

Mansfield Municipal Electric Department Operations Budget FY 2020

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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:

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

As a supplement to its FY20 Capital Improvement Plan, the MMED staff has prepared an FY20 Operating Budget to account for the ongoing operations and maintenance activities required to keep the existing physical plant in good operating condition. This planned maintenance is a major part of providing safe and reliable delivery of electric energy to MMED's 10,150 customers.

The FY20 Operating Budget submittal represents the period from July 2019 through June 2020. Both 'Income' and 'Expenses' (labor & material) have been accounted for in a detailed fashion designed to tie out all aspects of the budget. The Massachusetts Department of Public Utilities (DPU) Uniform System of Accounts has provided the basis for the categorization of these costs in accordance with the descriptions of those accounts in DPU literature.

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Table 1: FY 2020 Operations Budget Summary:

FY20 Operations Budget Summary	
Description	FY20 Requested Budget
Purchased Power	\$ 12,496,814
Transmission	4,895,612
Distribution	1,747,360
Customer Service	1,057,521
Administrative & General	1,155,647
Total Before Depreciation	\$ 21,352,954
Depreciation	1,697,998
Discounts and Other Expenses	1,605,536
Total Operating Expenses	\$ 24,656,487
Operating Revenue	27,561,531
Other Income	223,112
Net Income	\$ 3,128,156
Misc. Credits to Surplus	455,000
Payment In Lieu of Taxes	(699,478)
Increase to Surplus	\$ 2,883,678
Rate of Return	5.16%

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Table 2: A comparison of the proposed FY20 to the FY19 approved budget:

FY20/FY19 Budget Comparison			
Description	FY19 Approved Budget	FY20 Proposed Budget	Increase (Decrease)
Purchased Power	\$ 13,258,861	\$ 12,496,814	\$ (762,047)
Transmission	4,573,703	4,895,612	321,909
Distribution	1,725,105	1,747,360	22,255
Customer Service	1,069,148	1,057,521	(11,627)
Administrative & General	1,001,427	1,155,647	154,220
Total Before Depreciation	\$ 21,628,244	\$ 21,352,954	\$ (275,290)
Depreciation	1,655,700	1,697,998	42,298
Discounts and Other Expenses Less Other Income	1,407,135	1,382,424	(24,711)
Total Operating Expenses	\$ 24,691,079	\$ 24,433,375	\$ (257,704)
Operating Revenue	25,606,314	27,561,531	1,955,217
Net Income	\$ 1,136,648	\$ 3,128,156	\$ 1,991,508
Misc. Credits to Surplus	446,494	455,000	8,506
Payment In Lieu of Taxes	(709,699)	(699,478)	10,221
Increase to Surplus	\$ 873,443	\$ 2,883,678	\$ 2,010,235
Rate of Return	1.96%	5.16%	3.20%

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Table 3: FY20 Statement of Income and Surplus

SALES OF ELECTRICITY	Total
Residential Sales	\$ 10,718,481
Commercial	1,562,460
General Service Demand	7,011,792
Large General Service	7,193,176
Municipal Sales	1,075,622
Total Metered Sales:	\$ 27,561,531
OPERATING EXPENSES	
Power Production Expenses	
MMWEC Power	(11,229,409)
Shell Energy	(1,267,405)
Total Power Production Expense:	\$ (12,496,814)
Transmission Expenses	
Transmission Expense	(4,895,612)
Total Transmission Expense:	\$ (4,895,612)
Distribution Expenses	
Operations Expenses	(133,500)
Operations Payroll	(608,234)
Maintenance Expenses	(292,500)
Maintenance Payroll	(713,125)
Total Distribution Expense:	\$ (1,747,360)
Customer Accounts	
Customer Accounts Expenses	(281,800)
Customer Accounts Payroll	(775,721)
Total Customer Accounts Expense:	\$ (1,057,521)
Administrative & General Expenses	
Administrative & General Expense	(623,150)
Administrative & General Payroll	(532,497)
Total Administrative & General Expense:	\$ (1,155,647)
Discounts Taken:	(1,550,536)
Interest Income	42,500
Other Income Jobbing - Etc.:	180,612
Other Expense	(55,000)
Depreciation Expense:	(1,697,998)
Net Income:	\$ 3,128,156
Misc. Credit to Surplus	455,000
Misc. Debits to Surplus	0
Payment to Town in Lieu of Taxes	(699,478)
Net Increase (Decrease) To Surplus:	\$ 2,883,678

II. MMED Income:

Table 4: Income sources for MMED:

SALES OF ELECTRICITY	Total
Residential Sales	\$10,718,481
Commercial	1,562,460
General Service Demand	7,011,792
Large General Service	7,193,176
Municipal Sales	1,075,622
Total Metered Sales:	\$ 27,561,531
Other Income (Fiber, Jobbing, etc.)	\$ 223,112
Misc. Credit to Surplus:	\$ 455,000
Total Income:	\$ 28,239,643

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, 2018). Revenue generated by MMED rates goes to support operating costs, capital improvement costs, as well as producing a net income for the Department.

