanding of how it will affect low-income communities, communities of color, non-English speakers, and renters. Policies must also have clear tools and goals

geared towards combating historic injustices in MLP communities. Examples of such tools include but are not limited to increased rebates for income-qualified residents, targeted outreach to historically burdened residents, or specific programs for low-income communities and renters. Substantial work is needed to ensure that equity and justice are centered in clean energy programs. MCAN believes that prioritizing energy justice in MLP programs will contribute to an equitable clean energy future.

Finally, MCAN recognizes that, due to their size and structure, some MLPs have limited resources to develop and implement ambitious energy transition programs and policies. Given the need to ensure an energy transition across every community in the Commonwealth, state officials should aim to identify additional financial and technical resources to support MLPs' clean energy transition. Such investments would help ensure that no community is being left behind on the basis of the type of utility that serves them or the size of that utility.

3 Implement plans to transition away from nuclear energy and gas services

- ▶ Implement policies and plans specifying no new nuclear energy and establishing a clear timeline for replacing current nuclear sources with safe and clean alternatives
- ▶ Phase out gas services and accelerate electrification

MLPs' progress in transitioning away from fossil fuels and towards non-emitting energy sources has largely relied on nuclear and hydro-electric energy. MCAN acknowledges the need to rapidly transition away from fossil fuel sources while recognizing the danger that nuclear energy poses to communities, both in the operation of nuclear facilities and in the storage of nuclear waste. These activities disproportionately affect low-income communities, communities of color, and non-English speaking communities. MCAN also recognizes that large hydroelectric energy can permanently alter ecosystems and destroy culturally valued community resources. For a just transition to occur, MCAN firmly believes that these energy sources must be replaced with clean energy technologies such as wind, solar, and geothermal. We encourage MLPs that are heavily dependent on nuclear and large hydro to consider the

adverse impacts of these energy sources on vulnerable people and landscapes and to take steps to transition away from these sources.

MCAN further recommends that MLPs stop increasing their reliance on nuclear energy sources and transition away from nuclear and towards clean renewable sources such as wind and solar. The most effective way to ensure this transition is to adopt policies with long-term strategies. Such policies should explicitly state that **no additional nuclear energy will be procured by MLPs and clearly outline the timeline for MLPs to transition away from this harmful energy source.** MCAN specifically encourages the adoption of long-term policies aimed at replacing nuclear energy with clean energy sources such as wind, solar, and geothermal in all MLP districts.

For MLPs that provide gas services, MCAN recommends implementing plans to rapidly phase out gas services and accelerate electrification. MLPs with gas services are in a unique position, as they will not lose customers by phasing out gas. Rather, demand for gas will simply be transferred to electrical demand. Moreover, as electrification accelerates, industry experts predict that gas will become increasingly expensive, burdening low-income residents who remain on gas with high utility costs. By rapidly phasing out gas, MLPs can be leaders in the energy transition both among MLPs and across the state.

4 Stop investing in new fossil fuel infrastructure and dirty energy projects

- ▶ Commit to making no new investments in coal, oil, and natural gas projects or infrastructure
- ▶ Commit to making no investments in dirty biomass energy
- ▶ Commit to making no investments in projects that exacerbate environmental injustice

Recent energy projects have shown that, despite the Commonwealth's clear direction towards a clean energy future, MLPs are still making long-term investments in fossil fuel infrastructure and other dirty energy projects. Most notable among these projects is the 60 MW combined cycle peaker plant that MMWEC is proposing to build in Peabody, MA and the Palmer Biomass facility in Springfield, MA — a project whose

permit was recently revoked by the DEP and may not be built. At the time of this report's publication, 12 MLPs remained committed to participating in the Peabody peaker project⁵⁹ and 7 MLPs had signed contracts to receive energy from the Palmer Biomass Plant.⁶⁰ By investing in fossil fuels and dirty energy projects, MLPs are restricting their ability to transition rapidly to clean energy, increasing costs for ratepayers and risking investing in infrastructure that will be forced to cease operations prior to the end of its natural life cycle. Investing in projects that will become stranded assets runs counter to the global trend of allocating resources to clean energy technologies and infrastructure.

59 Specifically Boylston, Holden, Hull, Mansfield, Marblehead, Peabody, Russell, Shrewsbury, South Hadley, Sterling, Wakefield, and West Boylston. Chicopee and Holyoke have requested to withdraw from the project.

60 Specifically Braintree, Danvers, Groveland, Merri-mac, Middleton, Norwood, Reading, and Taunton

Investing in new dirty fuel projects also perpetuates chronic exposure to harmful pollution from which residents in Environmental Justice communities have long suffered. The Palmer Biomass Plant and the Peabody Peaker Plant are both proposed to be built in and adjacent to Environmental Justice neighborhoods that are already facing increased burdens from pollution. These plants' operation would only add to the cumulative impact of this pollution, exacerbating existing disparities in our state. Unlike IOUs, MLPs have the authority to own and operate energy production facilities. MCAN strongly recommends that MLPs use this authority to exercise leadership and a commitment to the public good that alleviates, rather than exacerbates, the disproportionate impact of our energy system on low-income communities, communities of color, and non-English speaking residents.

Conclusions

The results of this section are unequivocal: MLPs can be leaders in the energy transition. Whether looking at the adoption of new technology, the transition to clean energy and non-emitting energy, or effective programs and policies that enable customers to transition to clean technology, MLPs are making progress.

MLPs have the power and capacity to make significant contributions to a clean energy transition. From providing 100% clean energy opt-in programs to initiating programs that reduce peak energy demand and establishing strategies for deep integration of distributed resources, MLPs are playing a critical role in enabling and enhancing the Com-

monwealth's transition to a clean energy future. We encourage MLPs to embrace this role. Not only will transitioning to clean energy contribute to mitigating negative effects of the climate crisis and facilitating the state's transition, but it will also aid MLP communities and increase satisfaction among MLP customers.

MLPs and the state government can accelerate the clean energy transition by retiring Class I RECs. This can best be achieved by establishing short- and long-term plans that clearly incorporate Class I REC retirement targets. Strengthening policies that support residents in transitioning to clean energy can be done in parallel. Areas where state funding and support can promote this process should be investigated, as should opportunities that will directly enable MLPs to be the leaders they have shown they can be.

MLPs have made real progress over the past several years in the energy transition. To ensure that this progress continues and that the Commonwealth as a whole meets its climate targets, these efforts must continue at an accelerated pace. Cooperation among relevant stakeholders will increase the success of MLPs and the broader energy sector in Massachusetts, with the benefits going directly to Commonwealth residents both now and in the future.



MLP ENERGY TRANSITION RECOMMENDATIONS

1

INCORPORATE CLASS I REC RETIREMENT INTO LONG- AND SHORT-TERM MLP STRATEGIES

- Adopt plans to strategically accelerate Class I REC retirement
- Meet or exceed the RPS over time
- Adopt 100% renewable energy opt-in programs for residents
- Expand state involvement in REC retirement through either incentives or mandates

RELEVANT ACTORS

LIGHT BOARDS MLPs
LIGHT BOARDS MLPs
LIGHT BOARDS MLPs
LEGISLATURE DOER

2

STRENGTHEN AND ENHANCE POLICIES THAT ENABLE RESIDENTS TO TRANSITION TO CLEAN ENERGY

- Strengthen net metering policies
- Leverage MLP innovation to enhance battery storage, advanced metering infrastructure (AMI), electric vehicle adoption and infrastructure, and clean energy technology
- Strengthen and expand services that assist low- and moderate-income households in transitioning to clean energy
- Increase state investment in MLP clean energy innovation

RELEVANT ACTORS

LIGHT BOARDS MLPs
LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs MMWEC & ENE
LEGISLATURE DOER

3

IMPLEMENT PLANS TO TRANSITION AWAY FROM NUCLEAR ENERGY AND GAS SERVICES

- Implement policies and plans specifying no new nuclear energy and establishing a clear timeline for replacing current nuclear sources with safe and clean alternatives
- Phase out gas services and accelerate electrification

RELEVANT ACTORS

LIGHT BOARDS MLPs
LIGHT BOARDS MLPs

4

STOP INVESTING IN NEW FOSSIL FUEL INFRASTRUCTURE AND DIRTY ENERGY PROJECTS

- Commit to making no new investments in coal, oil, and natural gas projects or infrastructure
- Commit to making no investments in dirty biomass energy
- Commit to making no investments in projects that exacerbate environmental injustice

RELEVANT ACTORS

LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs MMWEC & ENE



Energy Efficiency

(25 points)

Introduction

Increasing the energy efficiency of homes, businesses, and our energy system overall is crucial for solving the climate crisis in the Commonwealth. As public utilities, MLPs provide programs and rebates for customers (residential and commercial) that support and incentivize energy efficiency practices and the adoption of energy-efficient technologies. These incentives focus on home improvements such as weatherization and insulation, transitioning to efficient electric heaters (i.e., heat pumps), and upgrading lights and appliances.

The energy efficiency programs offered by MLPs and IOUs differ significantly in terms of state oversight and funding sources. The Green Communities Act, enacted in 2008, requires IOUs to implement and provide state-approved energy efficiency programs that are overseen by the Energy Efficiency Advisory Council and the Residential Conservation Services (RCS) of DOER.⁶¹ This program, commonly known as Mass Save, is offered to all Massachusetts residents in IOU territories. Mass Save adheres to policies and guidelines laid out by the state. The program has four funding streams: (1) revenue collected from ratepayers through a mandatory charge; (2) proceeds from IOUs' participation in energy markets; (3) proceeds from cap-and-trade pollution, such as the Regional Greenhouse Gas Initiative; and (4) other funding as approved by the Department.⁶² In other words, the state provides a substantial amount

61 "An Act Relative to Green Communities," Chapter 169 (Commonwealth of Massachusetts, 2008), <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter169>.

62 "2019-2021 Three Year Plans Order" (Massachusetts Department of Public Utilities, January 29, 2019), <https://www.mass.gov/doc/2019-2021-three-year-plans-order/download>, pg 112.

of financial support and requires that IOUs collect revenue specifically for energy efficiency.

63 "Guideline Interpreting 225 CMR 4.00" (Massachusetts Department of Energy Resources, February 20, 2020), <https://www.mass.gov/doc/rcs-guideline-revised-2202020/download>.

MLP energy efficiency programs are not heavily regulated or supported by the state. Under the Green Communities Act, MLPs are exempted from regulations relevant to the adoption of energy efficiency programs, meaning that MLP-sponsored energy efficiency programs are offered voluntarily and with little state oversight. Indeed, up until 2020, MLPs were not even required to submit their energy efficiency plans to the DOER. As a result of regulatory changes, MLPs are now required to submit municipal action plans (MAPs) to the RCS.⁶³ However, these plans are not subject to the same standards or requirements as Mass Save and consequently, MLPs are not eligible for the same financial support from state funds. Most notably, MLPs do not receive funding from proceeds of cap-and-trade pollution programs such as the Regional Greenhouse Gas Initiative. They also are not required to implement a mandatory charge.

The state's limited involvement in MLP energy efficiency programs has practical implications, some of which support efficiency goals and others that do not. On one hand, current regulations allow MLPs to adapt quickly to community needs and present the potential for committed MLPs to be leaders in climate innovation that prioritizes energy efficiency programs and incentives. On the other hand, limited regulation leaves open the possibility that MLPs are not providing programs on par with those available through Mass Save. The limited state funding offered to MLPs and lack of a mandatory charge makes it nearly impossible for MLPs to invest a proportional amount of resources towards their energy efficiency programs compared to IOUs.

This section assesses MLP programs by evaluating the existence and strength of incentives, MLPs' commitment to energy efficiency and observable progress, and the accessibility of programs to low-income and Environmental Justice communities. Following a discussion of our methods and an analysis of the results, we outline recommendations for how MLPs can enhance their energy efficiency efforts moving forward. While we did not do so in the scoring, this section compares programs offered by Mass Save to those offered by MLPs. This comparison is not intended to reflect the success of MLPs' energy efficiency programs but

instead to highlight potential gaps and areas of improvement that can be addressed through coordination between MLPs, MLP associations, state government agencies, and advocates.

Energy Efficiency Scoring Methods

In scoring MLPs’ progress in energy efficiency, MCAN used methods that mirror those in similar reports comparing energy efficiency programs across a set of actors (e.g., the State Energy Efficiency Scorecard published by the American Council for an Energy-Efficient Economy [ACEEE]). We scored energy efficiency progress based on the availability and strength of free audits, energy rebates, and loans; MLPs’ level of

TABLE 8 ENERGY EFFICIENCY SCORING METRICS AND CATEGORIES

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
FREE AUDITS AND ENERGY EFFICIENCY INCENTIVES	10	Based on the seven factors listed below	Full points awarded if all seven factors were satisfied
▶ FREE ENERGY AUDITS	1	Availability of free home audit	Full points awarded for program availability
▶ FREE OR DISCOUNTED LED LIGHTS	1	Availability of program or discount	Full points awarded for the availability of free or discounted LED light bulbs
▶ ENERGY STAR REBATES	1	Availability of Energy Star rebates	Full points awarded if more than one Energy Star rebate was available

TABLE 8**ENERGY EFFICIENCY SCORING METRICS AND CATEGORIES**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
► SMART THERMOSTAT REBATE	1	Availability of smart thermostat rebate	Full points awarded for a smart thermostat rebate
► 0% LOANS	2	Availability of 0% loan	Full points awarded for the availability of 0% loans for weatherization, heat pumps, or both
► WEATHERIZATION INCENTIVES	2	Availability of weatherization rebate, size of rebate	Full points awarded for MLPs that had weatherization programs that either covered more than 50% of total costs and/or had a maximum rebate size that was greater than \$500 per action
► HEAT PUMP REBATES	2	Availability of heat pump rebate, size of maximum rebate per item	Full points awarded for MLPs that had heat pump rebates, with the maximum rebate per item being greater than \$700 (i.e., the approximate average maximum across MLPs)
ENERGY EFFICIENCY ACCESS	5	Resources in multiple languages, increased rebates for low-income residents, targeted outreach	Points awarded based on whether MLPs observe practices that advance energy efficiency access. Full points were awarded when all three practices were conducted.
ENERGY EFFICIENCY SPENDING	5	Energy efficiency program spending as a percent of total revenue	Points distributed on a scale from 0.25% to 1.00%. Total points were received for spending \geq 1.00%.
ANNUAL ELECTRICITY SAVINGS (KWH)	5	Tracking and reporting of annual electricity savings, amount of savings as a percent of total kWh distributed	Points awarded if MLPs tracked and reported electricity savings data. Full points were awarded if reported savings were \geq 0.5%.
TOTAL	25 + BONUS POINTS		

TABLE 8**ENERGY EFFICIENCY SCORING METRICS AND CATEGORIES****BONUS**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
COMMERCIAL ENERGY EFFICIENCY	1	Existence of program or incentives	Full points awarded for MLPs that offered a commercial energy efficiency program or incentives
MUNICIPAL PROGRAMS AND UPGRADES	1	Existence of municipal energy efficiency audits or funding for upgrades	Full points awarded for the existence of funding or programs
EDUCATIONAL EVENTS	1	Whether events took place between 2019 and 2020 that specifically focused on energy efficiency programs and rebates	Full points awarded if satisfactory evidence was available that an event of such nature occurred (either in person or virtually)
ADDITIONAL PROGRAMS	NO MAX	Existence of programs not accounted for in other sections of this category	Existence of program
TOTAL	3+		

NOTE: ENERGY EFFICIENCY PROGRAMS ADOPTED IN 2021 WERE NOT INCLUDED IN THIS REPORT.

investment in energy efficiency programs; the effectiveness of their programs based on the energy saved; and, importantly, the extent to which energy efficiency programs were responsive to issues of accessibility for low-income residents, non-English speakers, and renters (see **Table 8**).

Energy efficiency audits and incentives played a significant role in this section. The list of programs considered was based on general offerings available to residents who are eligible for Mass Save programs. The availability of each incentive was worth one point. An additional point was awarded for weatherization and heat pump incentives based on whether MLPs had programs stronger than the average offerings across all MLPs. Similarly, 0% loans were allocated an additional point given their overarching benefits in enhancing the adoption of energy efficiency practices.

Access to energy efficiency programs for low-income households, renters, and non-English speakers is an area of growing importance. To measure this, MCAN used access metrics that the DOER requested to be reported in MLPs' MAPs, which include whether resources are available in multiple languages, whether there are increased rebates for low-income residents, and whether MLPs conduct targeted outreach to vulnerable communities.⁶⁴

Measuring the level of investment in energy efficiency programs by comparing program budget to the total revenue of utilities is a common practice in similar reports and is an important indicator of MLPs' commitment to energy efficiency (acknowledging the wide variety of total revenue across MLPs). Similarly, the progress and effectiveness of energy efficiency programs are frequently tracked by observing the energy saved (in kWh) as a percentage of total energy distributed. MCAN incorporated tracking and reporting into our scoring even though not all MLPs tracked or reported their kWh savings for the purposes of this Scorecard.

Substantial bonus points were available in this section. These points were intended to credit MLPs that provided energy incentives and programming that enhanced their energy efficiency efforts. Acknowledging that MLPs offer a wide variety of energy efficiency programs, any program

TABLE 9

MLP SCORES IN ENERGY EFFICIENCY

MUNICIPAL UTILITY	AUDITS & ENERGY EFFICIENCY REBATES 10 PTS	ENERGY EFFICIENCY ACCESS 5 PTS	ENERGY EFFICIENCY PROGRAM SPENDING 5 PTS	ANNUAL ELECTRICITY SAVINGS 5 PTS	BONUS 3+ PTS	ENERGY EFFICIENCY SCORE 25 PTS		
BELMONT	8	5	5	2	6		26	
CONCORD	6	2	5	5	6		24	
HOLYOKE	9	5	5	2	3		24	
MIDDLEBOROUGH	8	4	3	2	4		21	
READING	6	0	5	5	5		21	
CHICOPEE	6	1	3	5	3		18	
WAKEFIELD	8	1	3	2	4		18	
WESTFIELD*	5	5	5	0	3		18	
IPSWICH	7	0	5	2	3		17	
BRAINTREE	6	3	3	0	4		16	
SHREWSBURY	8	1	3	0	4		16	
TAUNTON	6	1	2	0	6		15	
NORWOOD	6	0	2	2	4		14	
PEABODY	6	3	2	0	3		14	
WEST BOYLSTON	6	1	3	0	4		14	
HINGHAM*	7	0	2	0	4		13	
HUDSON*	4	0	4	0	5		13	
PRINCETON	6	1	4	0	2		13	
SOUTH HADLEY	6	1	3	0	3		13	
STERLING	5	1	3	0	4		13	
BOYLSTON	6	1	5	0	0		12	

TABLE 9

MLP SCORES IN ENERGY EFFICIENCY

MUNICIPAL UTILITY	AUDITS & ENERGY EFFICIENCY REBATES 10 PTS	ENERGY EFFICIENCY ACCESS 5 PTS	ENERGY EFFICIENCY PROGRAM SPENDING 5 PTS	ANNUAL ELECTRICITY SAVINGS 5 PTS	BONUS 3+ PTS	ENERGY EFFICIENCY SCORE 25 PTS
HOLDEN	6	1	3	0	2	12
MARBLEHEAD	6	1	3	0	2	12
PAXTON	6	1	4	0	1	12
ASHBURNHAM	5	1	3	0	2	11
GROTON	5	1	3	0	2	11
N. ATTLEBOROUGH	6	0	2	0	3	11
GEORGETOWN*	5	0	2	0	3	10
GROVELAND	6	0	2	2	0	10
ROWLEY	4	0	4	0	2	10
RUSSELL	6	1	3	0	0	10
TEMPLETON	5	1	3	0	1	10
DANVERS*	4	0	3	0	2	9
HULL	6	1	2	0	0	9
LITTLETON*	6	0	2	0	1	9
MERRIMAC*	5	4	0	0	0	9
WELLESLEY	5	0	2	0	2	9
MIDDLETON*	5	0	2	0	1	8
MANSFIELD	3	0	3	0	1	7
CHESTER	1	0	2	0	1	4
GOSNOLD	N/A	N/A	N/A	N/A	N/A	N/A

* indicates MLPs that did not submit questionnaires or provide feedback to MCAN for the purpose of this report

that was not accounted for in our methods was listed as an additional program and awarded one bonus point. Programs that qualified for this bonus varied, spanning from electric vehicle promotion and education efforts to peak demand reduction, tree giveaways, and more. **Table 9** displays MLPs' energy efficiency scores by category and total.

Results and Observations

Summary of Energy Efficiency Scores

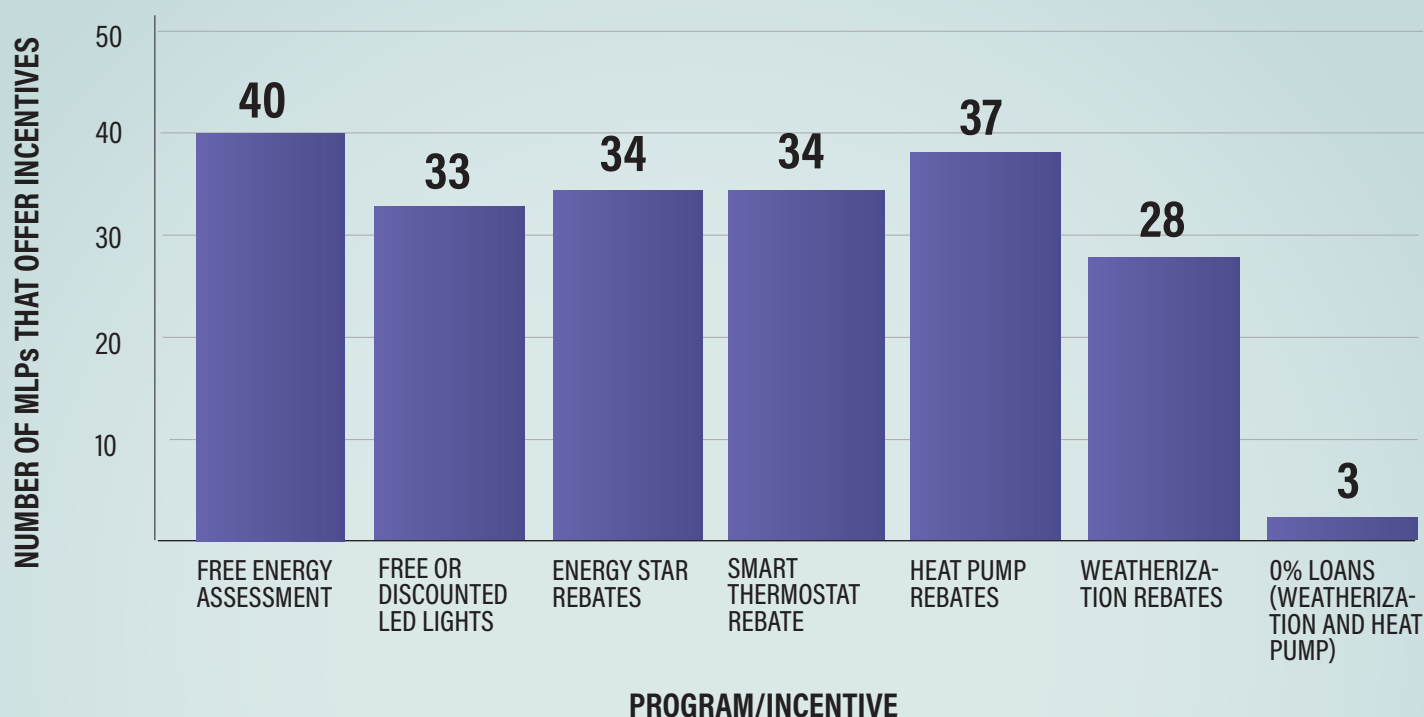
The results above provide a useful snapshot of MLPs' performance, relative to each other, in energy efficiency efforts. The average energy efficiency score was 13.6 points with a median score of 13 points. Half of MLPs (i.e., 20 out of 40) earned between 10 and 15 points, seven scored between 15 and 20 points, and five scored more than 20 points. Belmont, Concord, and Holyoke were the top three scorers in energy efficiency with 26, 24, and 24 points, respectively.

