

Mansfield Municipal Electric Department Operating Budget Fiscal Year 2022

I. Executive Summary:

The Mansfield Municipal Electric Department (MMED) is an electric utility governed under the provisions of Massachusetts General Laws Chapter 164. The four primary objectives of MMED are:

- To establish and work continually to ensure a safe working environment for its employees
- To ensure both short-term and long-term system reliability
- To provide competitive electric rates to its ratepayers
- To provide financial benefits to the Town of Mansfield in a manner consistent with sound financial management of the utility

MMED has prepared an FY22 Operating Budget to account for the ongoing operations and maintenance activities required to keep the existing physical plant in good operating condition.

HIGHLIGHTS:

- Purchase Power slightly lower driven by lower spot market
- Transmission charge higher driven by increased ISO-NE costs
- Non-Power expense increase driven by contractual increases

Table 1: A comparison of the proposed FY22 to the FY21 approved budget:

FY22/FY21 Budget Comparison				
Description	FY21 FINAL Budget	FY22 Proposed Budget	Increase (Decrease)	
Revenue	\$ 24,494,990	\$ 24,997,531	\$	502,541
Purchased Power Expense	\$ 11,752,750	\$ 11,511,437	\$	(241,313)
Transmission Expense	4,616,776	5,314,680		697,905
Operating Non Power Expense	4,263,405	4,632,494		369,090
Total Before Depreciation	20,632,930	21,458,611		825,681
Depreciation	1,267,566	1,275,000		7,434
Discount/Rebate Less Other Income	1,384,434	1,375,000		(9,434)
Total Expenses (Net Other Income)	23,284,930	24,108,611		823,682
Net Income	\$ 1,210,060	\$ 888,920	\$	(321,140)
Misc Credits to Surplus	-	-		-
Payment In Lieu of Taxes	745,030	780,960		35,931
Increase to Surplus	\$465,031	\$107,960	\$	(357,071)
Rate of Return	1.96%	1.64%		-0.32%

The FY22 Operating Budget submittal represents the period from July 2021 through June 2022. The Massachusetts Department of Public Utilities (DPU) Uniform System of Accounts has provided the basis for the categorization of these costs. Under Massachusetts General Laws, a municipal plant can earn up to 8% annually of the gross plant in service. MMED's retail rates are approved by the MMED Light Board Commission and revised periodically (last July 1, 2020).

Revenue generated by MMED rates goes to support operating costs, capital improvement costs, as well as producing a net income for the Department.

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Table 2: FY22 Statement of Income and Surplus