Electric Sales (Historical & Projected):

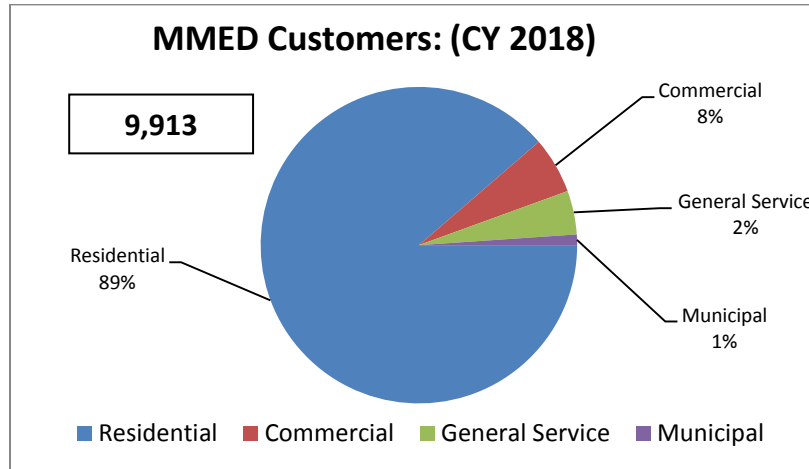
Table 5: Summary of MMED's Actual Energy Sales (kWh) CY 2013 - CY 2018

<i>Calendar Year</i>	<i>Energy Sales (kWh)</i>	<i>Increase (Decrease)</i>
2013	208,909,462	(0.7%)
2014	202,928,042	(2.9%)
2015	208,450,716	2.7%
2016	205,312,697	(1.5%)
2017	200,880,012	(2.2%)
2018	209,522,749	4.3%

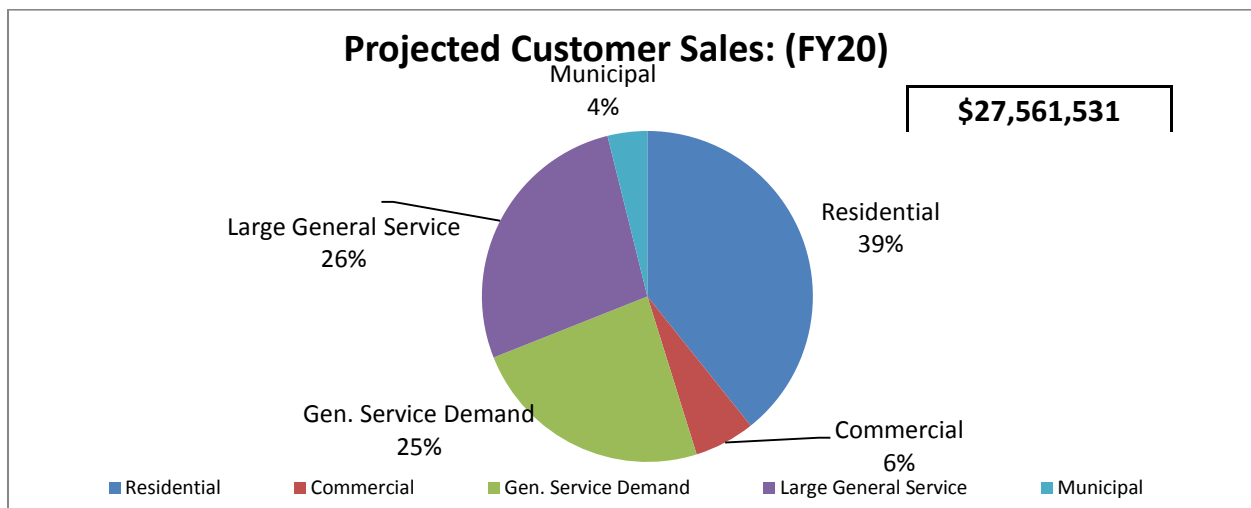
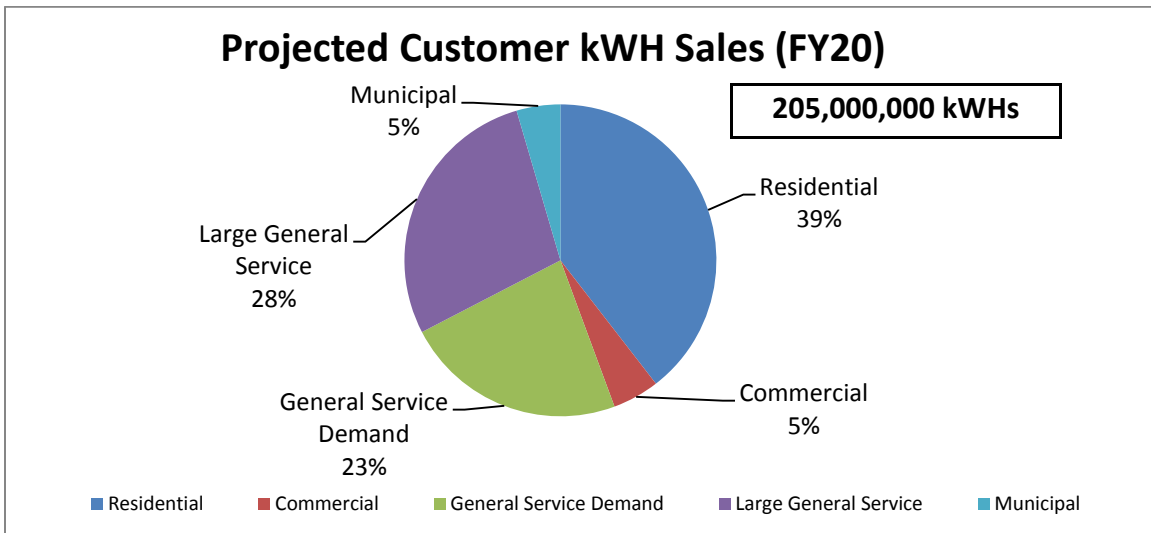
MMED serves a total of 9,913¹ customers by the following breakdown:

¹ MMED DPU Report: Count as of end of year 2018

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The projected Electric Sales for FY2020 is as follows:



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For budgeting purposes, MMED projects a 0.7% increase in energy (kWh) sales for FY20 as compared to our updated FY19 sales projections.