The overall scores in this section suggest that, while several MLPs are taking leadership and have made substantial progress, more work is needed to ensure that all MLPs have comprehensive and effective energy efficiency programs. To provide an in-depth overview of energy efficiency scores and their implications, the following subsections discuss the results of relevant subcategories and share key findings in various energy efficiency subcategories that help us better understand what specific actions must be taken to enhance MLPs' energy efficiency programs.

Free Energy Efficiency Audits and Incentives

The results indicate that the majority of MLPs provided free audits and energy efficiency programs and rebates. As seen in **Figure 8**, every MLP offered a free energy assessment; more than 90% offered heat pump rebates; more than 80% offered free or discounted LED lights, Energy Star rebates, and smart thermostat rebates; and 70% provided rebates for weatherization. Groton, Holyoke, and Shrewsbury were the only MLPs that provided 0% loans.

FIGURE 8 FREE AUDITS AND INCENTIVES



Of the 28 MLPs offering weatherization rebates, seven provided rebates greater than the average offering across MLPs (i.e., a rebate covering up to 50% of a project with a maximum limit of \$500). The highest project percentage covered was 75%, and the highest maximum limit was \$1,000 (excluding rare instances where multi-family homes were differentiated from other homes, in which case the maximum rebate was \$4,000 as offered by Middleborough⁶⁵).

Even the larger rebates were smaller than weatherization incentives offered to non-MLP residents through Mass Save. Mass Save offers to cover 75% of the total cost of weatherization activity, with no limit on the size of the total rebate. For income-eligible residents (i.e., low-income households), 100% of weatherization is covered with no maximum limit.⁶⁶

Of the 37 MLPs offering rebates for heat pump technology, eight provided rebates greater than the average approximate maximum rebate (for any technology) of \$700. The highest maximum rebate for non-in-

⁶⁵ "MGED Home Energy Saving Rebates," Middleborough Gas & Electric, November 20, 2020, <https://www.mged.com/save-energy/pages/home-energy-saving-rebates>.

⁶⁶ "Home Insulation Improvement Savings" (Mass Save), accessed May 27, 2021, <https://www.masssave.com/en/saving/residential-rebates/home-insulation>.

come-eligible residents was \$3,125 for the installation of a heat pump technology, offered by Concord.

67 "Electric Heating and Cooling Equipment Rebates" (Mass Save), accessed May 27, 2021, <https://www.masssave.com/en/saving/residential-rebates/electric-heating-and-cooling>.

Again, rebates for heat pump technology provided by MLPs were less than those offered by Mass Save. Mass Save determines rebates on a per-ton basis for heat pumps. Mass Save provides a rebate of \$1,250 per ton of heat pump installed with a maximum rebate of \$6,250.⁶⁷

Energy Efficiency Access

MLPs' implementation of practices and policies that enhance access to energy efficiency has yet to be closely tracked or required. Our results indicate that some voluntary efforts are being made; however, there are opportunities to expand the implementation of policies and practices that increase access to energy efficiency programs. **Figure 9** presents a breakdown of the number of MLPs that have implemented practices that expand accessibility. As indicated, a majority of MLPs have taken action by providing materials and information about energy efficiency in multiple languages. Few MLPs offered increased rebates for low-income

FIGURE 9 ENERGY EFFICIENCY ACCESS PRACTICES AND PROGRAMS

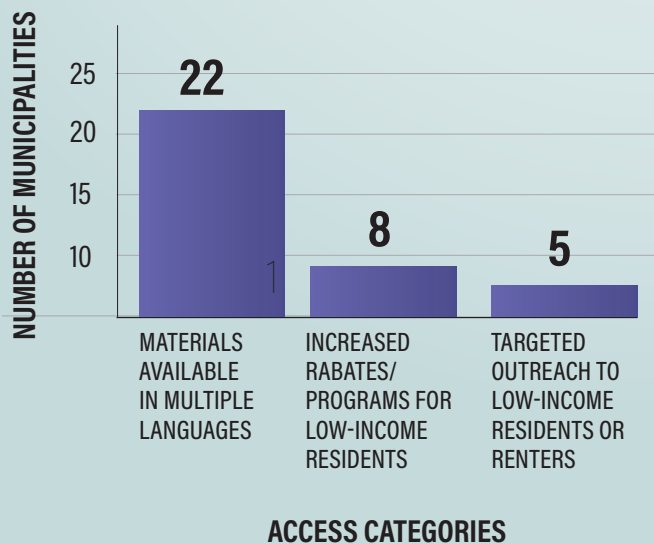
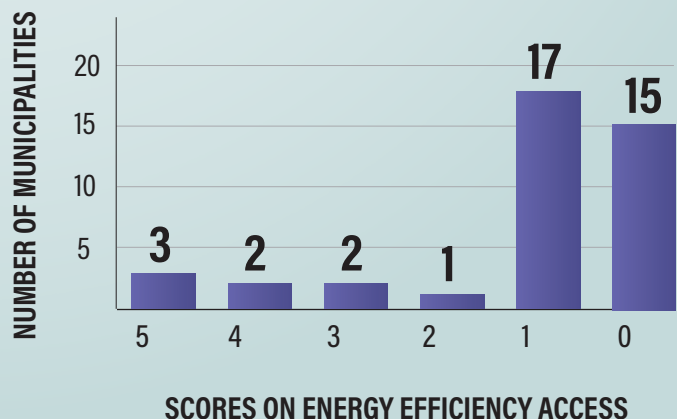


FIGURE 10 MLP SCORES ON ACCESS PRACTICES



residents or have conducted targeted outreach to enroll low-income residents and renters in these programs.

Figure 10 displays how MLPs scored on the accessibility metrics. Twenty-five MLPs had taken at least one step to increase accessibility. Belmont, Holyoke, and Westfield led in this category by adopting all three practices tracked in this report to increase accessibility.

Increasing the accessibility of energy efficiency presents an opportunity for MLPs to take action. Especially in light of the COVID-19 crisis and ongoing recovery, every chance to support individuals who have been adversely affected by the pandemic's economic disruption must be taken. Enhancing the energy efficiency of homes and transitioning to clean technology can make homes safer and reduce indoor pollution. Eliminating barriers to these programs, especially for low-income and non-English speakers in MLP districts, is an essential part of the Commonwealth's recovery from COVID-19.

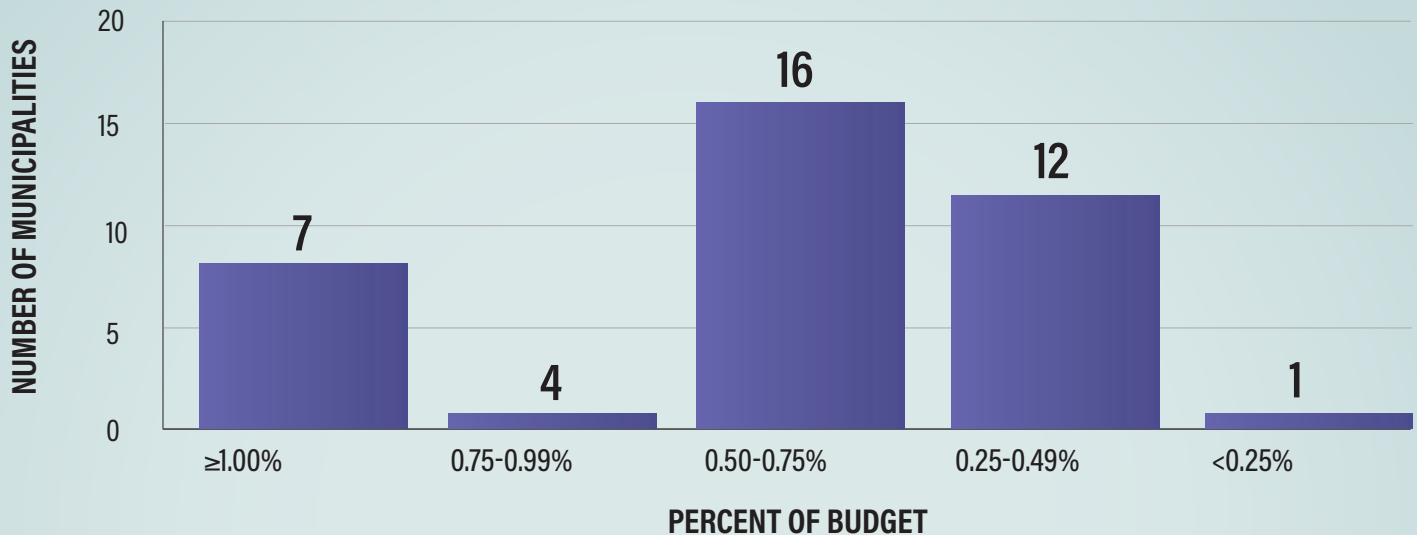
Spending on Energy Efficiency

When evaluating total spending on a scale from 0.00% to 1.00% of an MLP's total revenue, the results are clustered. Most MLPs committed to spending between 0.25% and 0.75% of their revenue on energy efficiency programs in 2020. As shown in **Figure 11**, four MLPs planned to spend between 0.75% and 0.99% of their total revenue, and seven planned to spend more than 1.00% of their revenue. Spending levels varied among these seven leading MLPs. Concord exhibited the largest commitment to energy efficiency by far, with approximately 2.90% of revenue allocated to energy efficiency programs. They were followed by Belmont and Boylston with 1.80% and 1.34% of total revenue going towards energy efficiency, respectively. The remaining four MLPs (Westfield, Reading, Ipswich, and Holyoke) committed between 1.00% and 1.20% of their total revenue to energy efficiency.

Relative to Mass Save, **MLPs are spending a much smaller percentage of their total revenue on energy efficiency programs.** According to the ACEEE 2020 State Energy Efficiency Scorecard, in 2019, Massachusetts IOUs spent 6.29% of their revenue on energy efficiency.⁶⁸ In other words, **compared to most MLPs, IOUs spent approximately 12 times as much**

68 Weston Berg et al., "The 2020 State Energy Efficiency Scorecard" (American Council for an Energy Efficient-Economy, December 2020), <https://www.aceee.org/state-policy/scorecard>, pg 38.

ENERGY EFFICIENCY PROGRAM SPENDING



of their total budget on energy efficiency. As specified above, this discrepancy is primarily due to IOUs having additional requirements and revenue sources for their programs. Nonetheless, this disparity is striking and identifies gaps in MLP programs that must be addressed.

69 Ibid. pg 32

Energy Saved from Energy Efficiency Programs

MCAN's results in this category were limited because several MLPs did not track their energy savings from energy efficiency. In some instances, MCAN was aware that energy savings had been tracked to some extent, but these data were not provided for this report.

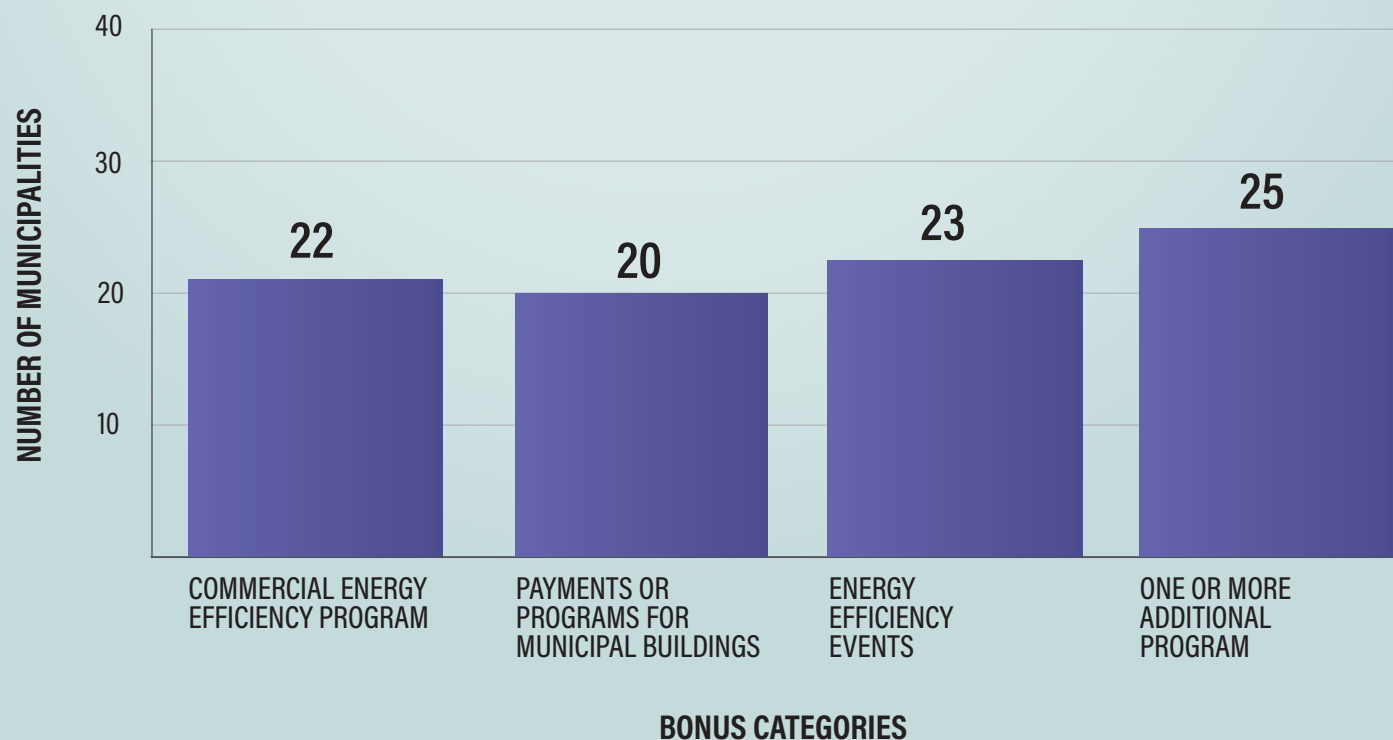
In total, 10 MLPs reported savings data to MCAN. Of these, Reading, Concord, and Chicopee had savings of more than 0.5% (in kWh) at 0.84%, 0.65%, and 0.55%, respectively. The remaining seven MLPs reported savings between 0.00% and 0.50%. These data indicate **lower savings compared to the Mass Save program**, which was estimated to have saved 2.25% of kWh in 2019.⁶⁹

Additional Energy Efficiency Programs

In addition to providing standard programs and incentives to enhance residential energy efficiency, MLPs have taken multiple other steps including promoting energy efficiency by holding specific events, offering programs for commercial customers and municipal governments, providing payments to municipal governments for increasing energy efficiency, and implementing additional programs intended to decrease energy use and increase efficiency. **Figure 12** provides a summary of the level of MLPs' engagement in each of these actions.

Just over half of MLPs offered a commercial energy efficiency program of any kind. When considering the immense potential for energy savings that can be achieved when commercial buildings implement energy efficiency improvements, and the fact that commercial energy efficiency programs are provided to all non-MLP communities, the lack of a commercial program in many MLPs highlights a clear opportunity

FIGURE 12 BONUS CATEGORIES AND ADDITIONAL PROGRAMS



for MLPs to enhance their energy efficiency efforts. Given that many of the existing programs are limited in scope, this opportunity applies to virtually every MLP in the Commonwealth.

As can also be seen in **Figure 12**, 25 MLPs offered at least one additional program not tracked in the Scorecard. Concord had the largest number of additional programs ($n = 4$), followed by Taunton and Belmont ($n = 3$). This shows that MLPs can be ambitious and leverage their unique position to be leaders in energy efficiency.

MCAN's Recommendations for Energy Efficiency Programs

Based on our results, MCAN recommends that light board members, MLP staff, MLP associations, state officials, and advocates consider taking the following steps to enhance energy efficiency efforts in MLP districts:

- 1 Increase the size of energy efficiency programs and rebates**
 - ▶ Increase the size of weatherization and heat pump rebates for residents
 - ▶ Work with the state to create and adopt a 0% interest loan program for energy efficiency retrofits
 - ▶ Implement and expand commercial energy efficiency programs and offerings
 - ▶ Increase the percentage of overall revenue allocated to energy efficiency programs

Based on our analysis, MLPs provide their customers an array of energy efficiency incentives. However, efforts must be made to enhance available programs and to ensure that incentives available to MLP customers are on par with those offered through Mass Save. Areas where enhance-

ments are most necessary include weatherization incentives, heat pump rebates, 0% loans, and commercial energy efficiency.

Weatherization is one of the most effective means of increasing energy efficiency. As a state with an old housing stock, one of Massachusetts's major areas of inefficiencies in residential heating is the lack of home insulation. If communities want to increase energy efficiency, weatherization is the ideal place to start. MCAN strongly **encourages all MLPs to offer weatherization incentives**. Where possible, MLPs should increase the size of these rebates and the total project cost covered. Such rebates should be equal to those of the Mass Save program. In this case, MLP incentives would cover 75% of project costs and have no total spending limit. **MLPs should also consider enhanced weatherization rebates for low- and moderate-income residents**, as these residents are more likely to have a significant need for weatherization and limited financial means to make upgrades.

Adopting heat pump technology is critical for electrifying homes and transitioning away from propane and natural gas heating sources. While the vast majority of MLPs provided heat pump rebates, MCAN remains concerned that these rebates may not be large enough to incentivize a critical mass of residents – particularly given the upfront cost of this technology. As such, MCAN strongly recommends that MLPs seek to **increase both the size of heat pump rebates as well as the maximum amount available for each project**. To be consistent with the offerings available to residents in non-MLP territories, MLPs should provide incentives of up to \$6,250 based on the size of the heat pump system (using a per-ton unit of measurement).

Zero-interest loans can further incentivize energy efficiency upgrades and clean technology adoption. While they pay off in the long term through reduced energy bills and improved indoor air quality for occupants, some energy efficiency upgrades require significant upfront investment. Low- and zero-interest financing options are effective tools for making such upgrades possible for low- and moderate-income residents. Unfortunately, few MLPs currently offer 0% loans for energy efficiency programs. To ensure that energy efficiency upgrades are easy and accessible in MLP districts, solutions that provide low-risk, low-interest financing must be available to residents. These financial tools generally

require the participation of financial institutions, and some financial institutions have appeared reluctant to provide such loans to interested MLPs in the past. MCAN therefore strongly recommends that the DOER create a program to provide 0% interest loans to MLP customers. If such a program is optional for MLPs, MCAN encourages all MLPs to opt in. Participation in this type of program would be an important step in enabling customers with limited financial resources to make energy efficiency improvements.

Finally, commercial energy efficiency is an important part of any effort to reduce emissions and increase savings across the state. Despite this, only about half of all MLPs currently have programs or incentives available to their commercial customers. Furthermore, when programs are available for commercial customers, they are often limited in scope. **MLPs can significantly enhance their energy savings efforts by substantially incorporating commercial energy efficiency into their efforts.** MCAN strongly encourages all MLPs to take this opportunity to develop and implement a commercial energy efficiency program that effectively incentivizes commercial customers to make upgrades and improvements that promote energy savings, decarbonization, and electrification.

- 2 Increase equity and access to energy efficiency programs**
- ▶ Provide increased energy efficiency rebates for low- and moderate-income home-owners and renters
 - ▶ Conduct specific outreach to low-income residents and renters who stand to benefit the most from energy efficiency programs
 - ▶ Identify households in MLP districts based on income, race, and language isolation; develop outreach strategies to reduce barriers and raise awareness of program offerings

Despite the lack of a relevant mandate, MLPs have voluntarily implemented practices to increase energy efficiency program access among low-income, Black and Brown, and non-English speaking households as well as renters. However, more must be done to ensure that programs are fully accessible. This aspect of energy equity is particularly important in light of COVID-19 and the pandemic's disproportionate impacts on frontline workers, low-income communities, communities of color, and non-English speakers.

A simple and essential step is to ensure that all resources related to energy efficiency programs, including marketing and program information, are available in multiple languages. Translation into multiple languages is readily available for website resource guides and program materials. To develop other non-English-translated pamphlets and additional resources, MCAN recommends that MLPs refer to available census data and conduct surveys to identify commonly spoken languages in their district.

Additional ways to increase energy justice and access to energy efficiency include direct outreach and education to low-income, Black and Brown, and non-English speaking households and to renters about energy efficiency programs. **Targeted outreach will increase awareness among community members who stand to benefit the most.** Stronger rebates for income-eligible households acknowledges the **disproportionate burden that the high upfront costs of energy efficiency upgrades pose to low- and moderate-income customers.** Additionally, MLPs could consider partnering with local Community Action Program (CAP) agencies to enhance efforts to provide energy efficiency programs to low-income residents through the agency. Enhanced rebates and funding through CAP agencies are important to ensuring equitable access to and distribution of energy efficiency upgrades and clean technologies.