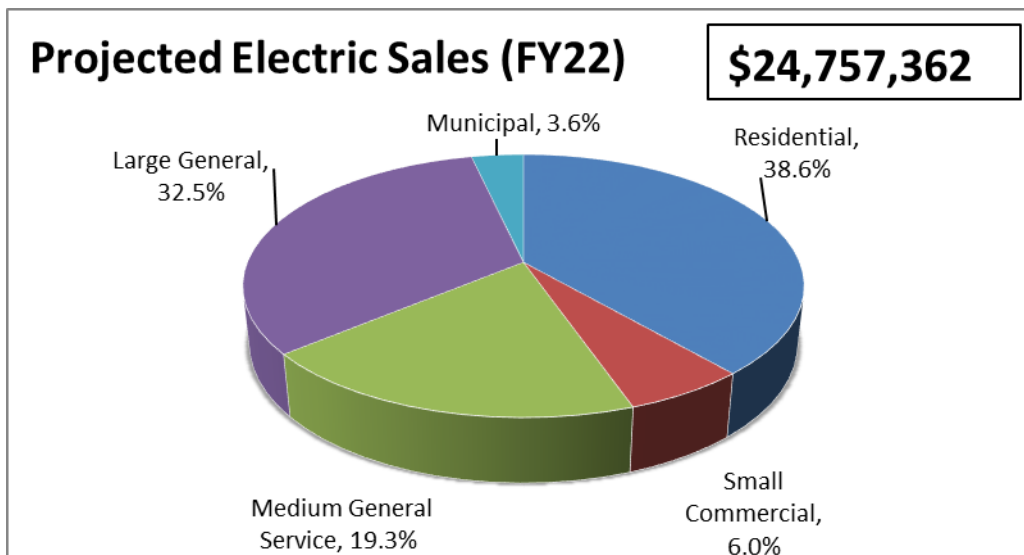
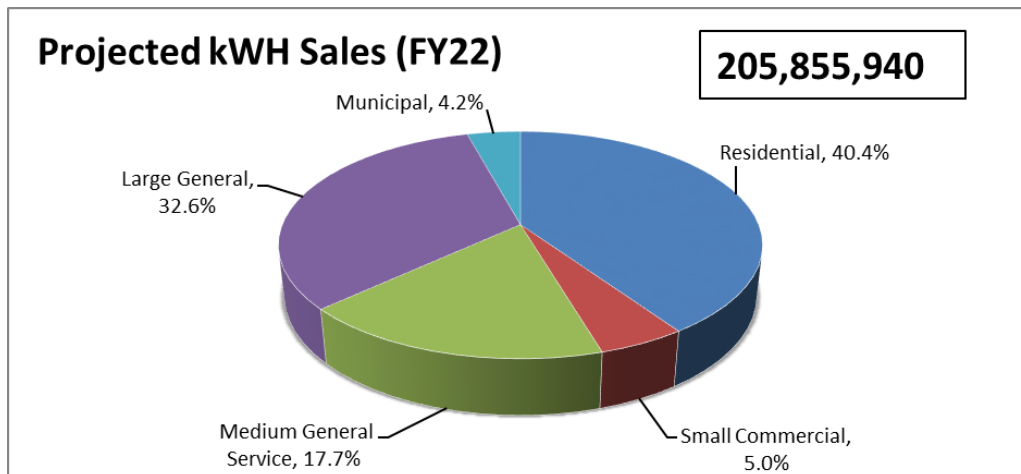
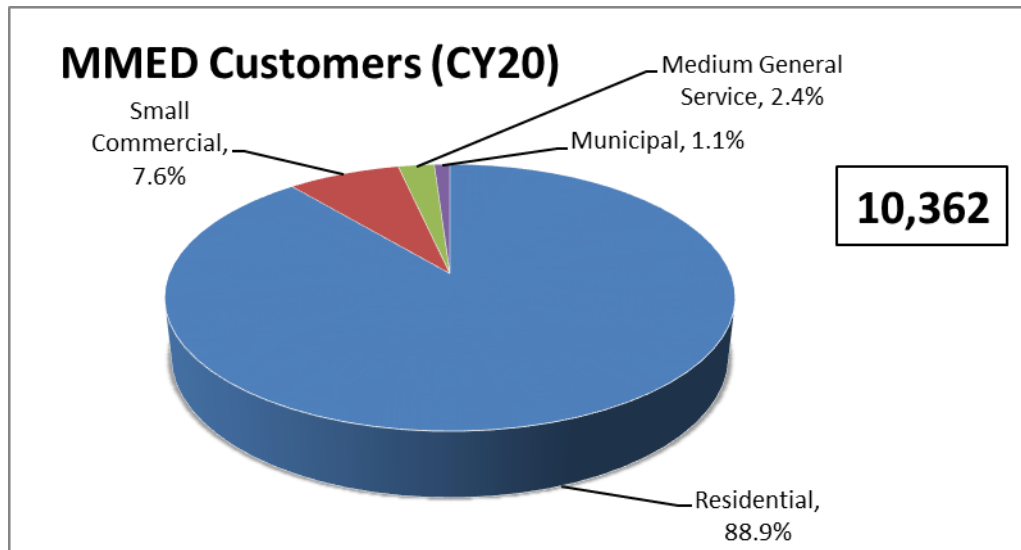
REVENUE:		EXPENSES:	
		Power Production:	\$11,511,437
Residential Sales	\$ 9,566,332		
Small Commercial	1,489,882	Transmission:	\$ 5,314,680
Medium General Service	4,772,337		
Large General Service	8,048,021	Non Power:	\$ 4,632,494
Municipal Sales	880,790	Discounts/Rebates	1,580,000
Total Metered Sales:	\$ 24,757,362	Depreciation	1,275,000
Over/Under Generation	\$ 240,169	Total Operating Expense:	\$ 7,282,494
Total Power Revenue	\$ 24,997,531		
Other Expense (Income)	(205,000)		
Total Power Revenue	\$ 25,202,531		
		Net Income	\$ 888,920
		Misc. Surplus	0
		In Lieu of Taxes	780,960
		Net change Surplus:	\$ 107,960

Table 3: Summary of MMED's Energy Sales (kWh) CY 2015 - CY 2020

<i>Calendar Year</i>	<i>Energy Sales (kWh)</i>	<i>Increase (Decrease)</i>
2015	208,450,716	2.72%
2016	205,312,697	-1.51%
2017	200,880,012	-2.16%
2018	209,522,749	4.30%
2019	205,748,407	-1.80%
2020	205,571,786	-1.89%
6 year Average	205,914,395	-0.05%

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II. MMED Statistics:



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Electric sales revenues are comprised from the following charges:

Customer Charge:

A flat surcharge is apportioned to each customer category type which covers all standard MMED costs that exist regardless of the amount of electricity that is consumed. Revenues received through Customer Charge support the operation and maintenance expenses of MMED such as the costs of meter reading, meter maintenance, customer service and billing.