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's) 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.

Note: In 2017, MMED implemented a Net Metering Tariff to account for the impact of solar installations on MMED's costs. In that tariff, a Net Metering Recovery Surcharge was included to recover the fixed costs of operations that are lost when a customer takes energy from their solar installation instead of from MMED, resulting in lower Distribution Charge revenues.

Generation Charge:

This rate is based upon the individual customer's energy consumption (kWh's) 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.

Note: MMED has ownership of power supply plants that are scheduled to be paid in full in 2019. While such plant ownership in various plants are lowering power supply costs, Transmission rates have (& will) continue to increase over the next several years. As a result, the decline in overall energy prices will be offset by increases in transmission costs.

Such rate is 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. Tables below reflect both the recent historical adjustments along with a projection (estimate) of future Generation charges.

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Table 6: Recent historical ‘Generation’ charges:

Period	Purchase Power Charge
January – March 2016	9.50 cents
April – June 2016	8.73 cents
July - September 2016	9.55 cents
October - December 2016	10.62 cents
January- March 2017	8.60 cents
April – June 2017	8.81 cents
July 2017 - Present	9.22 cents

Note: Since approval of the new ‘Rate Structures’ MMED has fixed the (previously known) ‘Generation Charge’ with ‘Purchased Power’ charge. The addition of the ‘Purchased Power Cost Adjustment’ charge is set at zero. Any future market cost increases will be addressed within that adjustment factor.

Table 7: Projected FY20 ‘Purchased Power Cost Adjustment’ charges:

Period	Projected Generation Charge
June 2018 – July 2019	(0.0022 cents)
<i>Projected (Future)</i>	0.00 cents

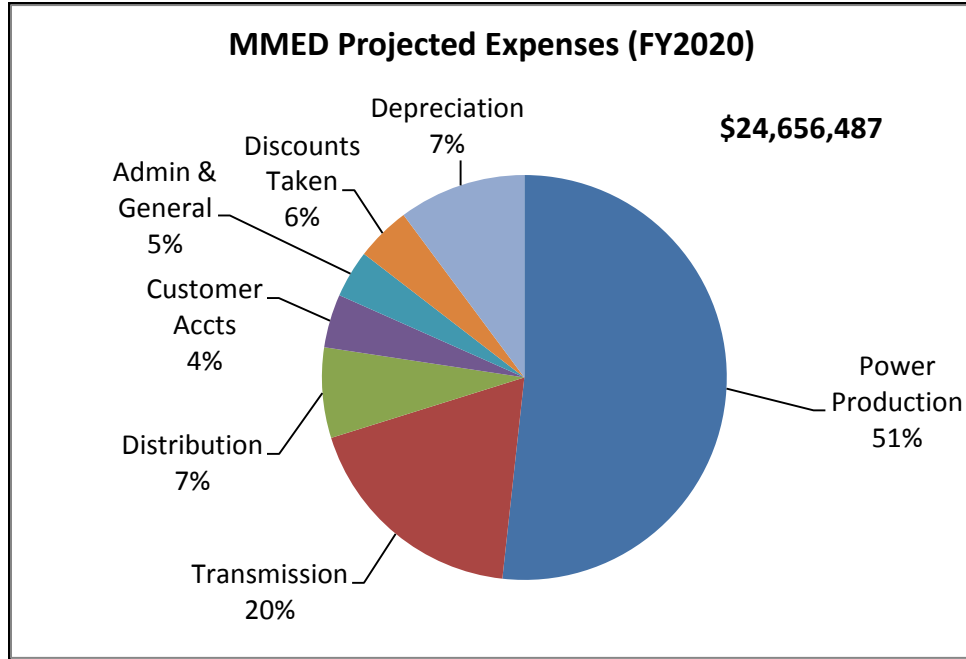
Such projections are based on current commodity market pricing for future energy purchases during the FY20 period and are subject to change depending on market conditions at the time.

III. MMED Expenses:

MMED estimates its total expenses for FY 2020 to be \$24,656,487 over the following categories:

MMED Expenses (FY20)	Total
Power Production	\$ 12,496,814
Transmission	4,895,612
Distribution	1,747,360
Customer Accounts	1,057,521
Admin & General Exp.	1,155,647
Depreciation Exp.	1,697,998
Discounts Taken	1,550,535
Other Assoc.	55,000
Total Expenses:	\$ 24,656,487