The steps identified and scored in this report represent initial actions to help ensure access to the benefits of energy efficiency programs for all residents in MLP districts. MCAN recommends that MLPs identify specific challenges faced by low-income residents, Black and Brown communities, non-English speaking households, and renters and then develop comprehensive plans to address these challenges, focused on all aspects of MLP operations and programming. MMWEC and ENE may have the insight and capacity to support MLPs in this effort.

3

Track savings and progress of energy efficiency programs

- ▶ Track and report kWh savings from energy efficiency programs in annual Municipal Action Plans (MAPs)
- ▶ Track and make public energy savings in a way that enables MLPs to be accountable for equity

- ▶ Set ambitious energy savings goals based on kWh savings and other metrics
- ▶ Track energy efficiency using additional metrics that account for electrification

For this iteration of the Scorecard, MCAN collected limited data on energy savings from energy efficiency programs due to MLPs not tracking these data and/or not reporting their data to MCAN. MCAN recommends tracking kWh savings as a core part of energy efficiency program evaluation.

IOUs that participate in Mass Save are required to track their savings, which serve as key indicators for program evaluation and planning for a net zero future. Similarly, **MLPs should be required to monitor progress**. MCAN specifically suggests that the RCS ask that these data be included in MLPs' annual MAPs. To do this, RCS should establish clear criteria for how MLPs should track savings and offer technical assistance to ensure that MLPs can provide savings data. By tracking savings in annual MAPs, MLPs and RCS can easily assess energy efficiency progress and identify more aggressive goals for the future.

While tracking overall savings is important, we also recommend that MLPs go further and **track energy savings in a way that enables them to be accountable for equity in their energy efficiency programs**. Specifically, their methods should allow data to be disaggregated (to the greatest extent possible while maintaining customer privacy) into multiple categories in order to determine whether low-income, Black and Brown, and non-English speaking households as well as renters are utilizing energy efficiency programs. Because other utilities' efforts to track data in a disaggregated manner have not been as effective as desired, **MLPs have an opportunity to lead in this area** and model ambitious tracking of energy efficiency data for utilities. Tracking savings helps to ensure that utilities are accountable for equity-related issues in energy efficiency and is vital to MLPs' equitable transition to a clean energy future. We also believe that such tracking represents a prime way in which MLPs can be a model for other utilities across the state and country.

Another important component of energy efficiency practices and the transition to clean energy involves electrification, and some programs may actually increase the amount of electricity (or kWh) used. To account for these efforts, MCAN recommends that MLPs and their professional associations consider tracking the carbon intensity of decarbonization activities (e.g., electrification) and include carbon intensity goals in overall energy efficiency programs.



Increase state support for MLP energy efficiency

- ▶ Mitigate disparities in energy efficiency programs between MLPs and IOUs
- ▶ Provide more funding for MLP energy efficiency programs
- ▶ Allocate funding specifically for MLPs to enhance their energy efficiency incentives
- ▶ Allocate funding for innovative programs and pilot projects in MLP districts

The wide disparity in programs offered by MLPs and IOUs should be of deep concern to the state government. While these discrepancies are partly due to MLPs prioritizing other areas of operation, the gaps also arise from limited state resources available to MLPs. To address these disparities, the state government should identify funding pathways and mechanisms for MLP energy efficiency incentives and program offerings. Particular areas in which the state should aim to invest include enhancing weatherization and heat pump incentives, adopting stronger rebates for income-eligible residents, and implementing innovative energy efficiency programs.

The disparities between weatherization and heat pump program offerings provided by MLPs versus Mass Save are stark. To prevent a substantial portion of our Commonwealth from falling behind the rest of the state in efficiency, Massachusetts should focus first on providing mechanisms that incentivize MLPs to invest in these programs and then offer additional funds to align MLP incentives more closely with those of Mass Save. MCAN encourages government officials, state legislators, and MLP lobbying groups to identify mechanisms that would best achieve this goal.

The state's reporting requirements for MAPs place little emphasis on access. Similarly, no program exists that either mandates, incentivizes, or supports MLPs in taking steps to ensure access to their energy efficiency programs. The state should consider developing equity targets and introducing reporting, providing technical assistance, and offering funding for efforts that enhance energy equity in energy efficiency programs.

Finally, MLPs have the capacity to innovate quickly in energy efficiency, electrification, and demand reduction programs. To encourage MLPs to capitalize on this potential, the state should provide funding or programs that expand MLPs' capabilities to accelerate energy efficiency adoption and to address climate change in data-driven, equitable, and impactful ways. As the entities responsible for providing energy efficiency services to the majority of MLPs across the Commonwealth, MCAN also encourages MMWEC and ENE to actively contribute and support MLPs in adopting innovative approaches to energy efficiency. These associations' resources and capacity can propel innovation if creative solutions are encouraged and invested in.

Conclusion

This section provides clear evidence that, despite limited regulations and state support, MLPs provide a variety of energy efficiency incentives to their customers. These offerings include a host of programs that have become expected as standard incentives and rebates, along with programs that address the climate crisis and energy efficiency using creative solutions. Even with substantial effort, opportunities for improvement remain.

This section identifies notable disparities in the incentives offered to residents and progress made in energy efficiency between IOUs and MLPs. MCAN believes these disparities are driven by an absence of proportionate resources from the state supporting MLPs. Other contributing factors include minimal regulatory oversight and nominal investment in energy efficiency by some MLPs. Moving forward, all relevant actors – advocates, MLP staff and light boards, MLP associations, state departments, and legislators – should seek appropriate ways to address these

gaps. Otherwise, the Commonwealth faces the risk of watching some communities fall well behind the rest of the state in energy efficiency.

Another important area where progress is being made but additional steps are needed is reducing barriers for low-income, Black and Brown, and non-English speaking households and renters to participate in energy efficiency programs. Some MLPs have taken initial steps to help foster equity; however, more must be done to ensure that substantial efforts are made across the state. Here, again, MLPs and the state must work together to address these issues and identify feasible solutions that promote energy and climate justice.

Considerable progress has been made in energy efficiency in MLP districts. To ensure that this progress continues at pace with the rest of the state and that no community falls behind, stakeholders need to collaborate to address funding disparities between MLP energy efficiency and Mass Save, to significantly improve program access, and to incentivize MLPs to be ambitious and creative in their approaches. These issues may be difficult to address. Nevertheless, we are confident that solutions exist which can rectify these issues while ensuring that the interests of relevant stakeholders are acknowledged.



MLP ENERGY EFFICIENCY RECOMMENDATIONS

1

INCREASE THE SIZE OF ENERGY EFFICIENCY PROGRAMS AND REBATES

RELEVANT ACTORS

- Increase the size of weatherization and heat pump rebates for residents
- Work with state officials to create and adopt a 0% interest loan program for energy efficiency retrofits
- Implement and expand commercial energy efficiency programs and offerings
- Increase the percentage of overall revenue allocated to energy efficiency programs

LIGHT BOARDS MLPs
LIGHT BOARDS MLPs MMWEC & ENE
DOER
LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs

2

INCREASE EQUITY AND ACCESS TO ENERGY EFFICIENCY PROGRAMS

RELEVANT ACTORS

- Provide increased rebates for low-income residents and renters
- Conduct specific outreach to low-income residents and renters who stand to benefit the most from energy efficiency programs
- Identify households in MLP districts based on income, race, and language isolation; develop outreach strategies to reduce barriers and raise awareness of program offerings

LIGHT BOARDS MLPs
LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs MMWEC & ENE

3

TRACK SAVINGS AND PROGRESS OF ENERGY EFFICIENCY PROGRAMS

RELEVANT ACTORS

- Track and report kWh savings from energy efficiency programs in annual Municipal Action Plans (MAPs)
- Track and make public energy savings in a way that enables MLPs to be accountable for equity
- Set ambitious energy savings goals based on kWh savings and other metrics
- Track energy efficiency using additional metrics that account for electrification

LIGHT BOARDS MLPs MMWEC & ENE DOER
LIGHT BOARDS MLPs MMWEC & ENE
LIGHT BOARDS MLPs MMWEC & ENE DOER
LIGHT BOARDS MLPs MMWEC & ENE

4

INCREASE STATE SUPPORT FOR MLP ENERGY EFFICIENCY

RELEVANT ACTORS

- Mitigate disparities in energy efficiency programs between MLPs and IOUs
- Provide more funding for MLP energy efficiency programs
- Allocate funding specifically for MLPs to enhance their energy efficiency incentives
- Allocate funding for innovative programs and pilot projects in MLP districts

LEGISLATURE DOER
LEGISLATURE DOER
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Transparency and Community Engagement

(15 points)

Introduction

MLPs are democratic institutions. They are governed by either an elected or appointed board and are directly responsible to the communities they serve. The democratic nature of MLPs makes them a unique and preferable type of utility. The programs and practices MLPs implement to afford decision-making power to residents must be protected and enhanced to every extent possible.

For MLPs to operate as effective democratic institutions, residents and customers need access to information about their MLP's decision-making processes and information about their MLP's operations. Engaging community members frequently by soliciting input and feedback is also foundational to the democratic nature of MLPs. MLPs that demonstrate a clear process for integrating community feedback and changing policies in direct response to residents' input reflect the highest standard of a democratically governed public institution.

This section assesses the extent to which MLPs are transparent in decision-making processes and operations, and whether MLPs frequently seek input from community members on issues of renewable energy and energy efficiency. Although we do not capture the full scope of outreach strategies and practices, this section uses general metrics that MCAN adopted as indicators of an MLP's commitment to engaging community residents in decision making and being transparent about decisions regarding programs, operations, and resource allocation.

Following a discussion of our methods and analysis of the results, we outline recommendations for how MLPs can enhance their efforts to be transparent about operations and decision-making processes as well as responsive to community interests.

Transparency and Community Engagement Scoring Methods

For this Scorecard, MCAN focused on three general areas when evaluating MLPs’ transparency and community engagement (see **Table 10**). To determine whether MLPs made information about decision-making processes and operations readily available, we identified whether key information was listed on MLPs’ websites. To determine whether recent efforts were made to solicit input on clean energy, MCAN identified whether surveys or community forums were recently conducted and the extent to which the results influenced MLP policy. Finally, to indicate

TABLE 10 **TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING METRICS AND CATEGORIES**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
ACCESSIBILITY OF GOVERNING AND OPERATIONS INFORMATION	8	Based on the four factors listed below	Full points awarded if all four factors were satisfied
► DPU REPORT AND FINANCIAL REPORTS ON WEBSITE	2	Presence of an updated DPU report and/or financial reports on website	Full points awarded if a report from 2019 or later was available

TABLE 10

TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING METRICS AND CATEGORIES

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
▶ LIGHT BOARD MEETING TIMES ON WEBSITE	2	The date and time of upcoming light board meeting(s) were clearly listed on website or calendar	Full points awarded if date and time were listed
▶ LIGHT BOARD CONTACT INFORMATION ON WEBSITE	2	Contact information for at least one, but ideally all, light plant board members was listed on website	Full points awarded if contact information was listed
▶ UPDATED MINUTES FROM LIGHT BOARD MEETINGS	2	Minutes from light board meetings were up to date (allowing for a lag of 2 months) and available on website	Full points awarded if meetings were listed and up to date
OPPORTUNITIES FOR COMMUNITY TO AFFECT DECISION MAKING (ON CLEAN ENERGY)	5	Surveyed residents on renewable energy in the last 3 years, held a forum on renewable energy in the last 3 years, community input from such events substantially impacted policies and/or strategy	Scores based on whether MLPs had conducted a survey or community forum that included discussion of renewable energy in the last 3 years. Full points awarded if either took place and if community input substantially guided or changed MLP policy.
INFORMATION SHARING FOR MCAN'S ANALYSIS	2	MLP responded to MCAN's questionnaires	Full points awarded if MLP responded to full questionnaire; partial points awarded if MLP only responded to follow-up questionnaire
TOTAL	15 + BONUS POINTS		

TABLE 10

TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING METRICS AND CATEGORIES

BONUS

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
LISTS RECENT POWER SUPPLY ON WEBSITE AND IS EXPLICIT ABOUT REC RETIREMENT	8	Presence of power supply from 2019 or later is on website (in a report linked to website did not count), whether MLP discussed their REC retirement strategy, whether MLP accurately represented clean energy based on REC retirement	Full points awarded if power supply was present, there was a discussion of MLP's REC retirement, and clean energy was accurately represented based on REC retirement. Partial points were awarded for presence of power supply and discussion of REC retirement strategy
TOTAL	8		

an MLP's willingness to share information about internal operations, we scored the extent to which an MLP provided information to MCAN for the purposes of this Scorecard. Significant bonus points were provided for MLPs that were transparent about REC retirement and the renewable portions of their energy mix based on the number of RECs retired in 2019 or later.

The availability of information documenting MLPs' decision-making processes and operations accounted for a large proportion of points in this category. To determine information availability, MCAN prioritized four key pieces of information that should be easily accessible to community members and identified whether this information was available on MLPs' websites. The four categories of information listed above rep-

resent some of the basic information residents need to stay informed and involved in decision-making processes.

The other metrics in this category were MLPs’ willingness to share public information and community engagement. As a proxy for an MLP’s willingness to share information, we awarded points to MLPs that submitted responses to MCAN’s Scorecard questionnaires used for the purposes of this report. To determine the extent of community engagement on issues related to MLP clean energy programs, MCAN scored MLPs based on whether they had conducted a customer survey or hosted a community forum on a topic related to clean energy within the past three years. Further, we scored whether community input from this outreach noticeably influenced MLPs’ policies and long-term strategies. MCAN relied on responses to our questionnaire to determine whether community input had a noticeable impact. When not available, MCAN scanned MLPs’ websites for evidence of survey results that the MLP acknowledged as having been impactful. When neither information source was available, we were unable to award full points.

In the Bonus section, MLPs were awarded additional points for providing information about their power supply, discussing their REC retirement in a detailed and quantitative way, and clearly identifying the percentage of clean and non-emitting energy on the basis of the RECs and EFECs they retired on their website. Score totals for this category are listed in **Table 11**.

TABLE 11

MLP SCORES IN TRANSPARENCY AND COMMUNITY ENGAGEMENT

MUNICIPAL UTILITY	ACCESSIBILITY OF GOVERNING INFORMATION 8 PTS	OPPORTUNITIES TO AFFECT DECISION MAKING 5 PTS	INFORMATION SHARING 2 PTS	BONUS 8 PTS	TRANSPARENCY SCORE 15 PTS		
BELMONT	8	5	2	6		21	
CONCORD	8	3	2	8		21	
IPSWICH	8	5	2	6		21	
WEST BOYLSTON	8	5	2	6		21	
HOLYOKE	8	5	2	2		17	
MIDDLEBOROUGH	8	5	2	2		17	
TAUNTON	8	5	2	2		17	
SOUTH HADLEY	8	5	2	0		15	
READING	6	5	0	2		13	
SHREWSBURY	6	5	2	0		13	
WAKEFIELD	6	5	2	0		13	
BRAINTREE	6	3	1	2		12	
CHICOPEE	8	0	2	2		12	
NORWOOD	6	5	1	0		12	
WESTFIELD*	8	3	0	0		11	
PRINCETON	8	0	2	0		10	
ROWLEY	6	3	0	0		9	
WELLESLEY	4	3	0	2		9	
MANSFIELD	6	0	0	2		8	
N. ATTLEBOROUGH	2	5	1	0		8	
PEABODY	6	0	2	0		8	

TABLE 11

MLP SCORES IN TRANSPARENCY AND COMMUNITY ENGAGEMENT

MUNICIPAL UTILITY	ACCESSIBILITY OF GOVERNING INFORMATION	OPPORTUNITIES TO AFFECT DECISION MAKING	INFORMATION SHARING	BONUS	TRANSPARENCY SCORE	
	8 PTS	5 PTS	2 PTS	8 PTS	15 PTS	
STERLING	4	0	2	2		8
ASHBURNHAM	4	0	2	0		6
GROVELAND	4	0	2	0		6
MIDDLETON*	4	0	0	2		6
CHESTER	4	0	1	0		5
MARBLEHEAD	0	3	2	0		5
PAXTON	0	3	2	0		5
DANVERS*	4	0	0	0		4
GROTON	2	0	2	0		4
HINGHAM*	2	0	0	2		4
HOLDEN	2	0	2	0		4
HULL	2	0	2	0		4
LITTLETON*	4	0	0	0		4
TEMPLETON	2	0	2	0		4
BOYLSTON	0	0	2	0		2
GEORGETOWN*	2	0	0	0		2
HUDSON*	2	0	0	0		2
MERRIMAC*	2	0	0	0		2
RUSSELL	0	0	2	0		2
GOSNOLD	N/A	N/A	N/A	N/A		N/A

* indicates MLPs that did not submit questionnaires or provide feedback to MCAN for the purpose of this report

Results and Observations

Summary of Transparency Scores

The results above provide a useful snapshot of how MLPs are performing, relative to each other, in actions that enhance transparency and community engagement. MLPs' average Transparency and Community Engagement score was 9.1 points with a median score of 8 points. Most MLPs (i.e., 24 out of 40) scored between 0 and 10 points in this category, eight scored between 10 and 15 points, and eight scored 15 points or more. Belmont, Concord, Ipswich, and West Boylston were the top four scorers in transparency and community engagement, earning 21 points each.

The overall scores in this section suggest that many MLPs need to do more to be transparent and engage their communities. The following subsections discuss the results of relevant subcategories and present important observations that enable us to better understand what actions MLPs should take to enhance transparency and involve community residents in decision making.

Accessibility of Governing and Operations Information

Findings from this section indicate that MLPs' level of transparency varied widely. While a number of MLPs readily offered information about their light board's decision-making processes and internal operations, other MLPs provided limited or no information (**Figures 13 and 14**).

MLPs generally posted updated light board meeting minutes as well as light board dates and times. MLPs posted updated DPU and financial reports and provided contact information for light board members less frequently.

Opportunities to Affect Decision Making

Twenty MLPs either conducted surveys that included questions about renewable energy or held forums on renewable energy (or both) between 2017 and 2021. Of those 20, 12 MLPs showed clear evidence that input from community engagement directly and substantially affected MLP policy. Three of the remaining MLPs held an event or conducted a survey before 2017; 11 MLPs were recorded as having never conducted a survey

or held a forum on renewable energy; and seven did not report results and provided no evidence of either type of community engagement taking place.

70 Increasing Percentage from Non-Carbon Emitting Sources (The Town of Concord, n.d.), <https://concordma.gov/515/Power-Supply-Portfolio>

Transparency on Clean Energy and REC Retirement

Based on MCAN’s criteria, Concord was the only MLP that provided sufficient information about their REC retirement strategy to gain full points in the Bonus section. Specifically, they represented the percentage of clean energy in their energy mix in accordance with the number and types of RECs that were retired.⁷⁰

While no other MLP received full bonus points in this category, Belmont, Ipswich, and West Boylston gained almost full points by including information about REC retirement that specifically related to their energy mix and REC retirement strategy. Twelve other MLPs listed their power supply but did not disclose how the information was influenced by REC retirement and their energy mix. Twenty-five MLPs did not post their power supply on their website in a readily accessible manner (**Figure 15**).