Distribution Charge:

This rate is based upon the individual customer's energy consumption (kWh) each month and reflects the costs associated with delivering energy from the distribution substations to homes and businesses in Mansfield. This includes the cost of constructing and maintaining all local distribution electrical lines.

Purchase Power Charge:

This rate is based upon the individual customer's energy consumption (kWh) each month and reflects the costs associated with power production and transmission of energy to the Mansfield distribution substations.

Mansfield power production resources vary from long-term joint ownership in various generation plants (Nuclear, Oil, Natural Gas, & Wind) through Massachusetts Municipal Wholesale Electric Company (MMWEC), along with fixed contract price purchases (Shell Energy), along with other short-term hedges in the 'Spot Market' to cover open market positions which helps reduce exposure to price volatility.

Such rate may be adjusted quarterly to reflect changes in market conditions (i.e. price of fuel, supply factors, etc.). The Generation Charge varies with market conditions and can fluctuate significantly depending on the time of year.

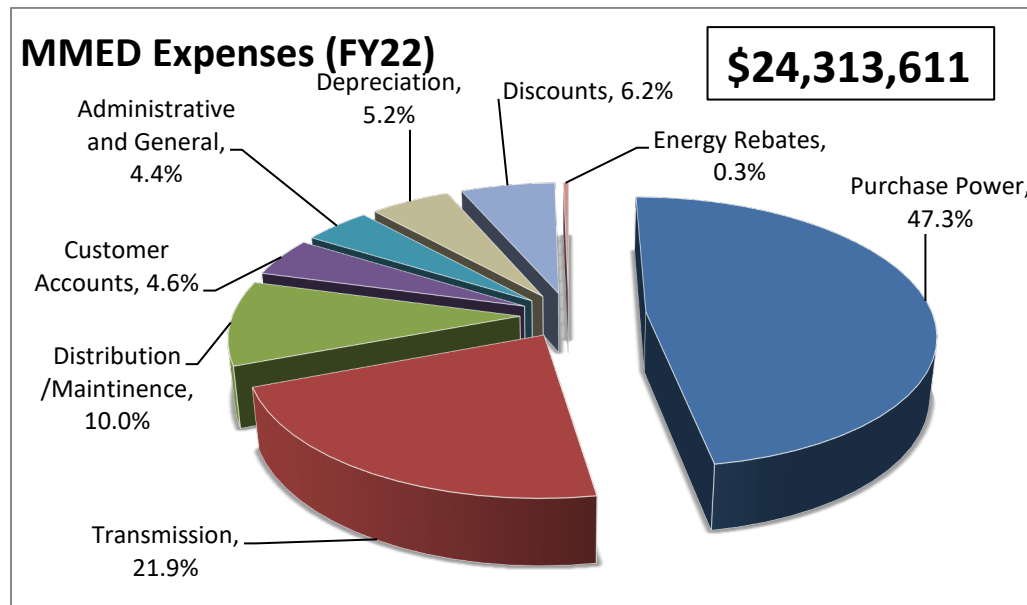
Revenue projections are based on current commodity market pricing for future energy purchases during the FY22 period and are subject to change depending on market conditions at the time.

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III. MMED Expenses:

Table 4: Major Expense Categories:

EXPENSES:	Amount	% Total
Purchase Power	\$ 11,511,437	47.3%
Transmission Expense	5,314,680	21.9%
Total Power Expense	\$ 16,826,118	69.2%
Total Non-Power Operating Expense	\$ 4,632,494	19.1%
Discounts	1,500,000	6.2%
Energy Rebates	80,000	0.3%
Depreciation Expense	1,275,000	5.2%
Other Expenses	\$ 2,855,000	11.7%
TOTAL OPERATING EXPENSE	\$ 24,313,611	100%