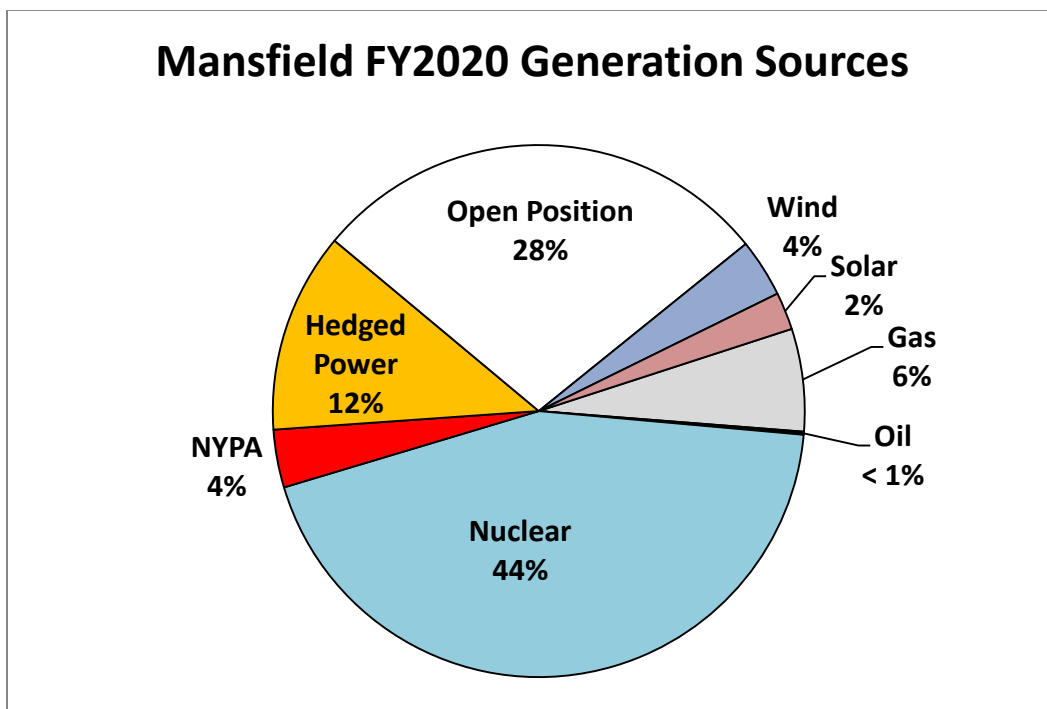
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Power Production:

For the twelve-month period ending in June 2020, the MMED budget for purchased power expense is \$12,496,814. This represents 50.7% 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:



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From those resources, there are five (5) main purchased power expenses:

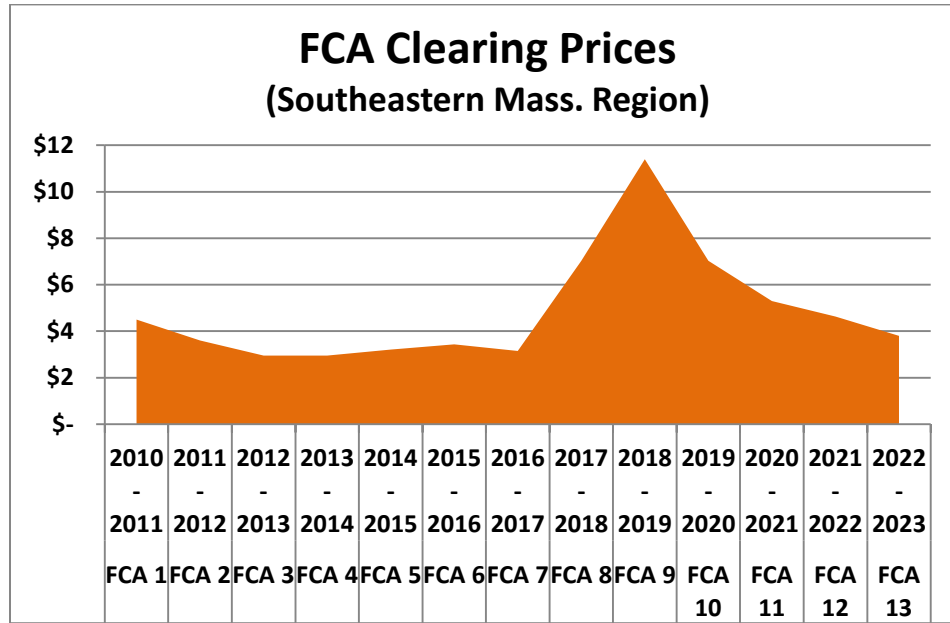
- 1) MMWEC Project Expenses – MMED is a project participant in numerous Massachusetts Municipal Wholesale Electric Company (MMWEC) generation projects through Power Sales Agreements. As a project participant, MMED is required to pay its share of the fixed costs of the plants, which includes the debt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

Note: MMED has also entered into a PPA with MMWEC to purchase energy generated from a 51 MW wind farm in Hancock, Maine which started producing energy in January 2017 and will eventually supply approximately 4% of MMED's total energy requirements.

MMED ownership responsibility (debt service) is significantly reduced for this year and following years. MMWEC debt payments were about \$3.8 million (FY15). In FY19 they will reduce dramatically and go to zero in FY20.

- 2) Shell Energy – Under the Power Market Hedging program described in (#5.) below, MMED has entered into three contracts with Shell Energy for a total of 111 million kWh at an average price of 4.8 cents per kilowatt-hour. 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 implemented a Forward Capacity Market (FCM) where it solicits 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 attributed to 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 dramatic impact of the FCM auctions on MMED ratepayers.



This shows the clearing prices from the previous (13) 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. The last four FCA clearing markets showed a reduction in cost allocation to \$3.80 by 2022. While there is speculation that the next market clearing price may remain steady, there are planned retirements of bulk power plants after 2023, therefore, the market conditions might see a dramatic increase in future market prices.

In total economics, Forward Capacity Market (FCM) payments have increased for several years and peaked at over \$3 million in FY19. Projections show a decrease to \$1.25 million in FY23.