FIGURE 13 ACCESSIBILITY OF GOVERNING INFORMATION POINTS RECIEVED

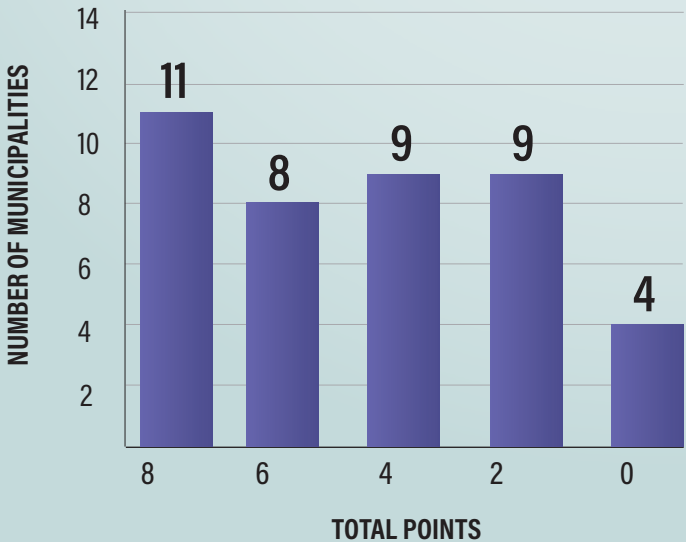


FIGURE 14 GOVERNING AND OPERATIONS INFORMATION AVAILABLE

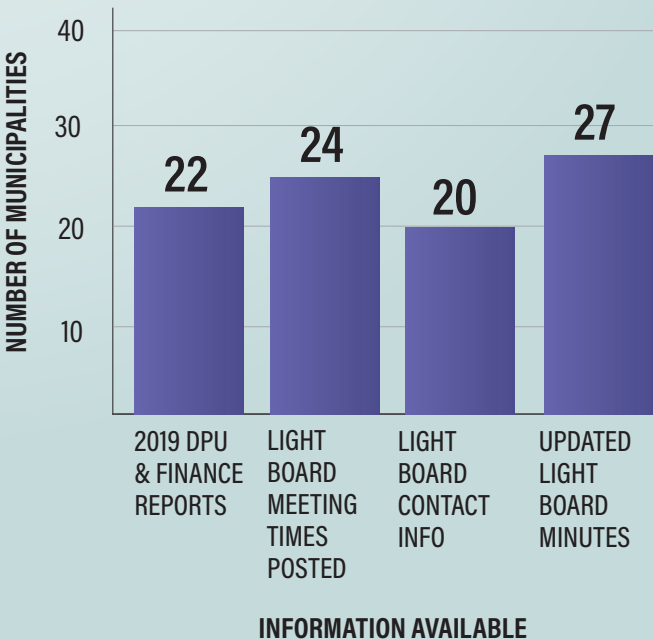
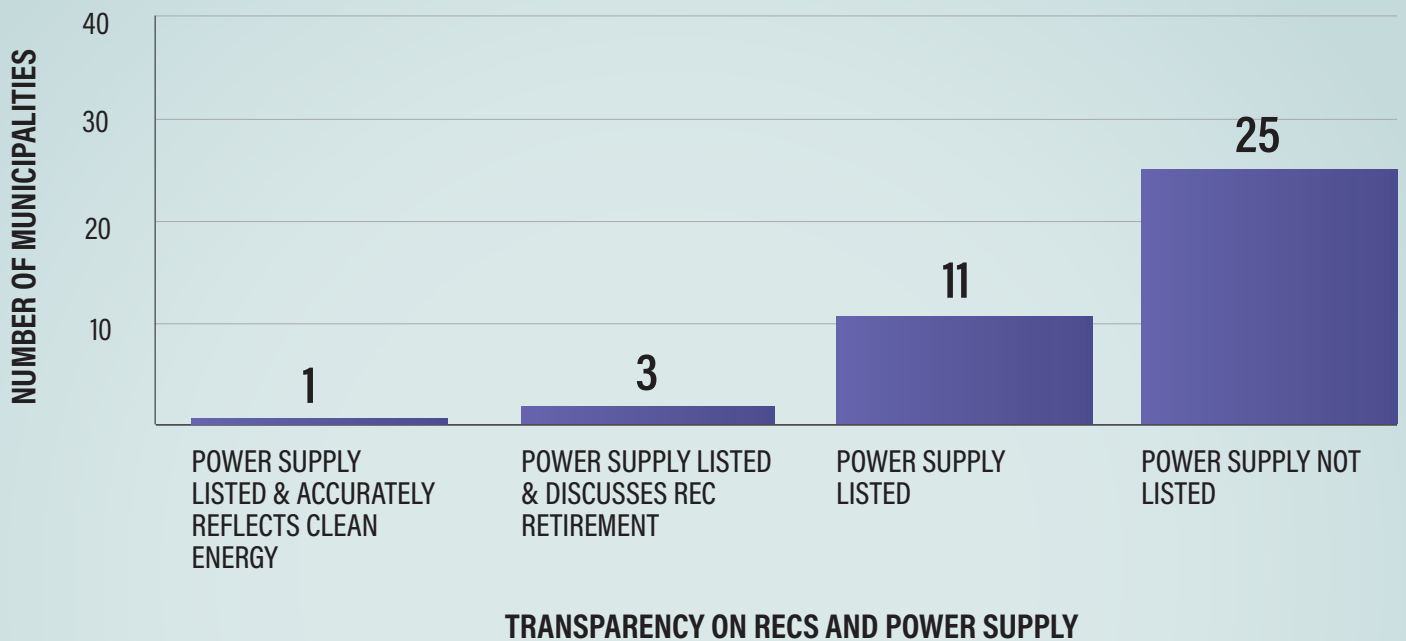


FIGURE 15 TRANSPARENCY ON CLEAN ENERGY & REC RETIREMENT



MCAN's Recommendations for Transparency and Community Engagement

MCAN recommends that light board members, MLP staff, MLP associations, state officials, and advocates consider taking the following steps to enhance transparency and community engagement in MLP districts:

- 1 Ensure that MLPs' websites contain updated information for residents to engage in decision making**
 - ▶ Consistently post and update light board meeting times, meeting minutes, and contact information

- ▶ Make it standard practice to post policies, reports, and other operations-related information on websites
- ▶ Work towards increasing transparency and educating residents about MLPs' decision-making processes and internal operations

Providing easy-to-find information about decision-making processes and operations is fundamental to an MLP fulfilling its mission as a public, democratic institution. While MCAN recognizes that there are alternative means of disseminating this information to residents, posting information on an MLP's website is standard practice to maintain transparency and enhance community engagement. To ensure that MLPs are being fully transparent, they should post all information relevant to decision-making processes and MLP operations to their websites. These materials should include, but not be limited to, light board meeting times; updated light board meeting minutes; light board member contact information; and all relevant reports, policies, and guiding principles.

In addition to ensuring that information is available to residents online, MCAN recommends that MLPs develop strategies to reach more residents using other technologies. Examples include video-recording meetings and posting those recordings in publicly accessible locations. Such practices became widespread due to COVID-19 and should be continued and enhanced during and after the recovery.

2 Increase opportunities for community involvement in decision making

- ▶ Conduct surveys and community forums regularly on issues related to MLP policy and long-term strategies
- ▶ Solicit feedback and support from community members on proposed energy projects and long-term policies
- ▶ Develop clear protocols and procedures to substantively incorporate community input into MLPs' policies and strategies

To understand the priorities, needs, and desires of district residents, MCAN recommends that MLPs regularly solicit formal feedback from their customers. This input can be collected through surveys as well

as community forums on specific policy questions or issues. While renewable energy and energy efficiency programs must be addressed, community input can be invaluable on a variety of topics.

Contracting for energy and investments in energy projects are two specific areas in which MLPs can expand community involvement. MCAN observed multiple instances where, without the knowledge of engaged residents, MLPs signed contracts for energy or invested in energy projects that did not align with the general goals and objectives of their community. Residents have voiced their concerns following the signage of such contracts, but MLPs have been limited in their ability to respond to such input due to the legally binding nature of these contracts. The alignment between residents' preferences and MLPs' financial commitments can be strengthened through consistent community feedback on potential investments and projects prior to contract signing.

As associations dedicated to supporting MLPs in serving the needs and interests of their residents, **MMWEC and ENE can exhibit leadership by being more transparent about the projects that they are presenting to member MLPs.** Furthermore, to minimize community backlash, MMWEC and ENE can use their expertise and resources to host community forums dedicated to reviewing project proposals before these proposals are scheduled to go before light boards. Using community forums – coupled with ongoing updates from individual MLPs through their websites, newsletters, and social media – is highly consistent with MLPs' responsibility to serve the public and create an informed civic culture.

3

Be transparent about clean energy and REC retirement

- ▶ Post updated power supply charts on websites
- ▶ Be transparent about REC retirement strategies and explain the implications of REC retirement for the energy mix
- ▶ Post charts that clearly identify the percentages of energy sources based on the number of RECs retired

MLPs have a responsibility to residents to accurately represent their energy mix in a way that follows the legally accepted practice of explicitly representing the percentage of clean and non-emitting energy. To do

so, **MLPs must represent their energy mix in accordance with the RECs and EFECs they retire from given resources and not based on the power supply.** To account for variance in the percentage of Class I RECs or Class II RECs and EFECs retired in an MLP's energy mix compared to the mix in the electron power supply, MCAN encourages MLPs to develop educational materials and campaigns regarding the benefits (and, if an MLP holds this view, the downsides) of Class I RECs and REC retirement. MLPs can coordinate with local elected officials and municipal staff, educational and library institutions, and nonprofit organizations to assist in conducting outreach and disseminating print and digital materials. Overall, MCAN strongly urges MLPs to be transparent about their strategies for procuring energy and retiring RECs and EFECs.

Conclusions

MLPs are a unique and preferable type of utility because they are responsible directly to the communities they serve. By frequently soliciting input from community members and lowering barriers to community participation in decision making, MLPs are fulfilling their responsibilities as democratic, community-owned organizations and incorporating their customers' priorities into policies and long-term strategies. However, there is still work to be done.

To enhance transparency and community engagement, MLPs can make all relevant and basic information on public involvement in their decision-making processes easily accessible to residents through MLPs' websites and printed materials. Furthermore, MLPs can enhance their efforts to solicit community feedback and actively identify additional ways in which residents can engage, particularly when MLPs are considering new energy contracts or are planning to invest in energy projects. Finally, MLPs must strive to be more transparent about their REC retirement strategies and the impacts of these strategies on the percentage of MLPs' energy mix that they can accurately claim as clean or non-emitting energy.

Transparency and community engagement are vital to MLPs as democratic institutions. Establishing democratic processes in our public utilities will ensure that MLPs are developing climate solutions that

are equitable and just. Through practices that enhance transparency and engagement, MLPs emphasize perhaps their most beneficial and unique quality as a democratic, local utility.



TRANSPARENCY & COMMUNITY ENGAGEMENT RECOMMENDATIONS

1 ENSURE THAT MLPs' WEBSITES CONTAIN UPDATED INFORMATION FOR RESIDENTS TO ENGAGE IN DECISION-MAKING	RELEVANT ACTORS
<ul style="list-style-type: none"> Consistently post and update light board meeting times, meeting minutes, and contact information 	LIGHT BOARDS MLPs
<ul style="list-style-type: none"> Make it standard practice to post policies, reports, and other operations-related information on websites 	LIGHT BOARDS MLPs
<ul style="list-style-type: none"> Work towards increasing transparency and educating residents about MLPs' decision-making processes and internal operations 	LIGHT BOARDS MLPs
2 INCREASE OPPORTUNITIES FOR COMMUNITY INVOLVEMENT IN DECISION MAKING	RELEVANT ACTORS
<ul style="list-style-type: none"> Conduct surveys and community forums regularly on issues related to MLP policy and long-term strategies 	LIGHT BOARDS MLPs
<ul style="list-style-type: none"> Solicit feedback and support from community members on proposed energy projects and long-term policies 	LIGHT BOARDS MLPs MMWEC & ENE
<ul style="list-style-type: none"> Develop clear protocols and procedures to substantively incorporate community input into MLPs' policies and strategies 	LIGHT BOARDS MLPs MMWEC & ENE
3 BE TRANSPARENT ABOUT CLEAN ENERGY AND REC RETIREMENT	RELEVANT ACTORS
<ul style="list-style-type: none"> Post updated power supply charts on websites 	LIGHT BOARDS MLPs
<ul style="list-style-type: none"> Be transparent about REC retirement strategies and explain the implications of it REC retirement for the energy mix 	LIGHT BOARDS MLPs
<ul style="list-style-type: none"> Post charts that clearly identify the percentages of energy sources based on the number of RECs retired 	LIGHT BOARDS MLPs



MLP Policy Context

(10 points)

Introduction

Efforts to transition to clean energy and increase energy efficiency are strengthened when MLPs and municipal governments establish policy contexts that are conducive to achieving these goals. When climate goals are established, climate action plans are in place, and sufficient resources are allocated, MLPs can better mitigate the harmful effects of climate change and transition to a net zero energy future. These and other local policy tools are useful for both MLP staff and advocates in ensuring and strengthening climate mitigation in their community.

This section assesses the extent to which MLPs and the towns within MLP districts have sought to establish policies and tools that enable climate mitigation. For this report, MCAN examined whether towns and MLPs had established local climate action plans, met all criteria for Green Community Designation, and opted to participate in the Renewable Energy Trust Fund (RETF) – all steps that enhance an MLP's ability to transition to clean energy and enhance energy efficiency. MCAN recognizes that other policies, plans, programs, and initiatives may also aid MLPs in taking progressive action on climate change. However, these three policies and tools are sufficient indicators of the policy context within which MLPs work to advance climate mitigation.

This section first presents MCAN's methods used to assess local policy context. We then discuss our findings and conclude by offering rec-

ommendations for what advocates, MLP staff, light board members, MLP associations, and local and state government officials can do to strengthen the local policy context and accelerate MLPs’ clean energy and climate mitigation efforts.

Policy Context Scoring Methods

In scoring MLP policy contexts, MCAN evaluated MLPs’ and local governments’ efforts to create and participate in policies, plans, and programs that better facilitate the transition to a clean energy future. Points were awarded based on (1) MLPs’ participation in opt-in statewide programs that enhance capacity for climate action and (2) MLPs’ adoption of

TABLE 12

POLICY CONTEXT SCORING METRICS AND CATEGORIES

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
CLIMATE ACTION PLAN	5	A published climate action plan, the development of a climate action plan	Scores whether MLPs had climate action plans that cover their complete district. Partial points were given for plans in development; full points were given for completed plans.
GREEN COMMUNITY DESIGNATION	3	Green Community status	MLPs whose towns had completed the process to become a Green Community were awarded full points for this category.
PARTICIPANT IN THE RENEWABLE ENERGY TRUST FUND (RETF)	2	A listed participant in the RETF	MLPs and towns that completed the process to become a member of the RETF were awarded full points in this category.
TOTAL	10 + BONUS POINTS		

TABLE 12**POLICY CONTEXT SCORING METRICS AND CATEGORIES****BONUS**

METRICS	TOTAL POINTS POSSIBLE	FACTORS	SCORING SUMMARY
ENERGY/ SUSTAINABILITY COMMITTEE	1	Existence of a committee working on issues of energy and sustainability	Full points were given if a committee existed
PROPERTY ASSESSED CLEAN ENERGY (PACE) PROGRAM PARTICIPATION	1	Participation in Mass Development's PACE program	Full points were awarded if a municipality in an MLPs had opted to participate in to the program
TOTAL	2		

comprehensive climate plans focused on reducing greenhouse gas emissions. A bonus point was awarded to MLPs whose municipalities had standing committees that addressed issues related to energy and climate change. An additional bonus point was awarded to MLPs whose municipalities had opted into Mass Development's Property Assessed Clean Energy (PACE) program. See **Table 12** for details.

For the purposes of this report, MCAN used the Institute of Local Government's definition of a climate action plan: "a comprehensive roadmap that outlines the specific activities that an agency will undertake to reduce greenhouse gas emissions. Climate action plans build upon the information gathered by greenhouse gas inventories and generally focus on those activities that can achieve the relatively greatest emissions reductions in the most cost-effective manner."⁷¹ As such, Municipal Vul-

nerable Preparedness reports and regional plans were not considered in this Scorecard.

MCAN used available government resources to determine MLPs' participation in the RETF and the Green Communities Program. Because participation in the Green Communities program requires multiple steps (including a final vote by town governing bodies) and the designation cannot be guaranteed until all steps are completed, MCAN did not give partial credit to MLPs in the process of receiving this designation.⁷² **Table 13** presents MLPs' Policy Context scores.

⁷¹ "Climate Action Plans" (Institute for Local Government), accessed May 27, 2021, <https://www.ca-ilg.org/climate-action-plans>.

⁷² As of or following MCAN's data review process in spring of 2021.

TABLE 13

MLP SCORES IN POLICY CONTEXT

MUNICIPAL UTILITY	CLIMATE ACTION PLAN	GREEN COMMUNITY DESIGNATION MAKING	PARTICIPANT IN THE RETF	BONUS	POLICY CONTEXT SCORE		
	5 PTS	3 PTS	2 PTS	2 PTS	10 PTS		
IPSWICH	5	3	2	1		11	
CONCORD	5	3	0	2		10	
BELMONT	5	3	0	1		9	
HOLYOKE	0	3	2	2		7	
NORWOOD	1	3	0	2		6	
ASHBURNHAM	0	3	2	0		5	
CHICOPEE	0	3	0	2		5	
GROTON	1	3	0	1		5	
HINGHAM*	1	3	0	1		5	
READING	5	0	0	0		5	
TEMPLETON	0	3	2	0		5	
WELLESLEY	1	3	0	1		5	
BRAINTREE	0	3	0	1		4	
GEORGETOWN*	0	3	0	1		4	
LITTLETON*	0	3	0	1		4	
MIDDLEBOROUGH	0	3	0	1		4	
TAUNTON	0	3	0	1		4	
CHESTER	0	3	0	0		3	
HUDSON*	0	3	0	0		3	
MERRIMAC*	0	3	0	0		3	
N. ATTLEBOROUGH	0	3	0	0		3	

TABLE 13

MLP SCORES IN POLICY CONTEXT

MUNICIPAL UTILITY	CLIMATE ACTION PLAN	GREEN COMMUNITY DESIGNATION MAKING	PARTICIPANT IN THE RETF	BONUS	POLICY CONTEXT SCORE		
	5 PTS	3 PTS	2 PTS	2 PTS	10 PTS		
SHREWSBURY	0	3	0	0		3	
WEST BOYLSTON	0	3	0	0		3	
WESTFIELD*	0	3	0	0		3	
HOLDEN	0	0	2	0		2	
HULL	1	0	0	1		2	
MARBLEHEAD	1	0	0	1		2	
PRINCETON	1	0	0	1		2	
RUSSELL	0	0	2	0		2	
STERLING	1	0	0	1		2	
WAKEFIELD	0	0	0	2		2	
PAXTON	1	0	0	0		1	
PEABODY	1	0	0	0		1	
SOUTH HADLEY	0	0	0	1		1	
BOYLSTON	0	0	0	0		0	
DANVERS*	0	0	0	0		0	
GROVELAND	0	0	0	0		0	
MANSFIELD	0	0	0	0		0	
MIDDLETON*	0	0	0	0		0	
ROWLEY	0	0	0	0		0	
GOSNOLD	N/A	N/A	N/A	N/A		N/A	

* indicates MLPs that did not submit questionnaires or provide feedback to MCAN for the purpose of this report

Results and Observations

Summary of Policy Context Scores

The results above provide a useful snapshot of the steps MLPs and municipalities are taking to develop local policy tools that support proactive climate action measures. MLPs' average Policy Context score was 3.4 points with a median score of 3 points. The majority of MLPs (i.e., 22 out of 40) scored between 0 and 5 points, and 11 MLPs scored 5 points or more. Ipswich, Concord, and Belmont were the top three scorers in this category, earning 11, 10, and 9 points, respectively.

73 MCAN did not provide partial points for MLPs that were in the process of receiving the Green Communities designation.

The overall scores in this section suggest that more can be done in most MLPs to improve the policy context within which they operate. The following subsections discuss the results of subcategories and present important observations that enable us to better understand what actions MLPs should take to improve the policy context across MLPs.

Climate Action Plans

Four MLPs – Belmont, Concord, Ipswich, and Reading – had district-specific climate action plans. Ten additional MLPs reported that climate action plans were underway. However, given confusion around the definition of a climate action plan during reporting, some uncertainty existed about whether those plans would meet the criteria for “climate action plan” used for this assessment.

Participation in Statewide Programs and Designations

As shown in **Figure 16**, participation in statewide programs and designations varied. As of the spring of 2021, municipalities in 23 MLPs had completed the process to become designated as a Green Community. Several additional municipalities including Mansfield, Rowley, and Wakefield were in the process of becoming Green Communities.⁷³

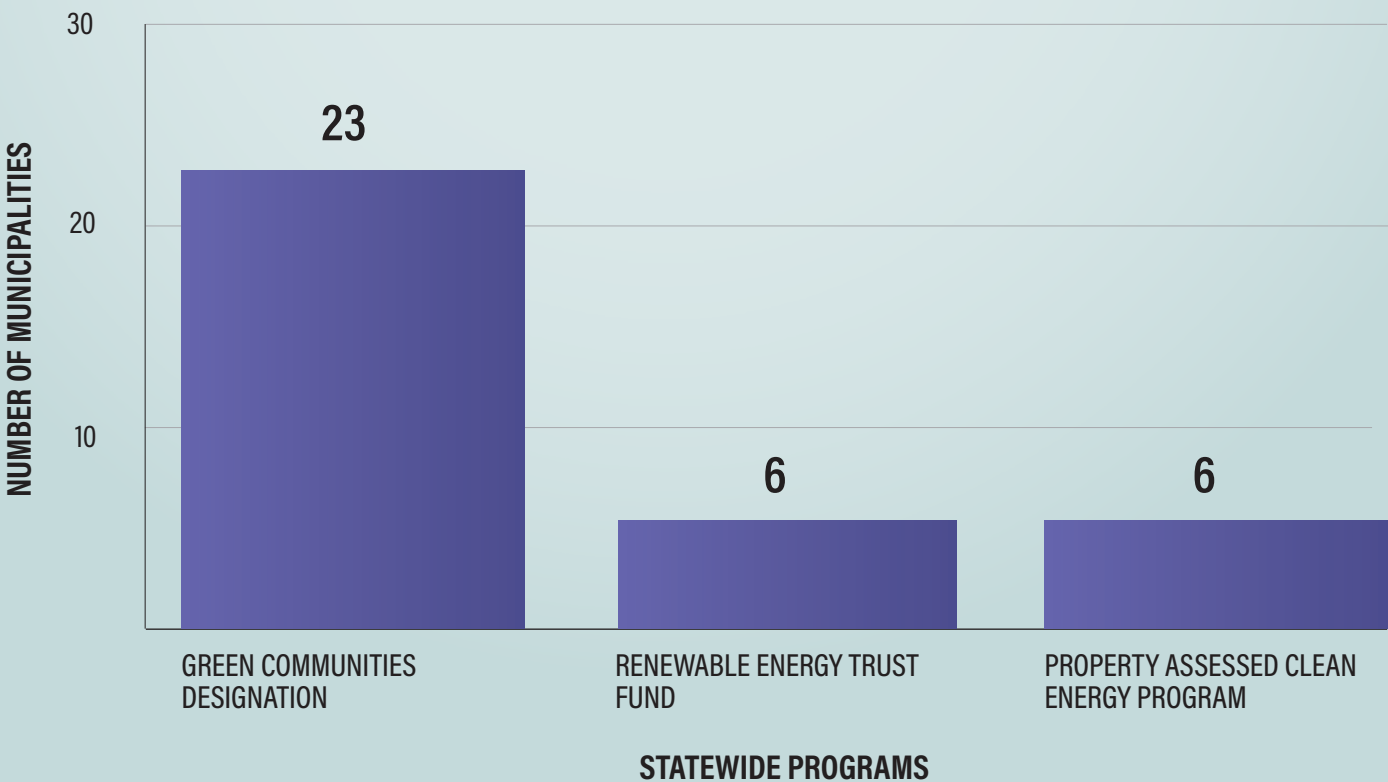
Of the 23 MLPs, a few (e.g., Taunton and Littleton) had some municipalities in their MLP districts that were not designated Green Communities. This is partly due to state regulations which make it far more difficult for these municipalities to receive the Green Communities Designation. As discussed below, such regulations are unnecessary barriers to MLP

communities’ participation in statewide programs. Legislative action should be taken to eliminate these obstacles.

Participation in the RETF was considerably lower. Only six MLPs had signed contracts to participate as of this report’s publication. No indications were given that additional MLPs intended to participate in the RETF in the near future.

MCAN observed a similarly low level of participation in the PACE program, with only six municipalities served by MLPs opting in. However, low levels of participation were likely due in part to the program being relatively new. Increased participation is expected as MLP staff and municipal officials become more aware of the program’s benefits.

FIGURE 16 PARTICIPATION IN STATEWIDE PROGRAMS



MCAN's Recommendations for Developing Strong Local Policies for Climate Mitigation and Clean Energy

MCAN recommends that MLP staff, light boards, MLP associations, state officials, and advocates consider taking the following steps to establish strong local policies supporting action on climate mitigation and clean energy in MLP districts:

1

Work with towns to establish climate action plans

- ▶ Work with town government and community members to implement climate action plans
- ▶ Conduct an inventory of MLP emissions and develop a long-term plan for reducing emissions to net zero by or before 2050

Developing a roadmap that outlines specific actions MLPs and other town agencies should take to reduce greenhouse gas emissions is a widely accepted approach to facilitate a timely clean energy transition. MCAN encourages MLPs and town governments within MLP districts to collaborate on developing such plans. During the development phase, MCAN encourages MLPs to engage residents and other stakeholders in their districts. In particular, MLPs should actively engage with low-income residents, communities of color, non-English speaking residents, and renters to ensure that these groups' needs are being met by these climate action plans and that the plans specifically alleviate all disproportionate burdens on these communities.