Non Power Expense (Labor vs Non Labor) Impact

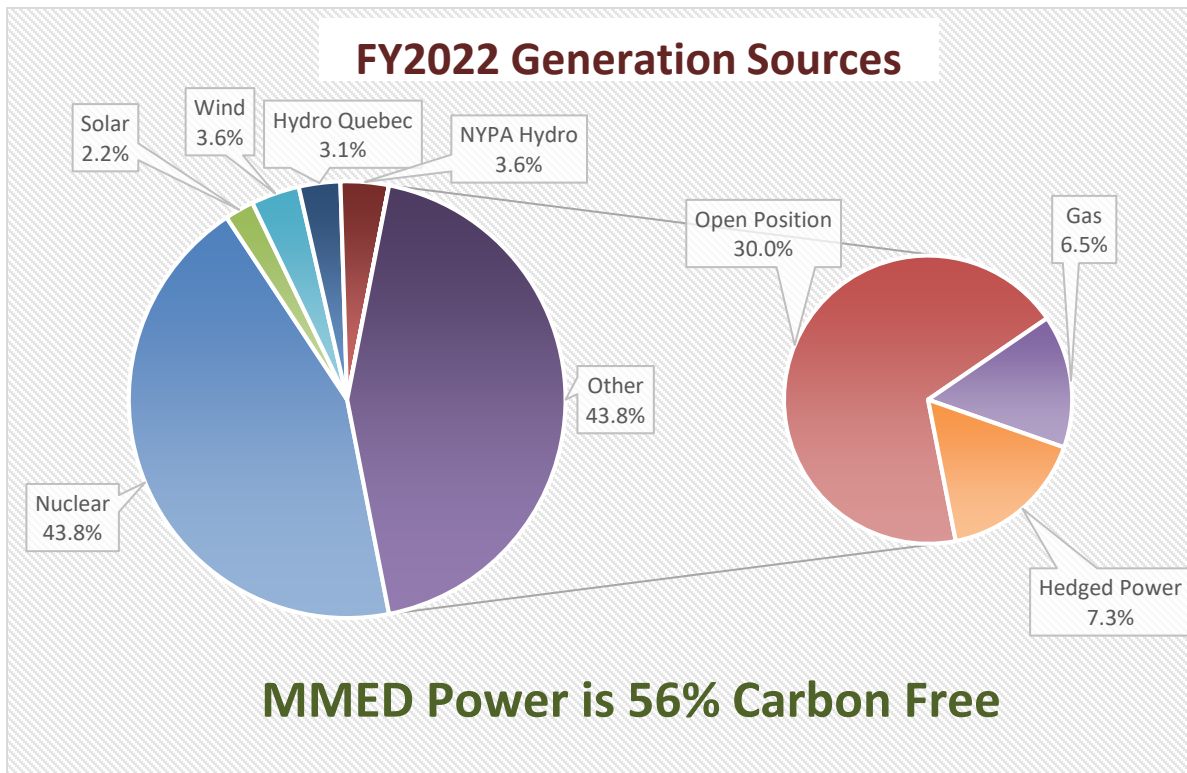
		BUDGET		
		2021	2022	%
Labor vs Non Labor Growth	TOTAL Non Power Expense	\$ 4,304,405	\$ 4,632,494	7.6%
	Labor	\$ 2,883,581	\$ 3,218,894	11.6%
	Non-Labor	\$ 1,420,824	\$ 1,413,600	-0.5%

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Purchased Power:

For the twelve-month period ending in June 2022, the MMED budget for purchased power expense is \$11,511,437. This represents 47.3% of the total operating budget request.

For MMED, there are three main sources of actual generation of electrical power broken out in the components below of which 56.1% is non-carbon admitting sources:



From those resources, there are five (4) main purchased power expenses:

- 1) MMWEC Project Expenses – MMED is a project participant in numerous Massachusetts Municipal Wholesale Electric Company (MMWEC) generation projects through Power Sales Agreements. As a project participant, MMED is required to pay its share of the fixed costs of the plants, which includes the debt service, as well as its prorated share of the operating costs associated with running the plants.

MMED ownership responsibility (debt service) is significantly reduced for this year and the foreseeable future.

- 2) Hedged Energy – In 2017, MMED approved the process of purchasing power directly from the market based upon 'Price' and 'Time' triggers. When MMED is within short duration, the purchase is made to fill open positions (i.e. 'Time' trigger). When the price is attractive enough below the average market price, then the purchase is made to fill the future open position (i.e. 'Price' trigger). Under this process MMED has entered into contracts with:

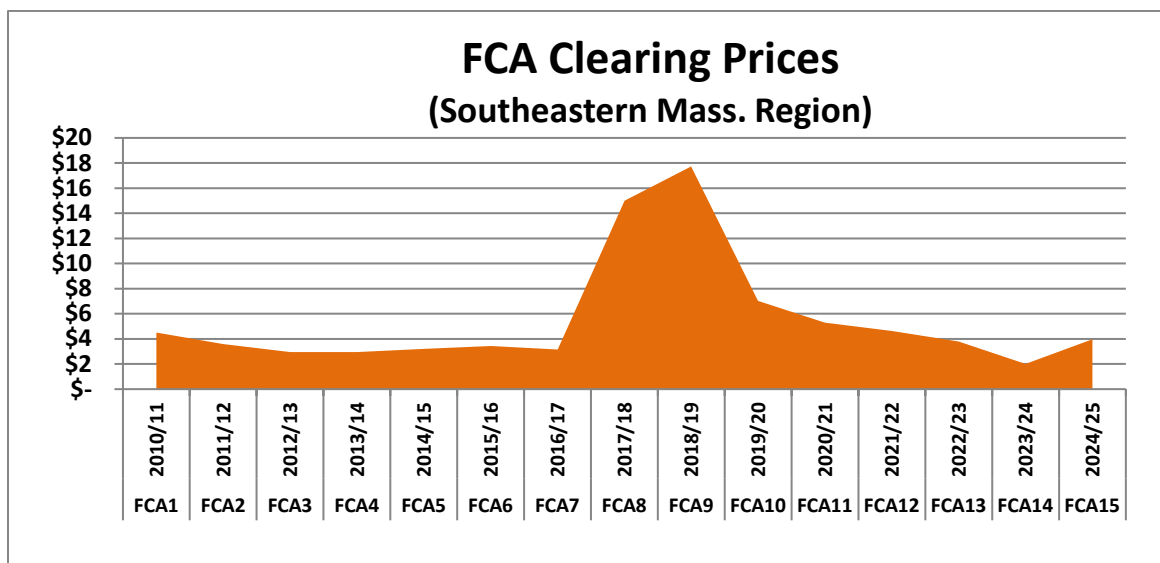
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- (3) with Shell Energy for a total of 111 million kWh at an average price of 4.8 cents per kilowatt-hour;
- (1) with EDF Energy for 27 million kWh at a price of 4.8 cents;
- (1) with Macquarie Energy for 10 million kWh at a price of 4.7 cents.

The transactions cover portions of MMED's energy requirements for 2018 through 2021.

- 3) Forward Capacity: In its continuing efforts to reward existing generators and encourage new generators in specific areas where there are constraints, the ISO has a Forward Capacity Market (FCM) to solicit bids through a Forward Capacity Auction (FCA) on an annual basis for a period 5 years in the future (the logic being it would take 5 years to build generation and the auction provides developers with the cash flow forecast for financing purposes). These monies are collected from service providers (like MMED) and are awarded to generators for being available to generate on demand and the costs are distributed to all customers on a kWh basis and built into the cost of power purchased in the market.

The chart (below) illustrates the impact of the FCM auctions on MMED ratepayers.



This shows the clearing prices from the previous (14) auctions already completed. The results show a steady rate of about \$3.50 per kW per month through FCA 7 (2016-2017). In FCA 8, however, the price increases to \$7.025 per kW per month. In FCA 9 the price skyrockets to \$11.80 for existing generators and to \$17.73 for new generation in the MMED load zone. Following five consecutive decreases in the FCA clearing price to a low of \$2.00 in FCA14, FCA15 (2024/25) increased to \$2.61 for Rest of Pool and \$3.98 for the Southeast New England zone where MMED is located. This should result in an increase of about \$600 thousand in FY25