Note: Increased costs in FCM have offset the anticipated savings from retirement of MMED's debt service to MMWEC (est. \$0.02/kWH).

- 4) Spot Market Energy Purchases: To the extent that the sum of MMED's project entitlements and the Shell contract either overstate or are deficient relative to MMED's actual hourly load, MMED then becomes either a purchaser or a seller into the spot energy market. Since achieving a perfect balance between actual load and entitlements on an hourly basis is impossible, MMED is either a purchaser or seller into this market every hour. Approximately 30% of MMED's energy is projected to be purchased off the spot market in FY20, although this will probably be reduced by additional hedging transactions.
- 5) Power Market Hedging Contracts: In 2017, MMED approved the process of purchasing power directly into the market based upon 'Price' and 'Time' triggers. When MMED is within short duration, the purchase is made to fill the open position (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).

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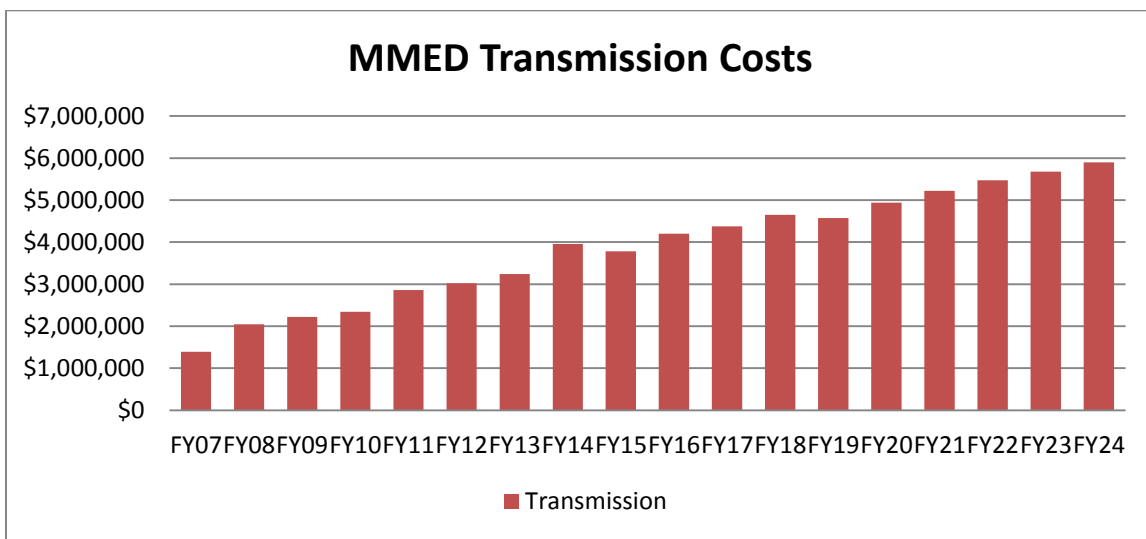
Transmission:

An increasingly expensive item 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 FY20, MMED has budgeted \$4,895,612 to cover its cost of transmission. The FY20 projected cost of transmission is 6.1% more than the FY19 budget and MMED is expected to purchase .7% more kWh. Transmission costs represent 19.8% of the operating budget request.

Further escalation of transmission costs is due to two main factors;

- (1) There is a vast amount of transmission plant coming on-line in the next several years. From 2002 through 2012, the amount of transmission infrastructure placed in service increased from approximately \$4.8 billion. The cost for this transmission is paid through the Regional Network Service (RNS) transmission rates that every utility in New England pays to move power.
- (2) As an incentive for transmission-owners to construct and maintain the transmission grid, the Federal Energy Regulatory Commission (FERC) had, at the urging of ISO New England, awarded "incentive rates of returns on equity" for transmission investment from a base of 11% to an incentivized rate of 13%. While FERC has shown some consideration to the consumers to evaluate 'cost', they reduced rate to the 11% range. Appeals by both transmission owners and load-serving entities (like MMED) are ongoing with FERC regulators.

MMED's cost per kWh for transmission is estimated at 2.43 cents in FY20. Since FY11 when the rate was 1.28 cents/kWh, the cost of transmission has increased about 70% based on the FY20 projection. The chart below shows both the actual and projected increases in Transmission costs.