2

Participate in statewide programs focused on increasing efficiency and transitioning to clean energy

- ▶ Work with towns to attain Green Community Designation
- ▶ Participate in the Renewable Energy Trust Fund (RETF)
- ▶ Opt into the Property Assessed Clean Energy (PACE) program

Green Community Designation comes with numerous benefits and provides access to resources that help communities increase their energy efficiency and transition to clean energy.⁷⁴ MCAN encourages all MLPs to work with municipalities in their territories to achieve Green Community Designation.

The RETF is another state program that can significantly enhance an MLP's capacity to transition to clean energy. In particular, being a part of the RETF makes MLPs eligible for grants and programs offered by the Massachusetts Clean Energy Center (MassCEC).⁷⁵ MassCEC offers more than 25 programs and incentives that promote renewable energy, energy efficiency, and electrification for residents, businesses, nonprofits, and local governments. These programs are useful supplements to the host of programs that MLPs already offer to their customers and would support MLP districts in transitioning to a net zero future.

Finally, the PACE program is a relatively new and potentially immensely beneficial program that can help MLPs and municipalities increase energy efficiency and expand the use of clean energy among commercial buildings and multi-family housing. Through this program, property owners can finance energy efficiency upgrades and renewable energy adoption through a betterment assessment and lien on their property, thereby enabling them to have a longer payback period and to receive other financial benefits.^{76, 77} These aspects make such projects more financially feasible and provide a powerful incentive for local commercial and industrial actors to make necessary energy efficiency and clean energy upgrades. Furthermore, with Mass Development serving as the primary program administrator, there are few financial or administrative costs associated with opting in. Given the PACE program's overwhelming benefits and minimal costs, as well as a general lack of commercial energy efficiency programs in MLP communities, MCAN strongly recommends that all municipalities served by MLPs adopt this program.

Reduce barriers for MLPs to participate in statewide programs

74 "Becoming a Designated Green Community" (Green Communities Division), accessed May 26, 2021, <https://www.mass.gov/guides/becoming-a-designated-green-community>.

75 "Municipal Lighting Plant Communities" (Massachusetts Clean Energy Center, January 17, 2020), <https://www.masscec.com/municipal-lighting-plant-communities>.

76 "Massachusetts Launches Financing Program for Energy Improvements to Commercial, Industrial, AND Multifamily Buildings," MassDevelopment, July 28, 2020, <https://www.massdevelopment.com/news/massachusetts-launches-financing-program-for-energy-improvements-to-commercial-industrial-and-multifamily-buildings>.

77 "Property Assessed Clean Energy (PACE)," MassDevelopment, accessed August 2021, <https://www.massdevelopment.com/pace>.

3

- ▶ Ensure there are no additional barriers to MLP towns attaining Green Community status
- ▶ Reduce the barriers and requirements for MLP participation in the Renewable Energy Trust Fund (RETF)
- ▶ Develop new state-sponsored programs to support MLPs in addressing climate change and increasing energy efficiency

Statewide environmental programs should seek to reduce unnecessary barriers to MLP communities' participation. Enabling MLP districts and municipalities within those districts to join existing state programs quickly and easily will enhance our ability to meet the Commonwealth's climate targets while ensuring that no community is left behind. As two highly beneficial programs, removing barriers to MLPs' participation in the Green Community program and the RETF is particularly important.

With respect to the Green Community program, unnecessary barriers exist for communities in MLP districts that serve multiple municipalities. Specifically, requirements are imposed which mandate that, if an MLP municipality wishes to become a Green Community, *the entire MLP* district must adopt a renewable energy charge. However, because other municipalities in the MLP may (1) not wish to be a Green Community or (2) have already received the designation without adopting the charge because part of the region is served by an IOU (which automatically imposes a renewable energy charge), such municipalities are not realistically able to receive the designation. To ensure that all municipalities have access to this program, the law must be changed to ensure that municipalities in MLP districts can adopt a renewable energy charge and obtain the Green Community Designation regardless of the status of other municipalities in their district.

Given that participation of MLPs is so low in the RETF, efforts should also be made to identify and reduce any unnecessary barriers keeping MLPs from participating. While there may be others, one way to lower barriers for MLPs is to remove or relax the requirement that MLPs must stay in the RETF in perpetuity once they join. A more flexible form of membership could allow MLPs who are not able to commit to indefinite membership an opportunity to contribute to and benefit from the RETF. In general, MCAN recommends that state officials and the state legislature enable MLPs to participate in all new and existing programs

that support local municipalities in transitioning to clean energy or in enhancing energy efficiency. Further, we support efforts to remove unnecessary barriers that inhibit MLPs' participation in these programs. Although MLPs are independent utilities focused on addressing the needs of their communities, the state has a responsibility to ensure that those communities are not being left behind.

Conclusions

The policy context within which MLPs and municipalities seek to advance the energy transition and increase energy efficiency substantially shapes potential community progress. Whether implementing climate action plans, participating in statewide programs, or developing other policy tools that enhance climate mitigation objectives, MLPs, municipalities, state agencies, legislators, and advocates should strive to enhance MLPs' policy contexts. This way, MLP staff will have resources at their disposal and a clear direction that enables an effective energy transition for their communities. These efforts will promote long-term and effective change that brings us closer to an equitable clean energy future.



MLP POLICY CONTEXT RECOMMENDATIONS

1 WORK WITH TOWNS TO ESTABLISH CLIMATE ACTION PLANS	RELEVANT ACTORS
<ul style="list-style-type: none"> Work with town government and community members to implement climate action plans 	<div>LIGHT BOARDS MLPs</div> <div>MUNICIPAL GOVERNMENT</div>
<ul style="list-style-type: none"> Conduct an inventory of MLP emissions and develop a long-term plan for reducing emissions to net zero by or before 2050 programs and investments 	<div>LIGHT BOARDS MLPs</div> <div>MUNICIPAL GOVERNMENT</div>
2 PARTICIPATE IN STATEWIDE PROGRAMS FOCUSED ON INCREASING EFFICIENCY AND TRANSITIONING TO CLEAN ENERGY	RELEVANT ACTORS
<ul style="list-style-type: none"> Work with towns to attain Green Community Designation 	<div>LIGHT BOARDS MLPs</div> <div>MUNICIPAL GOVERNMENT</div>
<ul style="list-style-type: none"> Participate in the Renewable Energy Trust Fund (RETF) 	<div>LIGHT BOARDS MLPs</div>
<ul style="list-style-type: none"> Opt-in to the Property Assessed Clean Energy (PACE) program 	<div>LIGHT BOARDS MLPs</div> <div>MUNICIPAL GOVERNMENT</div>
3 REDUCE THE BARRIERS FOR MLPS TO PARTICIPATE IN STATEWIDE PROGRAMS	RELEVANT ACTORS
<ul style="list-style-type: none"> Ensure there are no additional barriers to MLP towns attaining Green Community status 	<div>LEGISLATURE DOER</div>
<ul style="list-style-type: none"> Reduce the barriers and requirements for MLP participation in the Renewable Energy Trust Fund (RETF) 	<div>LEGISLATURE DOER</div>
<ul style="list-style-type: none"> Develop new state-sponsored programs to support MLPs in addressing climate change and increasing energy efficiency 	<div>LEGISLATURE DOER</div>

DIGGING INTO THE SCORES



Introduction

A high rank in this Scorecard is the result of MLPs' significant efforts, strong policies, and documented practices that support clean energy and a just transition. To gain a clearer understanding of the work underlying these scores, this section highlights five MLPs whose efforts have resulted in strong scores across one or multiple categories. For each MLP, we highlight particular progress, programs, and practices that MCAN considers ambitious and effective in transitioning MLP communities to clean energy, increasing energy efficiency, ensuring transparency and community engagement, and leveraging local policy tools to support climate mitigation efforts.

The MLPs discussed below include Concord Municipal Light Plant (CMLP), Belmont Municipal Light Department (BMLD), Holyoke Gas & Electric Department (HG&E), Ipswich Electric Light Department (IELD), and West Boylston Municipal Light Plant (WBMLP). While other MLPs received scores on par with some of these examples and should be acknowledged for their progress in combating climate change, this group of MLPs was selected because they provide a comprehensive outline of the actions, policies, and outcomes that demonstrate advances across all four performance categories.

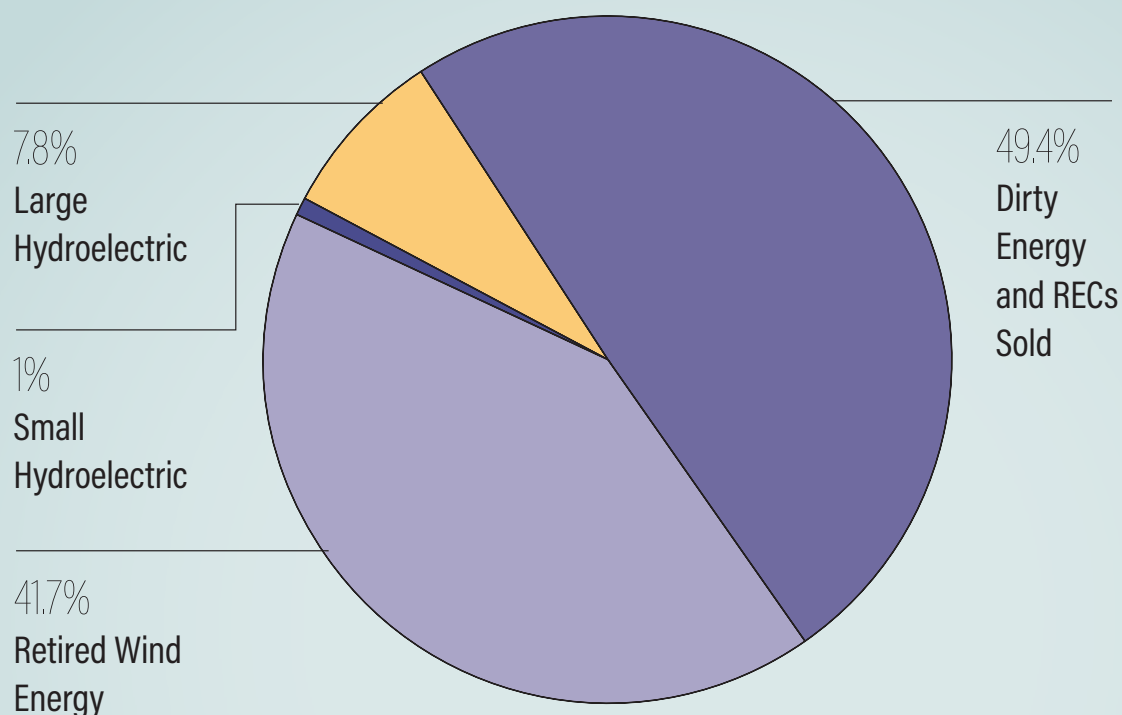


Concord Municipal Light Plant (CMLP)

MCAN's analysis shows that CMLP is a clear leader in energy transition and energy efficiency. Regarding energy transition, CMLP has made immense progress in transitioning its energy portfolio, with clean energy accounting for over 42% of their total energy mix in 2019 (based on retired Class I RECs). With this percentage, CMLP is far outpacing other MLPs and IOUs across the Commonwealth in clean energy integration. As shown in **Figure 17**, 41.7% of CMLP's total mix is made up of retired Class I wind energy RECs. This proportion includes RECs that came from CMLP's energy supply as well as Class I RECs that were purchased separately and subsequently retired. The remaining clean energy came from small hydroelectric energy (1.0%), and retired solar RECs

FIGURE 17 CONCORD'S ENERGY MIX⁷⁸

⁷⁸ Based on MCAN's methods. Percentages may vary depending on how calculations are made



An additional 7.8% of CMLP's total energy mix came from large-scale hydroelectric sources. The total non-emitting percentage of their energy mix was approximately 51% based on MCAN's methods.

In addition to their clean energy mix, CMLP has taken several steps to adopt clean technology and enable their residents to do the same. They have installed more than 11 MW of clean energy capacity in their district (when combining utility, commercial, and residential solar) and plan to install utility battery storage which will be connected to solar generation. According to the DOER, CMLP has spent \$216,286.00 through the MLP Solar Rebate Program, equal to a commitment of more than \$26.41 per customer. Additionally, while their net metering policy does not provide an excess generation fee equal to the residential rate, they have no limit on aggregate capacity and have a residential systems capacity limit above 100 kW. The investment in the Solar Rebate Program and CMLP's net metering policy both support customers in their transition to clean, renewable energy technology.

CMLP is also a leader in energy efficiency. They lead all MLPs with approximately 2.90% of their revenue allocated to energy efficiency programs and incentives. This investment contributes to their ability to offer weatherization and heat pump incentives that are larger than the average MLP offering. It has also enabled them to incorporate programs that incentivize the use of electricity when overall demand is low, reduce peak demand in the summer, and educate and encourage customers to adopt electric vehicles. These initiatives have led to reported savings of over one million kWh, approximately 0.65% of CMLP's total kWhs sold.

Transparency and Community engagement was another area in which CMLP performed very well. They had listed all of the key governing information tracked for this Scorecard on their website and recently conducted a survey which included questions about renewable energy. However, more notably CMLP was the only MLP that provided sufficient information about their REC retirement strategy to gain full bonus points in this section. Specifically, they represented the percentage of clean energy in their energy mix in accordance with the number and types of RECs that were retired.⁷⁹ While their methodology of calculation differs from MCAN's, the way that CMLP discussed and represented their REC retirement should be viewed as an excellent example and similar descriptions should be adopted by all 41 MLPs across the Commonwealth.

On the whole, CMLP's progress in mitigating climate change has been supported by numerous local policies and plans that provide them with a clear direction. In addition to the town of Concord adopting a climate action plan,⁸⁰ CMLP has authored a Strategic Plan for 2018–2025 that tasks the MLP with using data-driven approaches to aggressively reduce greenhouse gas emissions by retiring RECs, promoting energy efficiency, and encouraging electrification.⁸¹ These policy documents emphasize CMLP's commitment to a transparent clean energy transition and outline how this transition can be accomplished without compromising other priorities such as low rates and reliability.

79 Increasing Percentage from Non-Carbon Emitting Sources (The Town of Concord, n.d.), <https://concordma.gov/515/Power-Supply-Portfolio>

80 "Concord Climate Action and Resilience Plan 2020" (Town of Concord, June 2020), <https://concordma.gov/DocumentCenter/View/25318/Sustainable-Concord-Climate-Action-and-Resilience-Plan-2020>.

81 CMLP Strategic Planning Committee, "Strategic Plan 2018 – 2025 (Version 2.0)" (Concord Municipal Light Plant, November 2017), <https://concordma.gov/DocumentCenter/View/11239/CMLP-Strategic-Plan-Version-20>.



Belmont Municipal Light Department (BMLD)

BMLD is another MLP showing leadership in the clean energy transition and energy efficiency. Regarding the energy transition, BMLD scored well on virtually every metric, exhibiting a clear commitment to a well-rounded and holistic transition. Guided by clean energy targets adopted into their energy policy, BMLD exceeded IOUs

and MLPs in its percentage of clean energy with nearly 16% in 2019.⁸² Based on MCAN's methods for calculating the percentage of non-emitting RECs and EFECs, BMLD also showed fairly strong adoption of non-emitting energy, representing 31% of their overall energy mix.⁸³ This level of non-emitting energy is impressive, especially considering that BMLD has no contracts for nuclear energy and is not planning to sign any in the near future. BMLD decided not to sign nuclear or biomass contracts following extensive engagement with community members and other stakeholders to identify acceptable fuel types to add to BMLD's power portfolio.

BMLD is also committed to implementing programs that enable their residents to transition to clean energy and has made doing so easy for their customers. They have a net metering policy that meets two of MCAN's three criteria, have spent \$106,533.00 to date through the MLP Solar Rebate Program (equal to more than \$9.13 per customer), have electric vehicle charging rebates, and offer a 100% clean energy opt-in program for residents.

The same is true of BMLD's efforts to increase energy efficiency. By investing over 1.80% of their total revenue into energy efficiency programs, BMLD has established a comprehensive and ambitious energy efficiency effort. With the exception of 0% interest loans, BMLD offers all energy efficiency incentives and rebates tracked in this Scorecard. Similarly, their weatherization and heat pump incentives are above average compared with other MLPs. Like CMLP, BMLD provides numerous additional incentives including electric vehicle awareness and education, peak reduction rewards, and off-peak electric vehicle charging incentives.

⁸² "Energy Portfolio" (Belmont Electric Light Department, April 14, 2021), <https://www.belmontlight.com/energy-solution/energy-portfolio/>.

⁸³ This differs from the energy mix reported on Belmont's website because Belmont factors in Out-of-state RECs not purchased with a PPA, whereas MCAN does not.

Importantly, BMLD has taken strong initial steps to ensure that their energy efficiency programs are accessible based on knowledge of vulnerable communities in their district. BMLD offers an additional \$500 heat pump incentive for income-eligible residents, has a strategy focused on reaching renters and landlords to promote available energy efficiency programs, and is continuing to find ways to ensure that the approximately 30% of residents who speak a language other than English have access to information in their language both online and in printed materials.⁸⁴

Part of BMLD's success in energy efficiency and the clean energy transition is undoubtedly due to their transparency and engagement with residents. BMLD was one of four MLPs to score full points in the Transparency and Community Engagement section, demonstrating leadership in translating the democratic and public nature of MLPs into their programming. BMLD conducted consumer satisfaction surveys in 2017 and 2019, each of which inquired about customers' willingness to pay more for BMLD to reach a 100% clean energy portfolio. The results of these surveys led BMLD to retire RECs at an accelerated rate and revise their power supply policy.⁸⁵

In addition to consistent and meaningful community engagement, BMLD has a comprehensive website which lists light board meeting times, light board contact information, and light board meeting notes. The site also provides documents that include financial information, light plant policy information, and more.⁸⁶ In addition, BMLD is one of only four MLPs to discuss the implications of REC retirement and distinguish between power supply and energy mix based on REC retirement.⁸⁷ Although their methods for calculating renewable energy differ from those of MCAN, they provide a clear description of what is included and are transparent about RECs that were retired.



Holyoke Gas & Electric Department (HG&E)

With a population that is more than 50% LatinX, Holyoke is the most diverse MLP district in the Commonwealth. It also has a lower median income than any other MLP district at just under

84 "Belmont Municipal Light Department (BMLD) Municipal Action Plan," Municipal Action Plan (Energy New England, June 15, 2020), pg 20-25.

85 Belmont Municipal Light Department Questionnaire Response, MCAN MLP Questionnaire 2021, (June 18, 2020) Leadership Section, Question 7

86 "Financials, Policies & Terms" (Belmont Electric Light Department), accessed May 27, 2021, <https://www.belmontlight.com/about/financials-policies-terms>.

87 "Energy Portfolio" (Belmont Electric Light Department, April 14, 2021), <https://www.belmontlight.com/energy-solution/energy-portfolio/>.

\$41,000.⁸⁸ Despite this, HG&E has made substantial progress in decarbonization and energy efficiency.

HG&E has been a leader in decarbonizing their operations. While they do not have clean energy in their energy mix (because they do not retire Class I RECs), their energy mix is almost 88% non-emitting, powered by a large hydroelectric dam that HG&E owns and operates. HG&E has also invested significantly in the development of clean energy within their district and has rapidly adopted clean technology. They have more than 62 MW (equal to approximately 3.5 kW per customer) of Class I eligible renewables in their MLP district, more than any other MLP. They are also leading in battery technology, having already installed 8 MW of batteries with another 5 MW planned to be operational by December 2021.⁸⁹

In addition to adopting clean technology, HG&E is taking steps to reduce their use of dirty energy by working to electrify their gas services. They have imposed a moratorium on new gas loads and worked with the Rocky Mountain Institute to develop an action plan for electrifying their buildings and housing stock, thus reducing demand for gas.⁹⁰

HG&E is also a leader in energy efficiency. By investing nearly \$700,000 into energy efficiency (just over 1.00% of total revenue), they offer all energy efficiency program incentives scored in this Scorecard – only one of two MLPs to do so. They are also one of only three MLPs to offer a 0% interest loan for energy efficiency improvements such as heat pumps and weatherization.⁹¹ This loan is more comprehensive than any other loan program available by MLPs and offers loans of up to \$10,000 for single-family homes and up to \$20,000 for multi-unit properties.

The progress that HG&E and the city of Holyoke have made in decarbonization and energy efficiency is a testament to their emphasis on mitigating climate change. It is also a clear indication that MLP districts with majority low-income and working-class ratepayers can still be effective in addressing climate change without sacrificing low rates.

88 "QuickFacts Holyoke City, Massachusetts" (U.S. Census Bureau, n.d.), <https://www.census.gov/quickfacts/fact/table/holyokecitymassachusetts,MA/PST045219>.

89 Holyoke Gas and Electric Department Questionnaire Response, MCAN MLP Questionnaire 2021, (June 18, 2020) Leadership Section, Reduction of Brown Energy, Question 5 <https://drive.google.com/drive/u/1/folders/1bA134KMTelJ36Yogzk-sHzNKYtLGvW8LG8>

90 <https://drive.google.com/drive/u/1/folders/1iS-9d6jgH-3KlEm6TK4tbE75KZN7AEI5d>

91 "Residential Energy Conservation Program" (Holyoke Gas and Electric), accessed May 27, 2021, <https://www.hged.com/customers/save-energy-money/for-home/residential-energy-conservation/default.aspx>.



Ipswich Electric Light Department (IELD)

IELD is a clear leader in transparency and community engagement as well as in creating a progressive climate policy context. They were awarded top scores in Transparency and Community Engagement and were the only MLP to receive more than the full 10 points in the Policy Context category.