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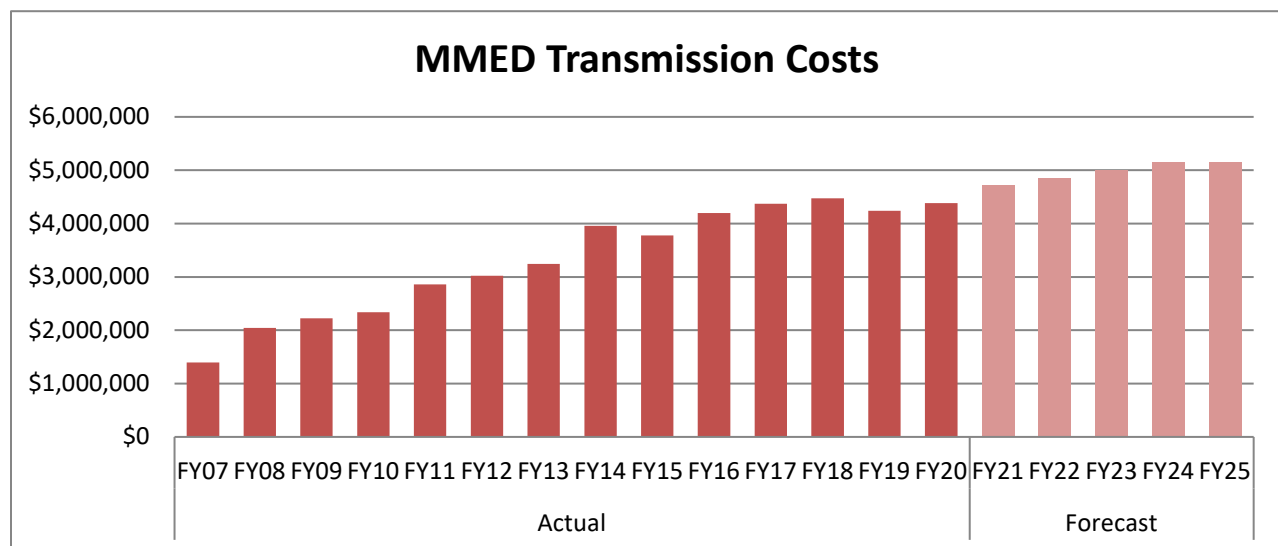
- 4) Spot Market Energy Purchases: To the extent that the sum of MMED's project entitlements and the hedge contracts either overstate or are deficient relative to MMED's actual hourly load, MMED is either a purchaser or seller into this market every hour. Approximately 33% of MMED's energy is projected to be purchased off the spot market in FY21, although this will most likely be reduced by additional hedging transactions.

Transmission:

A significant expense in MMED's budget is the cost of transmission services associated with moving the power across the regional transmission network from the sources that ISO New England uses to supply the Mansfield load. For FY22, MMED has budgeted \$5,314,680 to cover its cost of transmission. The FY22 projected cost of transmission is agreed to be 15.1% more than the FY21 budget. Transmission expense represents 21.9% of the operating budget request.

The increase in budgeted transmission costs is due to a much larger-than-expected increase in the transmission charge from ISO-NE.

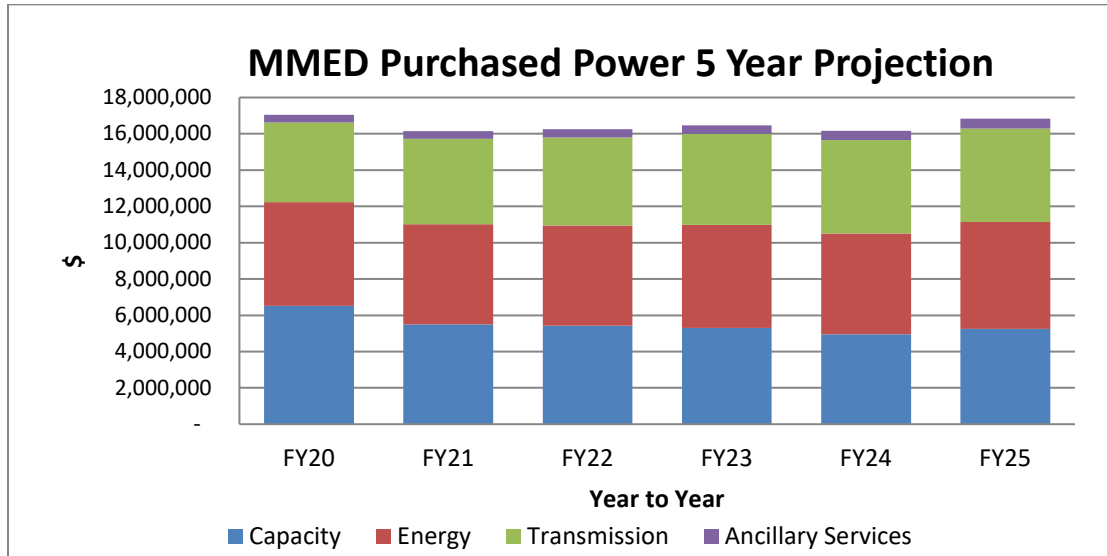
MMED's cost per kWh for transmission is estimated at 2.58 cents in FY21. Since FY11 when the rate was 1.28 cents/kWh, the cost of transmission has increased about 100% based on the FY22 projection. The chart below shows both the actual and projected increases in Transmission costs.