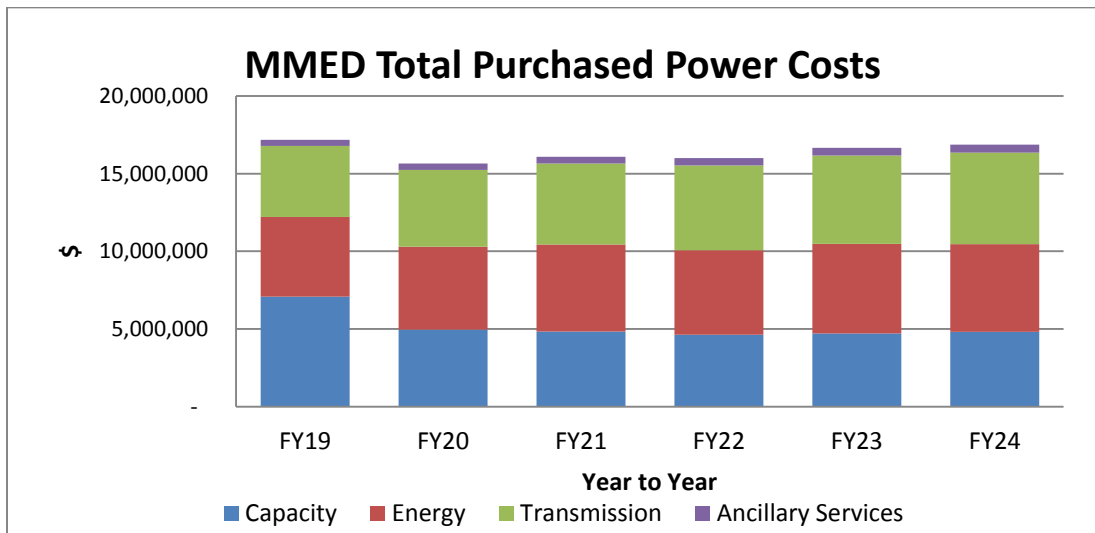


These increases are being driven by a few factors. First, with a trend towards fewer generating facilities in New England there is a need to maximize the flexibility of the transmission grid so

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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.

In summary, MMED's 'Power Production' and 'Transmission' expenses account for over 72% of the total expense budget. The following chart shows those projected expenses over the next few years:



Controllable Expenses:

MMED has identified the following 3 classes of operating expenses that it classifies as "controllable" expenses; (1) Distribution (2) Customer Accounts and (3) Administrative and General. Internal 'Labor Allocations' are built within each of the identified categories above but are summarized later in this report. The proposed FY20 budget for 'Controllable Expenses' represents an \$164,848 increase from the approved FY19 budget, or a 4.3% increase.

NOTE:

- *MMED's Post Employment Health Care Liability (OPEB) are included. An actuarial amount of \$179,000 is built within the labor component to account for those costs.*
- *Labor rates used in the FY20 budget reflect actual and anticipated contractual increases for the AFSCME and IBEW units, whose contracts were renewed until July 1st, 2019 (FY20).*

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 includes the majority of the cost for labor expended by MMED on an annual basis.

MMED has also summarized its FY20 distribution budget request by DPU plant account category. The top two blocks (plant account categories 580 through 598) represent the operations and maintenance portions of the distribution expenses. The total budgeted cost of distribution for FY20 is \$1,747,360 or 7.1% of the operating budget request. This is a increase of \$22,255, or 1.3%, from the approved FY19 budget.

Most of the increase is due to the Maintenance of Overhead Lines account. The bulk of the increase in that account is due to anticipated increases in labor costs in FY20.

2) Customer Account Expenses

All of the costs associated with meter reading, customer service and the billing and collection of revenues to support MMED fall under this category. The bulk of the expenses are the labor for the Meter Readers, the Business Manager and Financial Assistants. The total budgeted cost of customer accounts for FY20 is \$1,057,521, or 4.3% of the budget request. This is a decrease of \$11,627 from the approved FY19 budget. The bulk of the cost decreases represent anticipated cost decreases in Collection Charges in FY20.

3) Administrative and General Expenses

The administrative and general (A&G) expenses of MMED cover management salaries of the organization, 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 FY20 is \$1,155,647. This represents 4.7% of the MMED operating budget request and is \$154,250 more than the approved FY19 budget; due to an expected increase in outside engineering services.

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FY18 Actual vs FY19 Budget vs FY20 Proposed Controllable Expenses

Plant Account	Code	FY 18 Actual	FY 19 Budget	FY 20 Budget Proposal	FY19/FY20 % Change
Operations Supervision and Engineering	580	\$155,671	\$ 189,289	\$ 193,475	2.21%
Distrib. Station Operations	581	218,271	188,250	191,490	1.72%
Distrib. Station Expense	582	229,355	247,286	252,510	2.11%
Overhead Lines	583	28,578	33,000	38,000	15.15%
Underground Lines	584	4,422	11,200	10,000	-10.71%
Meter Expenses	586	43,793	51,709	52,169	0.89%
Customer Installation Exp.	587	10,539	4,011	4,091	0.00%
Maint. Structure	591	77,823	70,500	81,500	15.60%
Maint. Station Equipment	592	0	2,500	1,000	-60.00%
Maint. Overhead Lines	593	863,915	852,522	853,630	.13%
Maint. Underground Lines	594	2,807	4,000	3,500	-12.50%
Maint. Line Transformers	595	4,098	500	500	0.00%
Maint. Street Lighting	596	67,386	69,638	64,495	-7.39%
Maint. Of Meters	597	0	0	0	0.00%
Maint. Misc. Distr/Plant	598	1,820	700	1,000	42.86%
Total Distribution Maintenance		\$ 1,708,478	\$ 1,725,105	\$ 1,747,360	1.29%
Meter Reading Expenses	902	\$ 200,579	\$ 198,876	\$ 202,846	2.00%
Customer Records	903	684,094	755,772	743,675	-1.60%
Bad Debts	904	80,000	80,000	80,000	0.00%
Misc. Customer Accounts	905	23,747	34,500	31,000	-10.14%
Total Customer Account Expenses		\$ 988,420	\$ 1,069,148	\$ 1,057,521	-1.09%
Administrative and General Salaries	920	\$ 335,448	\$ 353,102	\$ 362,903	2.78%
Office Supplies	921	125,746	113,150	143,650	26.96%
Outside Services	923	218,863	206,000	260,600	26.50%
Property Insurance	924	32,257	30,000	40,000	33.33%
Property Damage Liability	925	23,759	0	0	0.00%
Miscellaneous Expense	930	165,924	180,175	217,497	20.71%
Rents	931	9,600	10,000	10,000	0.00%
Transportation	933	109,511	109,000	121,000	11.01%
Total Admin & General Expenses		\$ 1,021,108	\$ 1,001,427	\$ 1,155,650	15.40%
Grand Total		\$ 3,718,006	\$ 3,795,680	\$ 3,960,531	4.34%

