

ESMEC-ET Electric Supply Portfolio Energy Cost Management and Procurement Plan

September 2021
(Approved 3/17/2022)

I. Plan Statement

The goal of the Eastern Shore of Maryland Energy Trust (ESMEC-ET) Energy Cost Management and Procurement Plan is to mitigate risk and stabilize expected electric supply costs over a rolling three-year time horizon. No later than 6 months prior to the beginning of the upcoming fiscal year, electric supply costs will be stabilized within a predetermined limited variance range and the successive two fiscal years' costs will gradually be stabilized within a predetermined limited variance range over the next two years. The Plan will cover 4 years beyond the current fiscal year. Market price targets will be considered to provide opportunities to reduce costs in future fiscal years relative to the current fiscal year.

II. Electric Account Profile

The current approximate annual purchase volumes behind the local utility (Delmarva Power) are:

<u>Approximate # Accounts</u>	<u>2021/2022 UCAP (MW)</u>	<u>2021 Trans Cap (MW)</u>	<u>Annual (MWhs)</u>
884	28.4	24.3	FY19 (preCovid) 168,000 FY21 (Covid) 146,000

III. Electric Component Price Risk Profile

Fiscal year 2021 (July 1, 2020 through June 30, 2021) electric supply component costs and their respective price volatility profiles were:

	<u>\$/MWh</u>	<u>% of Total</u>	<u>Price Volatility Profile</u>
Supply			
Energy	\$31.68	30%	Moderate to High
Capacity (UCAP)	12.15	11 %	High year to year
Transmission	6.19	6%	Moderate
Regulatory Renewables	3.61	3%	Moderate
All other	<u>.75</u>	<u>1%</u>	Stable
Total supply cost	\$54.38	51%	
Distribution	<u>\$52.50</u>	<u>49%</u>	Moderate
Total electric cost	<u>\$106.88</u>	<u>100%</u>	

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Energy

For fiscal year 2021, approximately 30% of the costs represent energy costs that are determined directly by energy commodity/trading markets. Forward and spot (hourly) electric prices in PJM, (the mid-atlantic regional grid that includes the Delmarva Power service territory) are driven primarily by natural gas prices and the historical and current correlation between electric and natural gas prices is over 90%. Given the current PJM market design, this high correlation is expected to continue for the foreseeable future. Below is a summary of the electric forward and spot market volatility over the last five fiscal years (FY2017 – FY2021).

Energy Cost Volatility Range Summary

	Low		High	
	Price (\$/MWh)	ESMEC-ET Cost (1) (\$ millions)	Price (\$/MWh)	ESMEC-ET Cost (1) (\$ millions)
Spot (2)	\$21.45	\$3.1	\$36.97	\$5.4
Forward (3)	\$24.22	\$3.5	\$42.29	\$6.2

(1) Based on 146,000 MWhs per annum

(2) Based on PJM monthly average on and off peak hourly prices at Delmarva Zone for FY2017-FY2021 using FY2021 actual on peak/off peak ratio of 53%/47%.

(3) Based on PJM one-year forward prices at Delmarva Zone for period July 1, 2017 – June 30, 2021 using FY2021 actual on peak/off peak ratio of 53%/47%.

Capacity (UCAP – Unforced Capacity Obligation)

Represents approximately 11% of the total cost and this amount will vary each year based on PJM’s capacity auction price outcomes and the portfolio’s annual peak load contribution (PLC). Capacity prices are generally known three years in advance and are held each year for the next third year out (recent capacity auctions have been delayed due to revisions in the PJM capacity pricing parameters). The annual clearing prices are determined based on the projected capacity demand and available capacity to serve (supply) by utility zone. The capacity prices and estimated costs for the Delmarva zone for PJM fiscal years 2018 through 2022 are:

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<u>PJM Fiscal Year</u>	<u>Capacity Price (\$ MWD)</u>	<u>Estimated Annual Cost (1)</u>
Jun 1, 2018 – May 31, 2019	\$219.29	\$ 2.3 million
Jun 1, 2019 – May 31, 2020	\$115.58	\$ 1.2 million
Jun 1, 2020 – May 31, 2021	\$174.85	\$ 1.8 million
Jun 1, 2021 – May 31, 2022	\$164.73	\$ 1.7 million
Jun 1, 2022 – May 31, 2023	\$97.75	\$ 1.0 million

(1) Based on ESMEC-ET 2020/2021 UCAP of 28.4 MW

MWD = Megawatt Day

Annual capacity costs can be controlled/reduced through reducing demands during summer peak hours (peaks hours generally occur during July and August, Monday-Friday, hours ending 4:00 P.M. - 6:00 p.m. EST). Enel X provides ESMEC-ET members a peak load predictor service to assist them in reducing summer peak demands.

Transmission Costs

Transmission costs are based on an account(s) demand occurring during annual period November 1 thru October 31 five (5) peak load hours in the DPL zone with no two hours occurring on the same day. The Transmission rate is based on the FERC approved transmission rates that DPL has filed with FERC. Since January 2015, DPL's transmission rates (network integrated transmission services (NITS) have increased 50%. Active management of peak loads can result in significant reductions in transmission costs.