These increases are being driven by a few factors. First, with a trend towards fewer generating facilities in New England there is a need to maximize the flexibility of the transmission grid so system expansion is ongoing. Secondly, there continues to be a strong push for alternative energy sources at the federal and state levels, particularly construction of wind energy facilities which can typically only be constructed on a mass scale in very remote areas (especially northern Maine) and for solar facilities. This will create further pressure to construct transmission lines, resulting in increased transmission rates.

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In summary, MMED's 'Power Production' and 'Transmission' expenses account for over 69.2% of the total expense budget. The following chart shows those projected expenses over the next few years:



Operating Expenses (Non-Power):

MMED identifies the following 5 classes of Non-power operating expenses;

- (1) Distribution
- (2) Customer Accounts and
- (3) Administrative and General
- (4) Depreciations
- (5) Discounts/Rebates and Other Expenses

Internal 'Labor Allocations' are built within each of the identified categories above. The proposed FY22 budget for Operating Expenses (Non-Power) represents a \$302,877 increase from the approved FY21 budget, or a 7.6% increase. The increase is driven by increases in negotiated labor costs in FY21, increases in rate classes related to more experienced staff and increases to maintenance activities.

- *Labor rates and Benefit expenses used in the FY21 budget reflect actual and anticipated contractual increases for the AFSCME and IBEW units, whose contracts were renewed in September 2019 for FY 2020-2022. The FY2022 budget anticipates fulfilling a new temporary full time equivalent Electric Maintenance Apprentice.*

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1) Distribution Expenses:

The bulk of expenses in this category are those incurred by MMED for the operation and maintenance of its distribution system. This category includes a majority of the cost for labor expended by MMED on an annual basis.

The total budgeted cost of distribution for FY21 is \$2,438,318. This is an increase of \$384,479 or 18.7% increase from the approved FY21 budget.

The increase in this account is primarily due to anticipated increases in negotiated labor costs in FY22 which are comprised of a 3.0% annual merit, increases in rate/step progression in classes related to more experienced staff, one additional FTE and increased maintenance and overtime related activities.

2) Customer Account Expenses

All of the costs associated with meter reading, customer service and the billing and collection of revenues fall under this category. The bulk of the expenses are the labor for the Meter Readers, the Office Administrator and Financial Assistants. The total budgeted cost of customer accounts for FY22 is \$1,123,983. This represents a \$73,392 or 7.0% increase from the approved FY21 budget. The bulk of the increase represents higher meter overtime and 3% contractual merit.

3) Administrative and General Expenses

The administrative and general (A&G) expenses cover management salaries, office supplies and expenses, consulting and legal costs, insurance, cost for vehicular maintenance, and other miscellaneous expenses. The total budgeted cost for A&G for FY22 is \$1,070,203. This represents a decrease of \$129,782 or 10.8% decrease than the approved FY21 budget. The decrease is primarily related to decrease in management allocation, a decrease in transportation and consulting/legal related expenses partially offset by increase in contractual salaries.

4) Depreciation

Under M.G.L. Chapter 164, Section 57, municipal light departments are required to set aside an amount each year for depreciation expense to be used solely for the purpose of “repairs, extensions, reconstruction, enlargements and additions” to the physical plant. In this manner, the Legislature ensured that money would always be made available through the collection of rates for rebuilding the infrastructure of an electric utility.

Depreciation expense of \$1,275,000, representing 5.2% of the proposed operating budget and is budgeted to increase by 0.6%, which is driven actual capital spend in the last year. One-twelfth of this amount is transferred each month from operating cash to a segregated Depreciation Fund bank account and is drawn down on an as-needed basis to support capital improvement work.

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5) Discounts/Rebates and Other Expenses

MMED offers a 20% discount on either the Distribution Charge or Distribution Demand Charge portion of the unbundled bill (depending on the class of customer) for prompt payment within 15 days of billing. The discount does not apply to the monthly Generation Charge, Customer Charge or Hydropower Credit. The discount is not granted if the account is in arrears. MMED also offers alternate payment options such as credit card, direct debit, on-line internet bill payment and recurring credit card payment.