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FY19 and FY20 Comparison Distribution, Customer Accounts, and A&G

Plant Account	Description	FY19 Approved Budget	FY20 Proposed Budget	Increase/ (Decrease)
580	Operations Supervision and Engineering	\$ 189,289	\$ 193,475	\$ 4,186
581	Distribution Station Operations (Dispatching)	188,250	191,490	3,240
582	Distribution Station Expenses	247,286	252,510	5,224
583	Overhead Line Expenses	33,000	38,000	5,000
584	Underground Line Expenses	11,200	10,000	(1,200)
586	Meter Expenses	51,709	52,169	460
587	Consumer Installation Expenses	4,011	4,091	80
	Total Distribution Operations	\$ 724,745	\$ 741,735	\$ 16,990
590	Maintenance Supervision and Engineering	-	-	-
591	Maintenance of Structures	70,500	81,500	11,000
592	Maintenance of Station Equipment	2,500	1,000	(1,500)
593	Maintenance of Overhead Lines	852,522	853,630	1,108
594	Maintenance of Underground Lines	4,000	3,500	(500)
595	Maintenance of Line Transformers	500	500	-
596	Maintenance of Street Lights	69,638	64,495	(5,143)
597	Maintenance of Meters	-	-	-
598	Maintenance of Miscellaneous Distribution Plant	700	1,000	300
	Total Distribution Maintenance	\$ 1,000,360	\$ 1,005,625	\$ 5,265
902	Meter Reading Expenses	\$ 198,876	\$ 202,846	\$ 3,970
903	Customer Records and Collection Expenses	755,772	743,675	(12,097)
904	Bad Debts	80,000	80,000	-
905	Miscellaneous Customer Account Expenses	34,500	31,000	(3,500)
	Total Customer Accounts	\$ 1,069,148	\$ 1,057,521	\$ (11,627)
920	Administration and General Salaries	\$ 353,102	\$ 362,903	\$ 9,801
921	Office Supplies and Expenses	113,150	143,650	30,500
923	Outside Services Employed	206,000	260,600	54,600
924	Property Insurance	30,000	40,000	10,000
926	Employee Pensions and Benefits	-	-	-
930	Miscellaneous General Expenses	180,175	217,497	37,322
931	Rents	10,000	10,000	-
933	Transportation Equipment	109,000	121,000	12,000
	Total A&G Expense	\$ 1,001,427	\$ 1,155,650	\$ 154,223
	Grand Total	\$ 3,795,680	\$ 3,960,531	\$ 164,851

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Labor Allocation

The following page shows MMED's FY20 Budget Request – Man hour Summary. This summary breaks out the man hour allocation for capital and operating work by employee that is projected for FY20. The FY20 labor cost in the capital and operating budgets does not include the estimated 107 man hours for each line worker that is allocated to billable work. That labor time is billed directly to the customer.

For the FY20 period, MMED's 21 employees will be paid for either 2,080 hours of straight time work (for those on a 40 hour work week) or 1,950 hours of straight time work (for those on a 37.5 hour work week). As a practical matter, because employees take vacation, sick, personal, holiday and other time off during the year as well as participate in job training, the number of hours actually worked and charged to a specific capital or operating account is only 80% to 85% of the total available man hours.

The costs associated with paying for all employee benefits are tracked and actual benefit costs are directly allocated to a particular operating account or capital account by employee.

Overhead costs are not allocated to overtime labor, however, as the costs associated with benefit allocation are recovered over the basic 40 or 37.5 hour work week.

MMED's goal is to allocate the total actual costs of doing business to each capital or operating account under which labor is expended.

In addition, MMED applies a stores expense rate to all material drawn out of inventory. This stores expense covers the cost of the MMED Procurement Clerk's time, benefits and the operating costs associated with maintaining inventory.

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FY18 Analysis Of Available Scheduled Manhours By MMED Employee Manhour Summary July 2018 - June 2019

MMED Personnel Available For Capital Work	Total Work Hours (1)	Weather (2)	Vacation (3)	Sick/ Personal (4)	Holidays (5)	Operations and Maintenance (6)	Billable Work (7)	Capital Hours (8)
CHRIS TRASK	2,216	80	128	64	104	1,393	107	340
TAYLOR MILLER	2,216	80	120	64	104	1,401	107	340
RALPH BELLEVANCE	2,216	80	200	64	104	1,221	107	340
SHAWN CURRAN	2,216	80	240	64	104	1,328	107	520
PAUL DIGGIN	2,216	80	200	64	104	1,321	107	340
DAN ROMANKO	2,216	80	128	64	104	1,393	107	340
JAY THOMPSON	2,216	80	200	64	104	1,321	107	340
TOM WEIR	2,216	0	200	64	104	924	0	924
PAT CARROLL (9)	2,080	0	200	64	104	1,237	0	475
TIM MORAN (10)	2,080	0	200	64	104	1,712	0	0
CHRISTOPHER COX (11)	1,950	0	188	60	98	802	0	802
JOE SOLLECITO (12)	2,080	0	200	64	104	1,370	0	342
KEN THOMSON	1,950	0	180	60	98	1,612	0	0
LAURIE ANDERSON	1,950	0	188	60	98	1,604	0	0
KATHY CODELLA	2,054	0	143	60	98	1,665	0	0
JACQUELINE LEE	2,054	0	188	90	98	1,589	0	0
LARRY WELLS	2,054	0	75	60	98	1,732	0	0
NANCY OLSON	2,054	0	188	60	98	1,619	0	0
MICHAEL SIMONELLI	2,216	0	80	64	104	1,441	107	293
BRUCE DYKE	2,216	0	200	64	104	1,672	0	0
JEFF HAYES	2,216	0	200	64	104	1,712	0	0
Totals	44,682	0	3,766	1,346	2,142	28,674	749	5,796