Delmarva Power Distribution Costs

For fiscal year 2021, approximately 49% of total electric costs represent Delmarva Power local distribution costs that are non-market based as they are approved by the Maryland Public Utilities Commission. DPL rates are both KW (demand) and kWh usage driven depending the DPL rate schedule. DPL's distribution rates have increased over the last seven in the range of 4.5%-6% annually.

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IV. Purchase Structure

ESMEC-ET utilizes a managed portfolio approach with a dedicated PJM subaccount competitively procured from a Maryland licensed service provider. All ESMEC-ET accounts are enrolled into the subaccount by the service provider. The energy costs for all metered consumption reported in the subaccount are based on a combination of fixed rate wholesale block purchases and PJM hourly prices (at Delmarva Power zone) in effect during the reporting period. All other PJM charges (capacity, transmission, ancillary costs) and credits associated with the accounts are passed thru to the subaccount at cost. The services provider will bill the accounts based on pre-determined budgeted rates prepared by the Energy Consultant and approved by ESMEC-ET. Billing rates are adjusted periodically to true up billed vs. actual costs of the supply portfolio.

V. Energy Price Risk Management Strategy

1. Flexible Dollar Cost Average Mechanism

The overall strategy is to build price stability by avoiding single point market exposure, i.e., making a fixed price commitment for 100% of energy requirements at a single point in time as over 30% of overall cost is determined in an unpredictable market that can change rapidly and by large amounts. This is accomplished through a dollar cost averaging mechanism where fixed rate blocks are purchased for portions of consumption over time such that by **six (6)** months prior to the beginning of a fiscal year the maximum desired level of price stability has been established for that period. The level of fixed price commitments will increase for each period as it draws closer to the full commitment date (**six (6)** months prior to fiscal year). ESMEC-ET retains the flexibility to accelerate fixed price block purchases when market opportunities arise and defer block purchases when market prices are deemed unattractive or inflated.

2. Implementation Guideline

Target Fixed Price Positions

The targeted fully hedged (fixed price) positions for the energy exposure of the entire portfolio will be:

75 – 85 % - on peak expected volume
60% - 75% - off peak expected volume

The fully hedged positions are targeted for execution six months prior to the next budget year.

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Planned Hedge Position Timeline

	<u>On Peak Exposure</u>		<u>Off Peak Exposure</u>	
	<u>% of Target Hedge</u>	<u>Accumulated % Target Hedge*</u>	<u>% of Target Hedge</u>	<u>Accumulated % Target Hedge*</u>
27 Months prior to budget period:	25%	25%	25%	25%
18 Months prior to budget period:	25%	50%	25%	50%
12 Months prior to budget period:	25%	75%	25%	75%
6 Months prior to budget period:	25%	100%	25%	100%

*100% Target Hedge means that 75-85% of On Peak hedge target is reached and 60-70% of Off Peak target hedge is reached

VI. Cost Management

The following cost management strategies and tactics are employed to manage portfolio supply costs:

- ESMEC-ET will purchase fixed rate wholesale blocks of power to manage energy price volatility. To help ensure competitive pricing, the services provider will obtain a minimum of three bids. In addition, the Energy Consultant will compare the price quotes to readily available published market prices for the equivalent product and delivery periods.
- Separate pricing will be obtained for PJM West Hub and Delmarva Power zone delivery. The energy consultant will advise on which delivery point represents the best value for ESMEC-ET.
- Allow assumption of a limited amount of spot market risk to avoid liquidating fixed rate purchases against the spot market.
- Utilize Day Ahead Scheduling to reduce operating reserve costs and reduce real time spot market energy price volatility.
- Provide System Peak Predictor service to all client provided personnel. Track and report on annual portfolio PLC's performance on both quantity (MWs) and cost.
- Participate in annual PJM Auction Revenue Rights (ARR) process to influence level of ARR credits.
- Purchase Maryland Renewable Portfolio Standard compliance renewable energy certificates (RECs) on a monthly basis to spread price risk over time as RECS are not a highly liquid market. Look for opportunities to fixed REC prices for extended terms when value is identified.

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VII. Program Management

The electric cost management and procurement plan and program will be overseen by ESMEC-ET. The Energy Consultant prepares the portfolio reports on a bi-monthly basis and ESMEC-ET meets three times a year. The meetings will include energy market updates in addition to the portfolio review report and presentation from the Energy Consultant. The portfolio report will include line item portfolio performance for fiscal year to date, performance to plan, next fiscal year cost projections, hedge position, hedge strategy, review of current market rates, portfolio billing rates, working capital balance actual and forecast, capacity costs review, regulatory renewable purchases update and other energy related matters.

VIII. Transaction Authority

Transaction authority will reside with the ESMEC-ET and may be delegated as deemed appropriate. All delegated authority must be in writing.