From a transparency perspective, IELD's website lists all the information that MCAN tracked and scored in addition to other materials on the MLP's operations, policies, and financial status.^{92, 93} One such resource is IELD's projected power portfolio for 2021. This portfolio provides an in-depth summary of the MLP's power supply as well as a description of the environmental attributes and whether they had been sold or retired. While there is no discussion about the benefits of RECs or the impact of REC retirement on the percentage of clean energy that can be claimed in the energy supply, IELD's projected portfolio clearly describes the current power supply. This information helps residents easily understand IELD's current position and strategy.⁹⁴

When looking at policy context, IELD has taken several steps to be more aggressive on mitigating the harmful effects of climate change. By participating in Green Community Designation and the Renewable Energy Trust Fund (RETF), they have increased their funding opportunities and the number of rebates and incentives available to residents for clean technology adoption and energy efficiency improvements. Additionally, IELD was one of the first MLP communities to publish a climate action plan in 2011.⁹⁵ Their action plan is coupled with numerous other policies and plans and presents a clear strategy for how IELD and the town of Ipswich can reduce emissions, increase efficiency, and transition to clean energy.

92 Which is the same as the town's website

93 "Electric Light Department," Ipswich, MA - Official Website (Town of Ipswich), accessed May 27, 2021, <https://www.ipswichma.gov/369/Electric>.

94 "2021 Projected Power Portfolio By Resource" (Ipswich Electric Light Department, n.d.), <https://www.ipswichma.gov/DocumentCenter/View/12972/Projected-2021-Power-Portfolio-with-RECs>.

95 Ipswich Commission on Energy Use and Climate Protection, "Climate Action Plan Ipswich, Massachusetts" (Town of Ipswich, May 2011), <https://ipswich.files.wordpress.com/2019/12/climate-action-plan-2011.pdf>.



West Boylston Municipal Light Plant (WBMLP)

Serving 3,726 customers and distributing just over 55,700 MWh of energy, only 11 MLPs are smaller than WBMLP. Despite this, they scored above average in virtually every category, highlighting the fact that smaller MLPs can make significant

progress in transitioning to clean energy. Unfortunately, WBMLP was the exception rather than the rule among smaller MLPs, which generally scored below average in multiple sections. This is an indication that more state resources may be necessary to ensure that smaller MLPs can effectively transition to a just energy future.

While WBMLP did not have any clean energy in its energy mix (because they did not retire the Class I RECs generated from their power supply), in 2019, approximately 55% of their energy mix was non-emitting based on MCAN's methodology. WBMLP is thus already on track to meet the 2030 emissions levels in the Greenhouse Gas Emissions Standard (GGES) established under the *Next-Generation Climate Bill*. In addition to non-emitting energy, WBMLP has made progress in clean technology adoption. According to the statewide list of eligible Class I units, the district has over 3.5 MW of clean energy in their district.⁹⁶ A large portion of this energy comes from community rooftop and landfill solar.⁹⁷ WBMLP also has a flywheel storage facility which is connected to their solar and has a capacity of 125 kW. This capacity is set to be increased by a battery storage project that is expected to be operational in the next three years.⁹⁸

In addition to scoring above average in most categories, WBMLP is a leader in community engagement and transparency. This is largely due to their comprehensive website, on which all information tracked in this Scorecard was easily available. WBMLP's website also provided additional insight into their environmental efforts including a comprehensive summary of their energy sources accompanied by an overview of each project as well as a description of their renewable and clean energy strategy.^{99, 100} This clean energy strategy also detailed WBMLP's Class I REC retirement schedule.

96 "Lists of Qualified Generation Units," Mass.gov (Department of Energy Resources), accessed May 27, 2021, <https://www.mass.gov/service-details/lists-of-qualified-generation-units>.

97 "WBMLP's Clean & Renewable Energy Strategy" (West Boylston Municipal Light Plant), accessed May 27, 2021, <https://www.wbmlp.org/clean-energy.html>.

98 West Boylston Municipal Light Plant Questionnaire Response, MCAN MLP Questionnaire 2021, (June 18, 2020) Leadership Section, Reduction of Brown Energy, Question 5.

99 "WBMLP's Energy Strategy" (West Boylston Municipal Light Plant), accessed May 27, 2021, <https://www.wbmlp.org/energy-generation.html>.

100 "WBMLP's Clean & Renewable Energy Strategy" (West Boylston Municipal Light Plant), accessed May 27, 2021, <https://www.wbmlp.org/clean-energy.html>.

WBMLP has made considerable progress, exceeding that of MLPs of a similar or smaller size. However, they are the exception rather than the rule among smaller MLPs. Their distinct achievements highlight the struggles that smaller MLPs may face in expanding energy efficiency programs and adopting clean energy. The state can respond to this urgent need by providing additional support to smaller MLPs. If we want all communities and utilities to rapidly transition, then we must ensure that those with limited budgets and fewer resources are adequately supported.

CONCLUSION AND FUTURE REPORTS



Conclusions

This Scorecard provides a snapshot of MLPs' progress in mitigating the climate crisis and transitioning to a clean energy future. The results show that substantial efforts have been made in many areas. In some cases, MLPs have assumed a position of leadership in the Commonwealth. By identifying trends in MLP activity across categories, MCAN offers recommendations for steps that MLPs, MLP associations, government officials, legislators, and advocates can take to enhance efforts. These recommendations are meant to provide a clear direction for stakeholders interested in enhancing efforts to combat climate change in their MLP or in MLPs across the board.

Based on the findings in this report, MCAN outlines recommendations in each of the four categories. Some of the most important include the following:

- 1 Incorporate Class I REC retirement into long- and short-term strategies
- 2 Strengthen and enhancing policies that enable residents to transition to clean energy
- 3 Increase the size of energy efficiency programs and rebates and, more generally, the overall percentage of revenue invested in energy efficiency
- 4 Increase equity and access to energy efficiency programs
- 5 Enhance opportunities for community engagement in decision making
- 6 Reduce the barriers for MLPs to participate in statewide programs

Issues of justice within the energy sector were not addressed directly in this Scorecard. These issues are critical to MLPs' operations, and their

approach to climate mitigation and a clean energy transition. Moving forward, MLPs should focus on how they can identify and resolve disparities, equity issues, and disproportionate burdens resulting from their operations. MCAN firmly believes that addressing issues of justice is the foundation for effective climate mitigation. We are fully committed to expanding our focus on these issues in future reports.

The progress that has been identified in this Scorecard is a direct product of the hard work and advocacy by community members in MLP districts as well as the openness of MLP staff and light board members to incorporate community feedback into their policies and operations. Further enhancements to MLPs' efforts to combat climate change cannot be expected unless such advocacy continues. We hope that MLP residents use the information presented in this Scorecard, to whatever extent it is beneficial, to educate their neighbors, identify priorities unique to their communities, and engage their MLPs (both light boards and staff) in bolstering efforts to mitigate climate change and accelerate the transition to clean energy.

While advocacy and community engagement enables change, movement towards accelerating the energy transition can only happen when MLP light boards and staff are open to new, ambitious approaches and responsive to residents' requests. In this vein, we hope this Scorecard helps MLPs identify opportunities for coordination and innovation; identify trends and progress across MLPs; and consider how their utility can continue to increase its efforts. Even with different priorities and possible disagreements about best practices, MCAN recognizes that MLP staff and light boards are valued and necessary partners in this work. As such, we are committed to working with MLP staff and light board members to identify solutions and promote progress wherever feasible.

MLPs are an essential part of the Commonwealth's solution to the climate crisis. They are well positioned to take action and are capable of being leaders in the Commonwealth. This Scorecard is proof of these possibilities. As we look towards the future, MCAN is committed to working with advocates, MLP staff, MLP associations, and state officials to ensure that this potential is fully realized.

Future Research for Following Reports

This Scorecard expanded and improved upon MCAN's initial Scorecard released in 2019. Following discussions with experts, advocates, and MLP staff, we have taken steps to enhance this iteration with the intention of more completely accounting for MLPs' progress in combating climate change while doing more to acknowledge the differences between MLPs and IOUs. In future iterations of this Scorecard, we intend to continue building on our progress with the goal of developing an even more useful resource for advocates, MLP staff, and other stakeholders.

In subsequent iterations of MCAN's MLP Scorecard, any areas for improvement will be identified in each of the four scoring categories. These improvements should generally reflect avenues by which we can expand the factors considered in each category, enhance data collection methods, and adequately capture new developments. Changes will be made only if adequate data are available from the majority of MLPs.

In subsequent iterations, MCAN will seek to include metrics that enable us to account for or further consider the following:

- ① The level of financial investment and ownership of clean energy generation facilities and infrastructure. Investment and ownership of dirty facilities may also be considered.
- ② The work that is being done to install and integrate smart meters, communication networks, and data management systems that enable two-way communication between utilities and customers (i.e., AMI).¹⁰¹
- ③ Efforts made to adopt integrated resource planning (IRP) to effectively plan for increased integration of distributed resources, to improve demand-side management, and to better prepare MLPs to transition to a net zero future.¹⁰²
- ④ The implementation and strength of commercial energy efficiency programs and incentives.

101 "Advanced Metering Infrastructure and Customer Systems: Results from the Smart Grid Investment Grant Program," Advanced Metering Infrastructure and Customer Systems: Results from the Smart Grid Investment Grant Program § (2016), <https://www.energy.gov/sites/prod/files/2016/12/f34/AMI%20Summary%20Report%09-26-16.pdf>, pg 4.

102 Douglas C Bauer and Joseph H Eto, "Future Directions: Integrated Resource Planning" (American Council for an Energy-Efficient Economy, 1992), [https://www.aceee.org/files/proceedings/1992/data/papers/SS92\\$Pan-el8\\$Paper02.pdf](https://www.aceee.org/files/proceedings/1992/data/papers/SS92$Pan-el8$Paper02.pdf), pg 1.

- 5 The work that MLPs are doing to advance the electrification of the transportation sector through the adoption of electric vehicles and electric vehicle infrastructure.

Prior to incorporating these or other measures, MCAN will review available data and consult with experts and MLP staff to ensure that the proposed metrics accurately reflect MLPs' activity in these areas.

In addition to addressing potential improvements to each scored section, MCAN intends to create an additional category in subsequent reports focused on energy equity and environmental justice. To identify important metrics to include in this category, MCAN plans to consult with environmental justice advocates and scholars, data scientists, and MLP staff. This new scoring category will not diminish the importance of other categories but will instead alter the point scale and supplement the various considerations incorporated into subsequent reports.

We believe that the methodology presented in this Scorecard provides a strong foundation for an analysis of MLPs' progress in mitigating climate change. As such, we anticipate that future reports will not shift so drastically as to inhibit comparison between reports. Going forward, we are confident that it will be possible to track progress over time by comparing results. MCAN believes that tracking MLPs' progress from year to year is important to paint a full picture of ongoing efforts.

APPENDIX



APPENDIX A

SCORING METHODOLOGY

ENERGY TRANSITION SCORING (50 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
PERCENTAGE OF CLEAN ENERGY – 10 POINTS			
≥14.00%	10	Any MLP with less than 0.5% clean energy in their energy mix received 0 points. MLPs with a clean energy percentage greater than 0.5% received points in accordance with the listed scale. This percentage was calculated based on the number of Class I RECs retired by an MLP divided by the total energy sold (pg 57, line 17 of DPU Annual Report). Clean energy was defined as Class I eligible energy sources including solar photovoltaic, solar thermal electric, wind energy, small hydropower, landfill methane, anaerobic digester gas, marine or hydrokinetic energy, and geothermal energy. MCAN does not consider biomass to be a clean energy source.	
12.50%–13.99%	9		
11.00%–12.49%	8		
9.50%–10.99%	7		
7.00%–9.49%	6		
5.50%–6.99%	5		
4.00%–5.49%	4		
3.50%–4.99%	3		
2.00%–3.49%	2		
0.50%–1.99%	1		
<0.5%	0		
RETIRED CLASS I RECS – 5 POINTS			
YES	5	If MLPs retired any Class I RECs, they received full points for this category.	
NO	0		
CLEAN ENERGY PERCENTAGE CHANGE BETWEEN 2017 & 2019 (IN LINE WITH RPS INCREASE) – 5 POINTS			
≥2.0%	5	MLPs that increased their percentage of clean energy at the same rate or faster than the RPS between 2017 and 2019 received full points. MLPs that increased their percentage of clean energy at a slower rate than the RPS received 3 points. MLPs that had no change or a decrease in their percentage of clean energy received 0 points.	Between 2017 and 2019, the RPS increased by 2%.
0.01%– 1.99%	3		
0%	0		

ENERGY TRANSITION SCORING (50 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
PERCENTAGE OF NON-EMITTING ENERGY - 10 POINTS			
≥80%	10	MLPs received points in accordance with the listed scale. MCAN considered retired RECs and MWh that would be included in the DEP AQ31 reports. ¹ This includes non-emitting MWh from municipally owned generators, MWh from a generator with which an MLP has an electricity contract, and MWh that are eligible for the Massachusetts RPS (either Class I or Class II). ²	MWh that are purchased without a PPA and do not qualify as Class II RECs in Massachusetts were not considered in our methods; this includes MWh that qualify as Class II in other Northeastern states.
60%-79%	8		
40%-59%	6		
20%-39%	4		
>0%-19%	2		
0%	0		
CLEAN RENEWABLE SITING PER CAPITA (TOTAL RENEWABLES KW/NUMBER OF CUSTOMERS) - 3 POINTS			
≥1.0	3	Scores were determined based on the total clean renewable capacity in MLP districts per customer which included all sources listed as Class I eligible resources in MLP districts.	Does not include solar installed through the SMART program because MLP customers are not eligible for this program
0.99-0.66	2		
0.65-0.33	1		
>0.33	0		
MLP SOLAR REBATE PROGRAM (TOTAL MONEY SPENT PER CUSTOMER) - 2 POINTS			
≥\$5/CUSTOMER	2	This score is based on the amount of money spent through the MLP Solar Rebate Program offered by the DOER. The scale was on a \$ per customer basis to account for MLPs' size differences.	
\$0.01- \$4.99/CUSTOMER	1		
\$0/CUSTOMER	0		

¹ "AQ 31 Optional Greenhouse Gas Emissions Reporting Form and Spreadsheet for Municipal Retail Sellers of Electricity," Mass.gov (Massachusetts Department of Environmental Protection, June 2020), <https://www.mass.gov/doc/instructions-aq31-optional-ghg-reporting-for-municipal-retail-sellers/download>, pg 3, no. 6.2 "Who We Serve," MMWEC, accessed August 2021, <https://www.mmwec.org/who-we-serve/>

² Ibid.

ENERGY TRANSITION SCORING (50 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
NET METERING POLICY - 5 POINTS			
EXCESS GENERATION CHARGE ≥RESIDENTIAL RATE	1	MLPs were given 2 points for having a net metering policy that provides credits or payments for residential renewable energy generation. If this policy had no residential aggregate capacity limit, they received an additional point. If their residential system capacity limit was greater than 10 KW, they received an additional point. If their excess generation charge was greater than or equal to the rate they charged the customer, they received an additional point. The maximum score was 5 points.	
RESIDENTIAL SYSTEM CAPACITY LIMIT >10 KW	1		
NO RESIDENTIAL AGGREGATE CAPACITY LIMIT	1		
NET METERING POLICY	2		
NO POLICY	0		
BATTERY STORAGE ADOPTION - 5 POINTS			
INSTALLED & CONNECTED TO SOLAR	5	Full points were given if utility-scale storage was installed and connected to solar. Installed storage connected to the grid received 4 points. Planned storage received 3 points if an MLP specified their intention to connect the battery to solar and 2 points if an MLP specified their intention to connect the battery to the grid (or if the energy source was not specified).	Batteries connected to both solar and the grid received full points.
INSTALLED & CONNECTED TO GRID	4		
PLANNED - CONNECTED TO SOLAR	3		
PLANNED - CONNECTED TO THE GRID OR UNSPECIFIED	2		
NO	0		

ENERGY TRANSITION SCORING (50 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
PLANS FOR GAS SERVICES AND NUCLEAR ENERGY CONTRACTS - 5 POINTS			
NO NUCLEAR AND DOES NOT PROVIDE GAS SERVICE	5	MLPs received full points if they were planning to transition away from both nuclear energy and, where relevant, gas services. MLPs received 4 points if they planned to transition away from either nuclear or gas but not both. MLPs received 3 points if they intended to keep their gas services and nuclear mix the same. MLPs received 0 points if they were either increasing gas or nuclear or were replacing either gas or nuclear with the other. MLPs that did not report this category and had no information publicly listed received 0 points.	For MLPs that did not offer gas as a service, the gas component of this category was not considered.
NO NUCLEAR, PLANS TO DECREASE GAS SERVICES	5		
NO GAS SERVICES, PLANS TO RETIRE NUCLEAR CONTRACTS	5		
NUCLEAR STAYS THE SAME, PLANS TO DECREASE GAS SERVICES	4		
GAS STAYS THE SAME, PLANS TO RETIRE NUCLEAR	4		
NUCLEAR AND GAS STAY THE SAME	3		
INCREASING NUCLEAR, DECREASING GAS SERVICE	0		
INCREASING GAS SERVICE, DECREASING NUCLEAR	0		
GAS SERVICES STAY THE SAME, INCREASING NUCLEAR	0		

ENERGY TRANSITION SCORING - BONUS

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
ADDITIONAL SUSTAINABLE MEASURES - 4 POINTS			
IMPLEMENTING ADVANCED METERING INFRASTRUCTURE (AMI)	1	Bonus points were given for programs that help advance the clean energy transition. MLPs received 1 bonus point for each of the programs/rebates that they provided or have implemented.	Programs implemented after 2021 were not considered.
ELECTRIC VEHICLE REBATE CHARGER REBATE	1		
100% CLEAN ENERGY OPT-IN PROGRAM	1		
MOR-EV REBATES USED PER CUSTOMER - 1 POINT			
MOR-EV REBATES/ CUSTOMER > AVERAGE MLP	1	The number of MOR-EV rebates processed in MLP districts per customer was used as a proxy of electric vehicle adoption. MLPs that had more rebates processed per customer than the average across all MLPs received a bonus point.	This section looked at the total number of rebates distributed between January 2019 and December 2020.
BATTERY STORAGE INSTALLED WITH MORE PLANNED - 2 POINTS			
INSTALLED WITH MORE PLANNED	2	If MLPs had installed a utility-scale storage facility and were planning to install more, they were awarded 2 bonus points.	
CLEAN ENERGY IS EXCEEDS RPS- 2 POINTS			
PERCENT OF CLEAN ENERGY ≥10% ABOVE THE RPS	2	If MLPs had a clean energy percentage greater than or equal to 10% above the RPS, they were awarded 2 bonus points.	Based on the 2019 RPS, MLPs were awarded points if their clean energy percentage was ≥24% in 2019.

ENERGY EFFICIENCY SCORING (25 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
FREE AUDITS AND ENERGY EFFICIENCY INCENTIVES – 10 POINTS			
FREE ENERGY AUDIT	1	MLPs received one point for each of the following programs/rebates offered: Energy Star appliances, free lighting, smart thermostats, and a no-cost energy assessment. MLPs received up to 2 points for each of the following programs offered: weatherization, heat pumps, and 0% loans for either weatherization improvements or heat pumps. Full points were awarded for weatherization incentives that had a maximum incentive that was above the average maximum of \$500 or that covered more than 50% of the project cost. Full points were awarded for heat pump incentives that offered a maximum incentive greater than the average maximum incentive across all MLPs.	Lighting includes free and discounted LED lights. In order for programs to count, they needed to be included in the 2020 MAP or there needed to be a clear indication that the program was in place in 2020.
FREE OR DISCOUNTED LED LIGHTS	1		
ENERGY STAR REBATES	1		
SMART THERMOSTATS	1		
0% LOANS	1		
WEATHERIZATION INCENTIVES	1		
WEATHERIZATION INCENTIVE = ABOVE AVERAGE MAX INCENTIVE OR >50% PROJECT COST	1		
HEAT PUMP INCENTIVES	1		
HEAT PUMP MAX INCENTIVE > AVERAGE MAX INCENTIVE	1		
ENERGY EFFICIENCY ACCESS – 5 POINTS			
RESOURCES AVAILABLE IN MULTIPLE LANGUAGES	1	These measures reflect the information that MLPs are asked to report in their annual MAPs regarding access to energy efficiency programs. ³ MLPs could receive a total of 5 points: 2 points if they conducted targeted outreach, 2 points if they had increased rebates/programs for income-eligible residents, and 1 point if they provided resources about energy efficiency programs in multiple languages.	

³ "Guideline Interpreting 225 CMR 4.00," Mass.gov (Residential Conservation Services, February 2020), <https://www.mass.gov/doc/rcs-guide-line-revised-2202020/download>, Pg 10 - 13.

ENERGY EFFICIENCY SCORING (25 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
INCREASED REBATES/ PROGRAMS FOR LOW-INCOME RESIDENTS	2		
TARGETED OUTREACH TO LOW-INCOME RESIDENTS OR RENTERS	2		
NO PRACTICES EMPLOYED	0		

ENERGY EFFICIENCY SPENDING (AS A PERCENTAGE OF TOTAL REVENUE) - 5 POINTS

≥1.00%	5	Points were distributed based on planned energy efficiency program spending for 2020 as a percentage of total revenue from 2019.	In 2019, IOUs spent approximately 6.29% of total revenues on Mass Save.
0.75%-0.999%	4		
0.50%-0.75%	3		
0.25%-0.499%	2		
<0.25%	0		

ANNUAL ELECTRICITY SAVINGS (KWh SAVED/TOTAL KWH DISTRIBUTED BY MLP) - 5 POINTS

≥0.5%	5	This metric scores whether annual electricity savings from energy efficiency programs were tracked and provided to MCAN. If savings were provided and were greater than 0 but less than 0.5% of the total electricity delivered, 2 points were awarded. If savings were provided and were greater than or equal to 0.5% of the total electricity delivered, 5 points were awarded	
0.01%- 0.49%	2		
NOT TRACKED AND/OR PROVIDED	0		

ENERGY EFFICIENCY SCORING - BONUS

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
ADDITIONAL ENERGY EFFICIENCY MEASURES - 3 POINTS			
HAS A COMMERCIAL ENERGY EFFICIENCY PROGRAM	1	Bonus points in "Energy Efficiency" were given for programs that help to advance energy efficiency and were not accounted for in the above scoring. Qualified programs/activities are listed. MLPs received 1 bonus point for each program/rebate they offered.	
MUNICIPAL ENERGY EFFICIENCY UPGRADES AND AUDIT FUNDING	1		
EDUCATIONAL EVENTS	1		
OTHER PROGRAMS/REBATES - NO MAX			
ADDITIONAL PROGRAMS	1	A bonus point was given for every energy efficiency or demand response program that was offered by MLPs but not factored into the scoring above.	

TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING (15 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
ACCESSIBILITY OF GOVERNING AND OPERATIONS INFORMATION - 8 POINTS			
DPU ANNUAL REPORT &/ OR FINANCIAL REPORTS ON WEBSITE	2	2 points were given for each of the components listed. An MLP could receive a maximum of 8 points and a minimum of 0 points in this category.	Contracts are displayed in financial reports and DPU annual reports; 2019 financials and annual reports must be made available on the website. One light board member contact was sufficient to receive points but not preferred. Minutes needed to be posted for meetings held 3 months before and earlier based on the date the website was accessed. At minimum, the next meeting date needed to be posted.
LIGHT BOARD MEETING TIMES ON WEBSITE	2		
LIGHT BOARD CONTACT INFO ON WEBSITE	2		
UPDATED MINUTES FROM LIGHT BOARD MEETINGS	2		
OPPORTUNITIES FOR COMMUNITY TO AFFECT DECISION MAKING (WITH REGARDS TO RENEWABLE ENERGY) - 5 POINTS			
SURVEY OR FORUM IN THE PAST 3 YEARS & COMMUNITY INPUT GUIDED OR CHANGED POLICY	5	Opportunities were defined as a customer survey (via telephone or online) or a forum for customers within the past 3 years specifically regarding renewable energy or energy efficiency. MLPs received 3 points if either had occurred. MLPs received an additional 2 points if they could point to ways in which community input has substantially guided or changed MLP policy.	
SURVEY OR FORUM IN THE PAST 3 YEARS	3		
NO SURVEY OR FORUM IN THE PAST 3 YEARS	0		

TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
INFORMATION SHARING FOR MCAN'S ANALYSIS - 2 POINTS			
MLP OR ASSOCIATION COMPLETED ORIGINAL QUESTIONNAIRE	2	This score reflects whether MLPs were willing to share information with MCAN for the purposes of this Scorecard. The score was determined based on whether an MLP completed MCAN's original questionnaire, only the follow-up questionnaire, or neither questionnaire.	
MLP OR ASSOCIATION COMPLETED THE FOLLOW-UP QUESTIONNAIRE ONLY	1		
MLP DID NOT COMPLETE EITHER QUESTIONNAIRE	0		

TRANSPARENCY AND COMMUNITY ENGAGEMENT SCORING - BONUS

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
LISTS RECENT POWER SUPPLY ON WEBSITE AND IS EXPLICIT ABOUT REC RETIREMENT - 8 POINTS			
EXPLICIT ABOUT REC RETIREMENT	8	MLPs received bonus points for being transparent about their energy mix and REC retirement. If a recent power supply from 2019 or later was on the website but REC retirement was not mentioned, MLPs received 2 points. If an MLP listed their power supply and accurately discussed their REC retirement, they were awarded 6 points. If MLPs were explicit about REC retirement on their website and displayed their energy mix, they received 8 points.	
DISCUSSES REC RETIREMENT	6		
DOES NOT DISCUSS REC RETIREMENT	2		
NOT ON WEBSITE	0		

MLP POLICY CONTEXT SCORING (10 POINTS)

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
CLIMATE ACTION PLAN - 5 POINTS			
CLIMATE ACTION PLAN	5	MCAN uses the Institute of Local Government’s definition of a climate action plan: “Climate Action Plan is a comprehensive roadmap that outlines the specific activities that an agency will undertake to reduce greenhouse gas emissions. Climate action plans build upon the information gathered by greenhouse gas inventories and generally focus on those activities that can achieve the relatively greatest emission reductions in the most cost-effective manner.” ⁴ Full points were awarded if a town had a climate action plan in place. One point was awarded if towns were in the process of developing Climate Action Plans.	Municipal Vulnerability Plans and regional climate action plans were not considered in scoring.
CLIMATE ACTION PLAN UNDERWAY	1		
NO CLIMATE ACTION PLAN	0		
GREEN COMMUNITY DESIGNATION - 3 POINTS			
YES	3	If MLPs and towns had completed the process to become a Green Community, they were awarded full points for this category. No points were given for MLPs in the process of receiving the designation.	
NO	0		
PARTICIPANT IN THE RENEWABLE ENERGY TRUST FUND (RETF) - 2 POINTS			
YES	2	If MLPs and towns had fully completed the process to become a member of the RETF, they were awarded full points in this category. No partial points were given.	
NO	0		

⁴ Climate Action Plans" (Institute for Local Government), accessed May 27, 2021, <https://www.ca-ilg.org/climate-action-plans>.

MLP POLICY CONTEXT SCORING - BONUS

CRITERIA	SCORE	FACTORS	ADDITIONAL NOTES
ENERGY/SUSTAINABILITY COMMITTEE - 1 POINT			
HAS COMMITTEE	1	If every town in an MLP district had an energy/sustainability committee, the MLP was awarded 1 bonus point.	
DOES NOT HAVE COMMITTEE	0		
PACE PROGRAM PARTICIPATION - 1 POINT			
OPTED IN	1	Full points were awarded if any municipality in an MLP had opted to participate in Mass Development’s Property Assessed Clean Energy (PACE) program.	
DID NOT OPT IN	0		

APPENDIX B

DATA GATHERING METHODOLOGY

ENERGY TRANSITION

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
NUMBER OF CLASS I RECS RETIRED (2019)	<ul style="list-style-type: none">To determine the number of Class I RECs retired, MCAN examined the “Electricity Generation and Greenhouse Gas Emissions Summary 2019” of AQ31 Reports (supplied to MCAN by the DEP on 1/15/21), which lists all RECs that were retired line by line.Each of the power sources listed in the Electricity Generation and Greenhouse Gas Emissions Summary was searched in the Class I Renewable Generation Units spreadsheet (downloaded directly from DOER’s website on 1/15/21). If 100% of the source’s generation was listed as Class I eligible, the number of RECs retired from that source was counted as Class I. When less than 5% of the source was listed as Class I (e.g., Brown Bear Hydro), it was not listed as Class I. When greater than 5% of the generation but not 100% of the energy source was listed as Class I, MCAN reached out to the MLP directly to inquire about the number of Class I RECs retired.Numbers were confirmed with MLPs through MCAN’s review process, and revisions were made as needed.The sum of the total number of Class I RECs retired from all energy sources (in MWh) was divided by the total energy sold by the MLP (in MWh) (displayed on pg 57, line 17 of MLPs’ DPU annual reports) to determine the percentage of clean energy in an MLP’s energy portfolio in 2019.
NUMBER OF CLASS I RECS RETIRED (2017)	<ul style="list-style-type: none">To determine the number of Class I RECs retired in 2017, MCAN examined the Electricity Generation and Greenhouse Gas Emissions Summary in the AQ31 2017 Reports (supplied to MCAN by the DEP on 2/1/21).Each of the power sources listed in the Electricity Generation and Greenhouse Gas Emissions Summary was searched in the Class I Renewable Generation Units spreadsheet (downloaded directly from DOER’s website on 1/15/21). If 100% of the source’s generation was listed as Class I eligible, the number of RECs retired from that source was counted as Class I. When less than 5% of the source was listed as Class I (e.g., Brown Bear Hydro), it was not listed as Class I. When greater than 5% of the generation but not

ENERGY TRANSITION

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
	<p>100% of the energy source was listed as Class I, MCAN reached out to the MLP directly to inquire about the number of Class I RECs retired.</p> <ul style="list-style-type: none"> Numbers were confirmed with MLPs through MCAN's review process, and revisions were made as needed. The sum of the total number of Class I RECs retired from all energy sources (in MWh) was divided by the total energy sold by the MLP (in MWh) (displayed on pg 57, line 17 of MLPs' DPU annual reports) to determine the percentage of clean energy in an MLP's energy portfolio in 2017.
PERCENTAGE OF NON-EMITTING ENERGY	<ul style="list-style-type: none"> To determine the number of non-emitting MWhs of each MLP, MCAN examined AQ31 2019 Reports (supplied to MCAN by the DEP on 1/15/21). The number of non-emitting MWhs reported by MLPs in the "Electricity Generation and Greenhouse Gas Emissions Summary" and the "2019 Greenhouse Gas (GHG) Emissions represented by municipal generation, purchased power, or Massachusetts Renewable Portfolio Standard (RPS)-eligible NEPOOL GIS renewable energy certificates (RECs)" was considered. In rare instances of discrepancies between these documents, MCAN used the value in "2019 Greenhouse Gas (GHG) Emissions represented by municipal generation, purchased power, or Massachusetts Renewable Portfolio Standard (RPS)-eligible NEPOOL GIS renewable energy certificates (RECs)," which was more favorable to MLPs. In no instances did these discrepancies affect Class I RECs. Numbers were confirmed with MLPs through MCAN's review process, and revisions were made as needed. The sum of the total number of non-emitting MWh retired from all energy sources was divided by the total energy sold by MLPs (in MWh) (displayed on pg 57, line 17 of MLP DPU annual reports) to determine the percentage of non-emitting energy in an MLP's energy portfolio in 2019.
CLEAN RENEWABLE SITING IN DISTRICT	<ul style="list-style-type: none"> Energy facilities were included as a part of the total clean renewable energy in an MLP's service territory if they were listed in any one of the following: Class I Renewable Generation Units, Solar Carve-Out Qualified Units, Solar Carve-Out II (10-8-20). Documents were downloaded directly from DOER's website on 1/15/2021. Because the SMART program is only available to non-MLP customers, solar capacity listed as part of the SMART Solar Tariff Generation Units was not included.

ENERGY TRANSITION

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
	<ul style="list-style-type: none"> Numbers were confirmed with MLPs through MCAN's review process, and revisions were made as needed. Note: For MLPs with multiple towns, all renewables from each town in their district were included.
MLP SOLAR REBATE PROGRAM	<ul style="list-style-type: none"> MLP spending through the solar rebate program was determined based on a list provided by DOER summarizing all invoices that had been submitted by each MLP through August 10, 2021 This list was provided to MCAN on August 25, 2021 following a public records request that was initially submitted on July 28, 2021
NET METERING POLICY	<ul style="list-style-type: none"> Web searches and searches on MLPs' websites (either using the search function or by browsing relevant pages) were conducted to identify net metering and/or interconnection policies. In cases of more than one result, the newest version was used. Residential Aggregate Capacity Limit, System Capacity Limit, and the basis for the excess generation charge were determined directly from the policy document or information on MLPs' webpages. To determine a numerical value for the excess generation charge (when not articulated in the policy), relevant resources were reviewed, including but not limited to rate schedules, MLPs' websites, and ISO-NE Locational Marginal (LMP) charge. The LMP for 2019 was estimated to be \$0.0308 (rounded to \$0.031). The process for calculating the average LMP charge was as follows: <ul style="list-style-type: none"> LMP charges from 2019 were downloaded from the ISO Website on 2/4/21. The average LMP for each month of 2019 for each of the three regions in Massachusetts (SEMass, WCMass, NEMass) were averaged together and converted from MWh to KWh. This calculation generated three average annual LMP charges. These three values were then averaged together to create one LMP charge for Massachusetts in 2019. Once an estimated excess generation charge was determined, it was compared against the residential rates of the respective MLPs. Residential rates were determined directly from MLPs' rate schedules.

ENERGY TRANSITION

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
BATTERY STORAGE ADOPTION	<ul style="list-style-type: none"> Data were collected in three ways: <ul style="list-style-type: none"> (Priority) Start with the questionnaire: If MLPs responded to the questionnaire, MCAN assumed good faith and verified data using MLPs' websites and DPU reports. Web search: If MLPs did not respond to the questionnaire, a Google search was conducted using the term "[MLP Name] Battery Storage." If a result was found, it was confirmed by referring to pg 8B, line 5 of the DPU report to confirm spending on battery storage in 2019. When no results were found, MCAN examined the MLP's website directly and conducted the same search. If no information was found, MCAN linked the search to the data sheet and verified results using the DPU report. DPU Report: pg 8B line 5 lists spending on battery storage. Whether or not spending was indicated, MCAN conducted a web search to confirm the results.
BATTERY STORAGE SOURCE	<ul style="list-style-type: none"> When the source was reported on MCAN's questionnaires, MCAN assumed good faith. When the source was not reported through a questionnaire, MCAN conducted the same web search listed in the category above and sought to determine the source of energy for the respective battery. When no information was available, this category was recorded as "Unspecified."
PLANS FOR GAS SERVICES AND NUCLEAR ENERGY CONTRACTS	<ul style="list-style-type: none"> MCAN relied primarily on responses from MLPs to either MCAN's MLP Scorecard Questionnaire or to the follow-up questionnaire. When an MLP answered that they were planning to phase down nuclear or gas, we looked for plans in writing to verify. However, we took MLPs' questionnaire responses in good faith. In the event that MLPs did not respond to either of MCAN's questionnaires, searches were conducted on the web and on MLPs' websites for information regarding plans to increase or decrease nuclear power. If no information was found, it was recorded as "not reported."

ENERGY TRANSITION - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
IMPLEMENTING ADVANCED METERING INFRASTRUCTURE (AMI)	<ul style="list-style-type: none"> To determine whether MLPs had implemented or were in the process of implementing AMI, a systematic search was conducted. Web searches were conducted using three terms: "[MLP Name] Advanced Metering," "[MLP Name] AMI," "[MLP Name] AMR." If a reliable source was found (either from the town or MLP) indicating that AMI had been or was being implemented, the information was verified and recorded. If results could not be verified from the initial search, a search was conducted on the town and MLP website using the terms "AMI," "AMR," and "advanced metering." If a reliable source was found, the information was verified and recorded. If neither of the previous searches yielded town or MLP documents, less reliable sources from the initial source were considered. If these sources contained compelling information indicating that AMI had been or was being implemented, the information was recorded. All searches were conducted on 7/26/21.
ELECTRIC VEHICLE CHARGING REBATE OR PROGRAM	<ul style="list-style-type: none"> The primary resource for this category was each MLP's 2020 MAP, which was submitted to DOER's Residential Conservation Services (RCS). Reporting on the MAP was verified using information on MLPs' websites.
MOR-EV REBATES USED	<ul style="list-style-type: none"> The number of MOR-EV rebates used were based on Mass DOER's MOR-EV Program Statistics Website. Data were obtained through the following steps: <ul style="list-style-type: none"> Searching the map by zip code and setting the received application date range from Jan. 2019 to Dec. 2020 Locating all zip codes in the MLP's district using the U.S. Zip Code Database Narrowing the search to the MLP's zip code(s)
100% CLEAN ENERGY OPT-IN PROGRAM	<ul style="list-style-type: none"> Opt-in programs were identified using web searches and searches within MLPs' websites. To identify the existence of a program, a web search was conducted using the following terms: "[MLP Name] 100% renewable energy option," "[MLP Name] 100% renewable energy program," and "Go Green Program."

ENERGY TRANSITION - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
	<ul style="list-style-type: none"> In the event that no program was found, each MLP website was searched using the same terms. If that search also yielded no results, relevant pages on the MLP's website were examined. All data for this category were collected on 2/11/21.

ENERGY EFFICIENCY

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
FREE AUDITS AND ENERGY EFFICIENCY INCENTIVES	<ul style="list-style-type: none"> The primary resource for this category was each MLP's 2020 MAP, which was submitted to DOER's RCS. In the MAP, the list of programs and incentives planned for 2020 formed the basis of data gathered on available rebates and incentives. Each incentive was verified by referring to the rebates listed on MLPs' websites. Programs introduced in 2021 were not included.
ENERGY EFFICIENCY SPENDING	<ul style="list-style-type: none"> These data were determined by the total proposed energy efficiency budget for 2020 recorded in each MLP's 2020 MAP, which was submitted to DOER's RCS.
ELECTRICITY SAVINGS (KWH)	<ul style="list-style-type: none"> These data came from two primary sources: MCAN's MLP Scorecard Questionnaire and MLP associations (i.e., MMWEC and ENE). When MLPs reported a value, efforts were made to verify their results through MMWEC and ENE. However, verification was not necessary to include the data. For MLPs that did not report a value, MCAN reached out to MMWEC and ENE to request relevant data. For MLPs from whom MCAN did not receive KWh savings values, this category was recorded as "not tracked" or "not available."

ENERGY EFFICIENCY

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
ENERGY EFFICIENCY PROGRAM ACCESS	<ul style="list-style-type: none"> The primary resource for this category was each MLP's 2020 MAP, which was submitted to DOER's RCS. Any information that was not included in the MAP but was listed or evident on an MLP's website was also included. Responses to MCAN's questionnaire were also examined to ensure that no program had been overlooked.

ENERGY EFFICIENCY - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
COMMERCIAL ENERGY EFFICIENCY	<ul style="list-style-type: none"> The primary resource for this category was MLPs' websites. Responses to MCAN's questionnaire were also examined to ensure that no program had been overlooked.
MUNICIPAL PROGRAMS AND UPGRADES	<ul style="list-style-type: none"> This category was awarded to MLPs that either had an energy audit and rebate programs for which municipal buildings were eligible and/or had donated or given funds to a municipality to enhance a municipality's energy efficiency between 2019 and 2020. Payments required as a part of the Green Community Designation were not counted. Data were obtained from two primary sources: MLPs' websites and MCAN's follow-up questionnaire. For MLPs that responded to MCAN's follow-up questionnaire, their answer was the primary factor in this category. If MLPs responded affirmatively on providing municipal energy efficiency upgrades and offered an example in line with the description above, the program or effort was included. For MLPs that did not respond to MCAN's follow-up questionnaire, each MLP's website was examined for evidence of a program for municipal energy efficiency or of funds provided to municipal governments to enhance their energy efficiency. In addition to website searches, a web search was conducted.

ENERGY EFFICIENCY - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
EDUCATIONAL EVENTS	<ul style="list-style-type: none"> This category was awarded to MLPs that could provide a specific example of events in which they participated that focused on promoting energy efficiency programs. Such events did not include electric vehicle promotional events or non-specific regular public meetings. Data were based on three primary sources: MLPs' websites, MCAN's follow-up questionnaire, and MCAN's MLP Scorecard Questionnaire. For MLPs that responded to MCAN's MLP Scorecard Questionnaire but not to the follow-up questionnaire, the same process was conducted. For MLPs that did not respond to either of MCAN's questionnaires, each MLP's website was examined for evidence of energy efficiency events, web searches were conducted, and (when available) MLPs' social media accounts were examined.
ADDITIONAL PROGRAMS	<ul style="list-style-type: none"> If there was an energy efficiency program that was either listed in the MAP or on an MLP's website but not recorded elsewhere in our data, it was included in this category (including efforts to promote electric vehicle adoption).

TRANSPARENCY AND COMMUNITY ENGAGEMENT

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
ACCESSIBILITY OF GOVERNING AND OPERATIONS INFORMATION	<ul style="list-style-type: none"> Data for this category were collected directly from MLPs' websites. Websites were first reviewed to identify the presence of each transparency metric being considered. If the presence of each metric was not clear after extensive examination, searches for each metric were conducted on the MLP's website. Finally, if the website searches yielded no results, web searches were conducted for each metric.
OPPORTUNITIES FOR COMMUNITY TO AFFECT DECISION MAKING	<ul style="list-style-type: none"> The primary source for this category was MCAN's MLP Scorecard Questionnaire and follow-up questionnaire. For MLPs that did not respond to the MCAN MLP Scorecard Questionnaire or the follow-up questionnaire, thorough web and website searches were conducted to locate the results of surveys and/or forums that the MLP had conducted. If no surveys were found, they were recorded as "None listed."

TRANSPARENCY AND COMMUNITY ENGAGEMENT - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
LISTS RECENT POWER SUPPLY ON WEBSITE AND IS EXPLICIT ABOUT REC RETIREMENT	<ul style="list-style-type: none"> The source for this category was MLPs' websites. Upon examining website pages, if the location of the power supply was not evident, MCAN searched for the keywords "power supply" and "energy mix." If no results appeared, searches using the same keywords and the MLP's name were conducted on the web. All searches in this category were conducted on 2/11/21.

POLICY CONTEXT

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
CLIMATE ACTION PLAN	<ul style="list-style-type: none"> To determine the presence of climate action plans, two search processes were carried out (when an MLP submitted a questionnaire and when an MLP did not submit a questionnaire): MCAN referred to the submitted questionnaire – referred to Question 1 in the Leadership section. <ul style="list-style-type: none"> If the response to Question 1 was "yes," MCAN searched for and identified the climate action plan. If a plan was located and fit our definition of a Climate Action Plan, it was counted. If the response to Question 1 was "underway" or a similar response, MCAN took it in good faith and looked for further verification. MCAN also sought clarification in its follow-up questionnaire. If the response to Question 1 was "no," MCAN took it in good faith and did not look for a CAP. If an MLP did not submit a questionnaire, MCAN conducted the following searches: <ul style="list-style-type: none"> General web search: "[Town Name] Climate Action Plan." If no plan was found, MCAN referred to the town website and conducted Search #2. Town search: "Climate Action Plan." If MCAN did not find a plan, results were copied and attached to the data table, indicating that a search had been conducted. The final search was then conducted.

POLICY CONTEXT

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
	<ul style="list-style-type: none">• Town search: “Sustainability Plan.” If MCAN did not find a plan, MCAN concluded that the town did not have a plan.• Note: For MLPs with multiple towns, a search was conducted for each town.
GREEN COMMUNITY DESIGNATION	<ul style="list-style-type: none">• A list of MLPs that participate in Green Communities can be found on DOER’s Green Community Division. Data for this category were initially collected on 21/8/20; results were verified on 2/17/21.• MLPs who had been approved recently or who were not on the list had to notify MCAN during the data review in order to be considered.• MLPs that were in the process of receiving the designation were not awarded points in this category.
PARTICIPANT IN THE RENEWABLE ENERGY TRUST	<ul style="list-style-type: none">• A list of MLPs that participate in the Renewable Energy Trust can be found on MassCEC’s website. The website was accessed on 21/8/20; results were verified on 2/17/21.• MLPs who were not on the list had to notify MCAN during the data review in order to be considered

POLICY CONTEXT - BONUS

CATEGORY	DATA GATHERING PROCESS AND METHODOLOGY
ENERGY/ SUSTAINABILITY COMMITTEE	<ul style="list-style-type: none">• In order to determine this category, a systematic search was conducted:<ul style="list-style-type: none">• A web search for “[Town] energy committee” and “[Town] sustainability committee.” If a committee was found, it was verified and recorded.• If results could not be verified from the initial search, a search was conducted on the town’s website. If available, a list of all boards and committees was analyzed. If a complete list of boards and committees could not be found, the terms “energy committee,” “sustainability committee,” and other synonymous terms were searched within the town’s website.• All searches were conducted in February 2021.• Note: For MLPs with multiple towns, a search was conducted for each town.
PACE PROGRAM PARTICIPATION	<ul style="list-style-type: none">• A list of municipalities that have opted into the PACE program can be found on Mass Development’s website. The website was accessed on 7/26/21. At that time, the most up-to-date list of participating municipalities was posted on June 30, 2021.• MCAN marked each MLP that had one or more towns participating in the PACE program.