NOTES:

- (1) Total hours for line personnel based on time worked during July through June (excludes emergency work). Available man hours for productive work is total work hours less weather less vacation less sick/personal less holidays.
- (2) Weather based on historical loss of productivity due to cold and wet weather conditions. Time charged to operations and maintenance.
- (3) Vacation time based on full use of available vacation hours that each employee earns during the year.
- (4) Sick and personal time usage based on an average of 5 sick days used per year as well as 3 personal days each year.
- (5) Holidays based on 13 holidays (12 full days, 2 half days) available to employees during year.
- (6) Operations and Maintenance time detailed in FY20 Operating budget.
- (8) Capital hours for Linemen that are available for use in capital work plan is determined in detailed project summaries. All other hours in capital work plan based on allocations set forth below.
- (9) Meter Foreman time allocated 100% to maintenance for meter repair, meter reading and station operations.
- (10) Meter Technician time allocated 100% to expense for meter reading.
- (11) Electrical Engineer allocated 50% to capital, 50% to expense for normal hours worked. 37.5 hour work week.
- (12) Director allocated 20% to capital, 80% to expense for normal hours worked. 40 hour work week.

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Depreciation

Depreciation expense is a significant line item in MMED's operating budget request. 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 directly impacts Net Income, although since it is a non-cash expense it does not reduce MMED's overall cash position but instead transfers funds between operating cash and the depreciation fund.

From 2011 to 2017, MMED's depreciation rate was 5% of gross plant depreciable assets due to the financing burden of the Bird Road substation and other major system infrastructure improvements. In 2018, the Depreciation rate was re-established at 3% of gross plant.

Depreciation expense of \$1,697,998, representing 7.0% of the proposed operating budget, and 3% of gross plant, is noted by a line item on the budget summaries on Pages 2 through 4. 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.

Discounts 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. There has been a significant increase in credit card payments in the last few years due to the aggressive collection efforts that MMED has undertaken.

Discounts are considered an operating expense on the Statement of Income and Surplus. MMED estimates discounts and other expenses of \$1,605,536 in FY20. This represents 6.5% of the operating budget request.

IV. MMED Projected Net Income:

Based on projected revenues and anticipated operating expenses, MMED forecasts an FY20 Net Income of \$3,128,156 under the current rate structure. This represents a 5.16% rate of return. The approved FY19 operating budget projected a low Net Income in the amount of \$1,136,648, or 1.96%. These are based on a conservative set of assumptions. Shown below is the trending of Net Income since FY13.

Net Income FY14 – FY20

<i>Fiscal year</i>	<i>Net Income</i>	<i>Change from Prior Year Increase (Decrease)</i>
<i>FY 14</i>	\$1,727,818	(\$449,659)
<i>FY 15</i>	\$1,772,790	44,972
<i>FY 16</i>	\$1,233,407	(\$539,383)
<i>FY17</i>	\$1,075,000	(\$158,407)
<i>FY18</i>	\$ 677,902	(\$397,098)
<i>FY19 Budget</i>	\$1,136,648	\$458,746
<i>FY20 Proposed</i>	\$3,128,156	\$1,991,508

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 in the last several years. This impact is not fully reflected in operating cash because all capital improvements are now paid totally from the depreciation fund.

Overall, Net Income in the FY20 budget is 175% higher than the FY19 Net Income projection. The .7% projected increase in Energy Sales has a slight impact on the FY20 Net Income forecast.

MMED is currently in a strong operating cash position. However, the aggressive capital improvement program under which MMED projects an expenditure of approximately \$12.0 million over the next five years which will require significant financial resources in order to fund the planned capital improvement work without having MMED engage in borrowing.

V. MMED Budget Assumptions

The key assumptions used when compiling the FY20 capital and operating budgets are:

- 1) Labor rates used for this budget are based on actual current salary information for FY20.
- 2) The cost of benefits was based on the estimated annual benefit costs for each individual employee and is allocated monthly as a percentage of the employee's straight time hours versus all straight time hours worked.
- 3) Load is projected to increase by .7% of energy sales (kWh) from FY19.
- 4) Base electric rates are assumed in this budget to have changed per the new rate structure implemented in July 2017.
- 5) Depreciation expense is based on plant levels at 12/31/2018 less assets known to be fully depreciated. 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 21 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. Those interest amounts are included in the balances for each fund as shown on the Balance Sheet.
- 8) Controllable costs are budgeted evenly for each month during FY20, whereas projected purchased power expenses, transmission expenses and revenues are individually calculated on a monthly basis.

Conclusion

MMED's budget is an accurate estimate of operations and maintenance expenses for the FY20 and is consistent with the long term goals established by the Light Commission and communicated to the MMED staff.