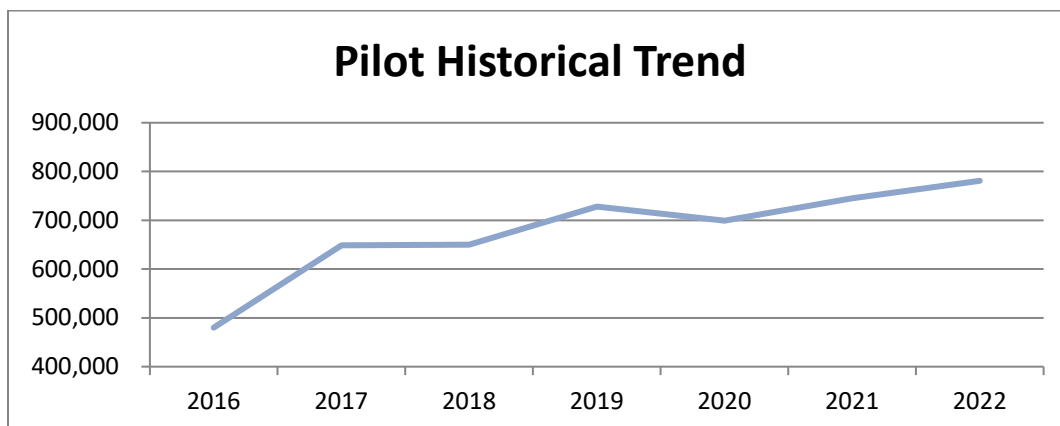
Discounts are considered an operating expense on the Income Statement. MMED estimates discounts and other expenses of \$1,580,000 or 6.5% of FY22 budgeted operating expenses.

PILOT (Impacting Surplus):

<i>FY22 MMED PILOT</i>	
FY20 MMED Net Book Value(GAAP)	\$34,586,372
times FY21 Comm Tax Rate	\$22.58
Total rounded up to nearest \$	\$780,960

<i>FY21 MMED PILOT</i>	
FY19 MMED Net Book Value(GAAP)	\$34,492,119
times FY20 Comm Tax Rate	\$21.60
Total rounded up to nearest \$	\$745,030

<i>Change</i>	
Net BV	\$94,253
Rate	\$0.98
\$ increase Pilot	\$35,931
	4.82%



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IV. MMED Projected Net Income:

Based on projected revenues and anticipated operating expenses, MMED forecasts a FY22 Net Income of \$888,920 under the current rate structure. This represents a 1.64% rate of return. Shown below is the trending of Net Income since FY16.

Net Income FY16 – FY22B

<i>Fiscal year</i>	<i>Net Income</i>	<i>Change from Prior Year Increase (Decrease)</i>
<i>FY 16</i>	\$ 1,234,584	\$ (531,488)
<i>FY17</i>	1,075,477	(159,107)
<i>FY18</i>	701,451	(374,026)
<i>FY19</i>	193,332	(508,119)
<i>FY20</i>	1,829,200	1,635,868
<i>FY21 Budget</i>	1,210,060	(619,140)
<i>FY22 Budget</i>	888,920	(321,140)

While MMED has been able to keep rates low, in large part because of its ownership in power plants and because the cost of power is lower due to the drop in natural gas prices, the impact of increased operating costs has gradually eroded Net Income. Operating cash has not decreased due to lower than budgeted capital improvements

Net Income in the FY22 budget is \$321,140 lower than the FY21 Net Income budget. The projected increasing labor costs, power expenses and depreciation are the primary drivers.

MMED is currently in a strong operating cash position. Capital improvement program will require cash resources in order to fund the capital improvement 5 year plan. MMED will not need to engage in borrowing as Operating Cash is sufficient to cover planned capital improvements.

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V. MMED Budget Assumptions & Risks

Key assumptions used when compiling the FY21 capital and operating budgets are:

- 1) Risks: Due to COVID-19 pandemic there are unknown variables that may impact results
 - a. Decrease in Load Shape
 - b. Decline in Collection Trends
 - c. New Regulatory Requirements
- 2) Labor rates used for this budget are based on contractual salary information for FY22.
- 3) The cost of benefits was based on estimated annual benefit costs for employees.
- 4) Base electric rates are assumed in this budget to be same as FY21.
- 5) Depreciation expense is based on net plant levels at 12/31/20. A regulatory accounting method of a 33 year life for all assets was used in calculating depreciation.
- 6) Labor amounts used in the operating budget were based on total hours estimated to be worked by each of MMED'S (22) employees less hours spent on capital improvements, as detailed in the Capital Budget, less labor expended on reimbursable projects.
- 7) Interest income accrues on specific MMED accounts: the Depreciation Fund; Guaranteed Deposits for customers providing a deposit for electric service; and the MMWEC Reserve Trust fund.
- 8) Non-Power operating costs are budgeted evenly for each month during FY22, whereas projected purchased power expenses, transmission expenses and revenues are individually calculated monthly.

Conclusion

MMED's budget is an accurate estimate of operations and maintenance expenses for FY22 and is consistent with the long-term goals established by the Light Commission.