APPENDIX C

DATA AND SCORING LIMITATIONS

ENERGY TRANSITION

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
NUMBER OF CLASS I RECS RETIRED (2019)	2019 AQ 31 Reports were not reviewed by DEP at the time of this Scorecard's publication	N/A
NUMBER OF CLASS I RECS RETIRED (2017)	2019 AQ 31 Reports were not reviewed by DEP at the time of this Scorecard's publication	N/A
PERCENTAGE OF NON-EMITTING ENERGY	2019 AQ 31 Reports were not reviewed by DEP at the time of this Scorecard's publication	Did not include RECs that were not reported on the 2019 AQ 31 Report. Non-MA Class II RECs that were purchased without a PPA were not accounted for.
CLEAN RENEWABLE SITING IN DISTRICT	Relied on DOER's lists of eligible capacity (Class I Renewable Generation Units, Solar Carve-Out Qualified Units, Solar Carve-Out II [10-8-20]). Eligible capacities not included on these lists were not accounted for unless MLPs specifically sent information to MCAN during data review.	N/A
MLP SOLAR REBATE PROGRAM	N/A	N/A
NET METERING POLICY	MCAN used the most up-to-date information available online. If a policy was not listed online, MCAN relied on MLPs to send policies.	If policies were not sent and information was not provided, MLPs were not awarded points.

ENERGY TRANSITION

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
BATTERY STORAGE ADOPTION	When MLPs did not provide information to MCAN through either questionnaires or data review, MCAN relied on publicly available information.	When no information was listed, MCAN was unable to award points.
BATTERY STORAGE SOURCE	When MLPs did not provide information to MCAN through either questionnaires or data review, MCAN relied on publicly available information.	When no information was listed, MCAN was unable to award points.
PLANS FOR GAS SERVICES AND NUCLEAR ENERGY CONTRACTS	When MLPs did not provide information to MCAN through either questionnaires or data review, MCAN relied on publicly available information.	When no information was listed, MCAN recorded plans as “not listed” and was unable to award points.

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

ENERGY TRANSITION - BONUS

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
IMPLEMENTING ADVANCED METERING INFRASTRUCTURE (AMI)	Relied primarily on information and records from MLPs’ or municipality’s websites. However, when these sources were not available, other, less reliable sources were used (e.g., news articles). In cases of uncertainty, MCAN tended to give MLPs the benefit of the doubt.	N/A
ELECTRIC VEHICLE CHARGING REBATE OR PROGRAM	N/A	N/A

ENERGY TRANSITION - BONUS

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
MOR-EV REBATES USED	Relied on the accuracy of Mass DOER's MOR-EV database. Data from this source did not distinguish between numerous electric vehicles and other alternative vehicle technologies. As such, the total numbers of MOR-EV rebates used might include other technologies. Additionally, the accuracy of the database was limited because there have been fluctuations in data collection over time.	N/A
100% CLEAN ENERGY OPT-IN PROGRAM	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

ENERGY EFFICIENCY

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
FREE AUDITS AND ENERGY EFFICIENCY INCENTIVES	N/A	N/A
ENERGY EFFICIENCY SPENDING	N/A	N/A
ELECTRICITY SAVINGS (KWH)	If MLPs or the association that serves them did not send electricity savings data, MLPs were listed as “not available” or “not tracked.”	N/A
ENERGY EFFICIENCY PROGRAM ACCESS	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

ENERGY EFFICIENCY - BONUS

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
COMMERCIAL ENERGY EFFICIENCY	N/A	N/A
MUNICIPAL PROGRAMS AND UPGRADES	If MLPs did not respond to our follow-up questionnaire and no information was listed online, we were limited in our ability to consider activities in this category.	N/A
EDUCATIONAL EVENTS	If MLPs did not respond to our follow-up questionnaire and no information was listed online, we were limited in our ability to consider activities in this category.	Based on the information, MCAN had to determine which events were eligible to receive points based on our criteria.
ADDITIONAL PROGRAMS	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

TRANSPARENCY AND COMMUNITY ENGAGEMENT

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
ACCESSIBILITY OF GOVERNING AND OPERATIONS INFORMATION	N/A	N/A
OPPORTUNITIES FOR COMMUNITY TO AFFECT DECISION MAKING	If MLPs did not respond to MCAN's follow-up questionnaire and no information was listed online, we were limited in our ability to consider activities in this category. If surveys were not found, they were recorded as "None listed." Similarly, if no insight was available on the impact of the survey, we were unable to include anything in this category.	To determine whether surveys guided or changed policy, we were required to interpret the information in MCAN's questionnaire or publicly available data. While MLPs that provided information were typically awarded points, in some instances, MCAN used a value judgement to determine the outcome.

TRANSPARENCY AND COMMUNITY ENGAGEMENT

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
INFORMATION SHARING FOR MCAN'S ANALYSIS	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

TRANSPARENCY AND COMMUNITY ENGAGEMENT - BONUS

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
LISTS RECENT POWER SUPPLY ON WEBSITE AND IS EXPLICIT ABOUT REC RETIREMENT	N/A	MCAN was required to interpret information on websites and decide on accessibility and content based on our criteria.

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

POLICY CONTEXT

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
CLIMATE ACTION PLAN	In multiple instances, MCAN relied on information from MLP questionnaires to determine whether climate action plans were underway. Given confusion around what MCAN defines as a climate action plan, uncertainty persisted regarding whether MLP staff accurately reported if action plans, as defined, were indeed underway. Efforts were made to clarify this during the follow-up questionnaire and the review process. Nonetheless, uncertainty remains.	N/A

POLICY CONTEXT

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
GREEN COMMUNITY DESIGNATION	N/A	N/A
PARTICIPANT IN THE RENEWABLE ENERGY TRUST	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

POLICY CONTEXT - BONUS

CATEGORY	DATA LIMITATIONS	SCORING LIMITATIONS
ENERGY/SUSTAINABILITY COMMITTEE	N/A	N/A
PACE PROGRAM PARTICIPATION	N/A	N/A

*NOTE: N/A SIGNIFIES THAT THERE WERE NO LIMITATIONS OF WHICH MCAN WAS AWARE.

APPENDIX D

REGRESSIONS INVESTIGATING SCORES AND MLP CHARACTERISTICS

Regressions are performed to predict the influences of key factors on a particular outcome. MCAN wanted to know how influential MLPs' size, customer's median income, electricity rates, and other MLP characteristics were on MLPs' scores in this report. Univariate regression models like those presented here present a coarse prediction of influential factors. These models only consider one variable and do not include potential interactions between variables. Univariate regression models are often run to provide an initial assessment on the roles of key variables (i.e., in influencing MLPs' scoring in this case).

TABLE 1 SCORES VS. TOTAL NUMBER OF CUSTOMERS

Regression Statistics		This regression model predicts the degree of influence of the total number of MLP customers on MLPs' scores in MCAN's MLP Scorecard. The table below reflects the results of a simple regression analysis using MLPs' scores as the dependent variable and MLPs' number of customers as the independent variable. Based on the p-value, the number of customers was significantly correlated with MLPs' scores. However, the R ² and adjusted R ² values demonstrated a relatively poor fit, indicating that other factors were more influential than an MLP's number of customers in determining scores.
Multiple R	0.409	
R Square	0.168	
Adjusted R Square	0.146	
Standard Error	17.519	
Observations	40.000	

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2346.732	2346.732	7.646	0.009
Residual	38	11662.868	306.918		
Total	39	14009.600			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	35.830	4.349	8.239	0.000	27.026	44.634	27.026	44.634
Number of Customers	0.001	0.000	2.765	0.009	0.000	0.002	0.000	0.002

Note: This table presents a rudimentary analysis conducted simply as a general indicator. Further modeling is necessary to fully understand the relationships between MLPs' scores and number of customers.

TABLE 2

SCORES VS. TOTAL ELECTRICITY DISTRIBUTED

Regression Statistics

Multiple R	0.344
R Square	0.118
Adjusted R Square	0.095
Standard Error	17.941
Observations	39.000

This regression model predicts the degree of influence of MLPs’ total electricity distributed income on MLPs’ scores in MCAN’s Scorecard. The table below reflects the results of a simple regression analysis using MLPs’ scores as the dependent variable and MLPs’ total electricity distributed as the independent variable. As indicated by the p-value, the total electricity distributed correlated with MLP scores. However, the R² and adjusted R² values showed a poor fit, indicating that other factors were more influential than an MLP’s total electricity distribution in determining scores.

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1599.366	1599.366	4.969	0.032
Residual	37	11909.300	321.873		
Total	38	13508.667			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	38.394	4.347	8.832	0.000	29.586	47.202	29.586	47.202
Total Electricity Distributed	0.000	0.000	2.229	0.032	0.000	0.000	0.000	0.000

Note: This table presents a rudimentary analysis conducted simply as a general indicator. Further modeling is necessary to fully understand the relationships between MLPs’ scores and the total electricity they delivered.

Analysis excluded Russell

TABLE 3

SCORES VS. TOTAL ELECTRICITY DISTRIBUTED

Regression Statistics

Multiple R	0.044
R Square	0.002
Adjusted R Square	-0.025
Standard Error	19.437
Observations	39

This regression model predicts the degree of influence of median income on MLPs’ scores in MCAN’s Scorecard. The table below reflects the results of a simple regression analysis using MLPs’ scores as the dependent variable and MLP districts’ median incomes as the independent variable. As can be seen by the p-value, median income was not significantly correlated with the scores. The R² and adjusted R² values also displayed a poor fit, indicating that other factors were more influential than an MLP’s total electricity distribution.

ANOVA

	df	SS	MS	F	Significance F
Regression	1	26.631	26.631	0.070	0.792
Residual	37	13978.446	377.796		
Total	38	14005.077			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	40.897	16.334	2.504	0.017	7.801	73.992	7.801	73.992
Rates	0.104	0.392	0.265	0.792	-0.691	0.899	-0.691	0.899

Note: This table presents a rudimentary analysis conducted simply as a general indicator. Further modeling is necessary to fully understand the relationships between MLPs’ scores and the total electricity they delivered.

Analysis excluded Groveland

TABLE 4

SCORES VS. MLP DISTRICT MEDIAN INCOME

Regression Statistics

Multiple R	0.103
R Square	0.011
Adjusted R Square	-0.015
Standard Error	19.098
Observations	40

This regression model predicts the degree of influence of MLPs' electricity rates on MLPs' scores in MCAN's Scorecard. The table below reflects the results of a simple regression analysis using MLPs' scores as the dependent variable and MLPs' electricity rates as the independent variable. As shown by the p-value, electricity rates have no significant correlation with MLPs' scores. The R² and adjusted R² values also exhibited a poor fit, indicating that other factors were more influential than an MLP's total electricity distribution.

ANOVA

	df	SS	MS	F	Significance F
Regression	1	149.194	149.194	0.409	0.526
Residual	38	13860.406	364.748		
Total	39	14009.600			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	38.869	10.200	3.811	0.000	18.221	59.517	18.221	59.517
Median Income	0.000	0.000	0.640	0.526	0.000	0.000	0.000	0.000

Note: This table presents a rudimentary analysis conducted simply as a general indicator. Further modeling is necessary to fully understand the relationships between MLPs' scores and MLP districts' median incomes.

GLOSSARY

AQ31 REPORT	Optional reports submitted to the Department of Environmental Protection that account for the ownership and/or use of generation sources in reporting greenhouse gas emissions. ¹
CLASS I RECS	Renewable energy credits from facilities that began operating after 1997 and generate electricity using any of the following technologies: solar photovoltaic, solar thermal electric, wind energy, small hydropower, landfill methane and anaerobic digester gas, marine or hydrokinetic energy, geothermal energy, eligible biomass fuel. ²
CLASS II RECS	Generation units that use eligible renewable resources, including all energy types eligible for Class I RECs as well as waste energy, but have an operation date prior to January 1, 1998. ³
CLEAN ENERGY	Class I eligible energy sources including solar photovoltaic, solar thermal electric, wind energy, small hydropower, landfill methane, anaerobic digester gas, marine or hydrokinetic energy, and geothermal energy. MCAN does not consider biomass to be a clean energy source.
CLIMATE ACTION PLAN	A comprehensive roadmap that outlines specific activities that a municipality, state, or country will undertake to reduce greenhouse gas emissions, based on information gathered from greenhouse gas inventories.
DEPARTMENT OF ENERGY RESOURCES (DOER)	A department within the Executive Office of Energy and Environmental Affairs (EEA) that focuses on developing and implementing policies and programs aimed at ensuring the adequacy, security, diversity, and cost-effectiveness of the Commonwealth's energy supply to create a clean, affordable, and resilient energy future for all residents, businesses, communities, and institutions. ⁴
DPU ANNUAL REPORT	Reports submitted by each MLP every year to the Department of Public Utilities. In these reports, MLPs must provide information on utilities financials and operations. ⁵

- ¹ "AQ 31, 32: Retail Seller of Electricity Greenhouse Gas Emissions Reporting," Mass.gov (Massachusetts Department of Environmental Protection), accessed August 2021, <https://www.mass.gov/how-to/aq-31-32-retail-seller-of-electricity-greenhouse-gas-emissions-reporting>.
- ² "14.07: Renewable Energy Portfolio Standard - Class I," 225 CMR 14.00: RENEWABLE ENERGY PORTFOLIO STANDARD - CLASS I (Department of Energy Resources, n.d.), <https://www.mass.gov/doc/rps-class-i-regulations-clean/download>, pg 36.
- ³ "15.00 Eligibility Criteria for RPS Class II Generation Units," Renewable Energy Portfolio Standard - CLASS II (Department of Energy Resources, n.d.), <https://www.mass.gov/doc/rps-class-i-regulations-clean/download>, pg 133-136
- ⁴ "Doer Divisions and Services," Mass.gov (Massachusetts Department of Energy Resources), accessed August 2021, <https://www.mass.gov/guides/doer-divisions-and-services>.
- ⁵ "Find an Mlp Annual Return," Mass.gov (Massachusetts Department Public Utilities), accessed August 2021, <https://www.mass.gov/info-details/find-an-mlp-annual-return>.

EMISSIONS-FREE ENERGY CREDITS (EFECs)	Credits that track the zero-carbon generation attributes associated with emission-free generation. While renewable energy can be eligible for EFECs, some non-renewable resources (e.g., nuclear) are also eligible for such credits. ⁶
ENERGY EQUITY	The distribution of costs and benefits of an energy system (e.g., an electric grid) and the accessibility to affordable energy and programs across customers in a region or utility service territory.
ENERGY JUSTICE	The goal of achieving equity in both social and economic participation in the energy system while remediating social, economic, and health burdens on groups historically harmed by the energy system (“frontline communities”).
ENERGY MIX	The legally accepted method of quantifying the percentage of fuel types, clean energy, and non-emitting energy based on the number of RECs retired that are given MA Class I attributes, MA Class II attributes, or non-emitting attributes.
ENERGY NEW ENGLAND (ENE)	A municipal cooperative that serves its members in areas such as management, procurement, and energy efficiency.
ENVIRONMENTAL JUSTICE	All people and communities have the right to equal environmental protection under the law and the right to live, work, and play in communities that are safe, healthy, and free of life-threatening conditions.
ENVIRONMENTAL RACISM	Actions and decisions that result, whether by conscious design or institutional neglect, in the disproportionate exposure of people of color to environmental hazards and environmental health burdens.
GREEN COMMUNITIES PROGRAM	A program that provides financial and technical support to municipalities that 1) pledge to cut municipal energy use by an ambitious and achievable goal of 20% over 5 years and 2) meet four other criteria established in the Green Communities Act. ⁷
INVESTOR-OWNED UTILITIES (IOUs)	Large electric distributors, such as Eversource and National Grid, that issue stocks and are owned by private shareholders.
MASS SAVE	An energy efficiency program available to customers of investor-owned utilities. This program was established following the passage of the Green Communities Act, enacted in 2008. ⁸

6 “How Emission-Free Energy Certificates (EFECs) Help Companies Achieve Their Carbon Goals” (Constellation, July 29, 2021), <https://blogs.constellation.com/sustainability/how-emission-free-energy-certificates-efecs-help-companies-achieve-their-carbon-goals/>.

7 “Becoming a Designated Green Community,” Mass. gov (Green Communities Division), accessed August 2021, <https://www.mass.gov/guides/becoming-a-designated-green-community>.

8 “An Act Relative to Green Communities,” Chapter 169 (Commonwealth of Massachusetts, 2008), <https://malegislature.gov/Laws/SessionLaws/Acts/2008/Chapter169>.

MASSACHUSETTS MUNICIPAL WHOLESALE ELECTRIC COMPANY (MMWEC)	A non-profit public corporation and political subdivision that serves its 20 MLP members in areas including power procurement and energy efficiency programs.
MLP GREENHOUSE GAS EMISSIONS STANDARD (GGES)	An emissions standard which requires MLPs to derive 50% of their fuel mix from non-emitting energy by 2030, 75% non-emitting by 2040, and net zero by 2050. ⁹
MUNICIPAL ACTION PLANS	An action plan submitted annually by MLPs that provides information on energy efficiency budgets, a breakdown of the budget into various activities, gross annual retail revenue, and a description of the utilities' energy efficiency program. ¹⁰
MUNICIPAL ELECTRIC ASSOCIATION OF MASSACHUSETTS (MEAM)	A professional association that serves 40 MLPs in the Commonwealth in numerous ways, such as by providing technical, accounting, financial, purchasing, and counsel services as well as political lobbying.
MUNICIPAL LIGHT BOARDS	Boards and commissions composed of appointed or elected members who are responsible for governing MLPs.
MUNICIPAL LIGHT PLANTS (MLPs)	Non-profit utilities that are owned by municipalities.
NET METERING	A billing mechanism that credits renewable energy system owners for the electricity they add to the grid. In other words, if customers generate additional electricity, they will be credited or paid for that service. In this billing mechanism, customers are only billed for their "net" energy use. ¹¹
NON-EMITTING ENERGY	Energy sources that are considered non-emitting include nuclear energy, hydro-powered energy, solar photovoltaic, solar thermal electric, wind energy, small hydropower, landfill methane and anaerobic digester gas, marine or hydrokinetic energy, geothermal energy, eligible biomass fuel, and more. In other words, non-emitting energy is generally energy that is eligible for Class I RECs, Class II RECs, or EFECs.
POWER SUPPLY	The combination of various energy sources used to meet demand within MLPs. The power supply is based solely on the actual energy being used by an MLP; it does not account for environmental attributes (i.e., RECs) of an energy source and whether that source was retired by the MLP, sold, or purchased by another entity.

⁹ Ibid. Sections 11F3/4 (b)10 "Guideline Interpreting 225 CMR 4.00" (Massachusetts Department of Energy Resources, February 20, 2020), <https://www.mass.gov/doc/rcs-guideline-revised-2202020/download>.

¹⁰ "Guideline Interpreting 225 CMR 4.00" (Massachusetts Department of Energy Resources, February 20, 2020), <https://www.mass.gov/doc/rcs-guideline-revised-2202020/download>.

¹¹ "Net Metering," SEIA (Solar Energy Industries Association), accessed August 4, 2021, <https://www.seia.org/initiatives/net-metering>.

REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)	A cooperative, market-based effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia to cap and reduce carbon dioxide emissions from the power sector. ¹²
RENEWABLE ENERGY CREDITS (RECs)	Credits representing the positive environmental attributes associated with energy production. One REC is created each time a qualified facility generates one megawatt-hour (MWh) of electricity. ¹³
RENEWABLE ENERGY TRUST FUND (RETF)	A fund created in 1997 with the purpose of increasing the supply of and demand for green power while expanding economic activity in the Commonwealth's renewable energy industry. The fund has developed three program areas to achieve these objectives: industry support, clean energy, and green buildings and infrastructure. ¹⁴
RENEWABLE PORTFOLIO STANDARD (RPS)	A policy that requires retail electricity suppliers to obtain a percentage of the electricity they serve to their customers from qualifying renewable energy facilities. ¹⁵ In 2019 and 2021, the renewable energy percentage, as mandated by the RPS, was 14% and 18%, respectively. ¹⁶
RESIDENTIAL CONSERVATION SERVICES (RCS)	A program within the DOER that is designed to encourage residential customers to conserve energy by providing them with accurate information concerning what they can do to save energy in their own homes, services and programs, and consumer protection. ^{17, 18}

12 "The Regional Greenhouse Gas Initiative," Welcome | RGGI, Inc., accessed August 2021, <https://www.rggi.org/>.

13 "Program Summaries: Program Summaries Summaries of All the Renewable and Alternative Energy Portfolio Standard Programs." (Commonwealth of Massachusetts), accessed May 26, 2021, <https://www.mass.gov/service-details/program-summaries>.

14 "Community Loan Fund," Sustainable Business, accessed August 2021, <https://www.sustainable-business.com/green-venture-capital-directory-56/green-vc-categories-367/community-loan-fund-819/name/massachusetts-renewable-energy-trust/>.

15 "Program Summaries: Program Summaries Summaries of All the Renewable and Alternative Energy Portfolio Standard Programs." (Commonwealth of Massachusetts), accessed May 26, 2021, <https://www.mass.gov/service-details/program-summaries>.

16 "14.07: Renewable Energy Portfolio Standard - Class I," 225 CMR 14.00: RENEWABLE ENERGY PORTFOLIO STANDARD - CLASS I (Department of Energy Resources, n.d.), <https://www.mass.gov/doc/rps-class-i-regulations-clean/download>, pg 36.

17 "225 Mass. Reg. 4.02 - RCS Program," Legal research tools from Casetext, accessed August 4, 2021, <https://casetext.com/regulation/code-of-massachusetts-regulations/department-225-cmr-department-of-energy-resources/title-225-cmr-400-residential-conservation-service-program/section-402-rcs-program>.

18 "Residential Conservation Services (RCS)," Mass.gov (Energy Efficiency Division), accessed August 2021, <https://www.mass.gov/service-details/residential-conservation-services-rcs>.