KENTUCKY MUNICIPAL ENERGY AGENCY

**ENTERPRISE RISK MANAGEMENT PROGRAM**

**POLICY**

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**KENTUCKY MUNICIPAL ENERGY AGENCY**

**ENERGY RISK MANAGEMENT PROGRAM**

#### POLICY

### INTRODUCTION

This Policy defines and establishes the broad base approach for Kentucky Municipal Energy Agency (“KYMEA”) Energy Risk Management Program (ERMP). The Policy establishes and describes the KYMEA policy in assuming, assessing, and controlling the level of risk exposure involved in the normal course of the company’s energy related business activities.

The standards of this policy are designed to ensure that the risk management oversight function remains independent of risk taking activity. This oversight role, in addition to other controls, is necessary for a comprehensive energy risk management program and will serve to centralize the action taken across KYMEA departments.

### OBJECTIVES

It is the policy of KYMEA to engage in financial or commodity transactions related to underlying commercial (physical) or financial exposures. Only financial or commodity transactions using derivatives that would achieve the following objectives are authorized by this energy risk management policy. These objectives are not mutually exclusive and achieving them requires a balanced approach to managing risk exposure. It is expressly understood that risk management is intended to mitigate risk and does not necessarily result in increased financial profitability. The purpose of the following objectives is to ensure solvency and facilitate planning and control in the face of increased volatility resulting from market price uncertainty. It is also understood that current market conditions can influence decision-making.

The following are the specific ERMP objectives for KYMEA:

OBJECTIVE #1 Manage financial performance by mitigating fuel price volatility and, hence, limiting fluctuations in cash flow and the cost of supplying power to Members while being sensitive to market conditions.

KYMEA’s cost to generate, purchase, and supply power is greatly impacted by fluctuations in the market price of fuel such as coal, natural gas, and oil. This ERMP will outline procedures for how hedge positions will be employed to limit these market fluctuations in the price of fuel and, hence, provide KYMEA with a tool to manage costs to generate, purchase and supply power to its Members.

OBJECTIVE #2 Manage price exposure of wholesale power contracts.

As a supplier and purchaser of power in the wholesale market, fluctuations in the market price of electricity will have an impact on KYMEA’s net income. The market price of electricity can be volatile and KYMEA will have an ongoing need to manage these price fluctuations in order to protect net income.

OBJECTIVE #3 Manage fuel consumption risks.

Budgeted fuel consumption volumes are based on variables such as load forecasts, weather forecasts, and forecasts of availability of generation resources, and forecasts provided by purchase power agreement suppliers. Changes in these variables can have an impact on actual fuel consumption and, hence, can have an impact on variances to the fuel budget. Exchange-traded and Over-the-Counter (OTC) markets provide financial tools that may be used by KYMEA to manage changes in these variables.

OBJECTIVE #4 Manage Plant Availability Risks.

Financial hedges can be used as a form of insurance to mitigate the fuel and purchased power cost exposure associated with the unavailability of generating resources, whether owned or provided under a purchase power agreement. In a volatile electricity market, the temporary loss of generation resources can have a substantial impact on net income.

OBJECTIVE #5 Manage Environmental Emission Allowances.

As a potential owner and operator of power plants or as a future option or requirement of a purchase power agreement, KYMEA may be allocated emission allowances by the United States Environmental Protection Agency (EPA). The manner in which these allocated allowances are managed relative to plant emissions can impact the operational availability of electric generating units as well as have a direct financial impact to KYMEA. The ability to trade emission allowances provides KYMEA with a tool to mitigate changing environmental conditions that can be driven by regulation, fuel- type consumption, and market conditions.

**OBJECTIVE #6 Manage Renewable Energy Attributes.**

As an owner and operator of renewable energy facilities and/or a purchaser of renewable energy with associated Renewable Energy Attributes, KYMEA is allocated and maintains an inventory of such Attributes including but not limited to Renewable Energy Certificates (RECs) and Carbon Offsets. The manner in which these Attributes are managed relative to KYMEA’s need to demonstrate compliance with any applicable regulations or standards can have a direct financial impact to KYMEA. The ability to trade such Attributes provides KYMEA with a potential tool to mitigate applicable regulation, fuel-type consumption, and market conditions.

### RISK

## AGENCY EXPOSURE

KYMEA’s exposure spans activity in both the physical market for commodities and the financial derivative markets that have developed to accommodate those commodities. Without risk management, KYMEA will be subject to earnings volatility, cost and pricing uncertainty, as well as uncertainty in meeting budgeted cash flow.

The primary components of KYMEA’s risk exposure are market risk and credit risk. This ERMP Policy is designed to address the management of these risks in the aggregate.

## MARKET RISK

Market riskinvolvesthe potential change in value of a commodity contract, liability, or cash flow caused by adverse fluctuations in market factors over a pre-defined holding period. Types of market risk include:

Price Risk - The uncertainty associated with changes in the price level of an underlying asset. Price risk can include:

1. Change in value of wholesale energy transactions,
2. Commodity fuel costs,
3. Cost of purchasing power on the open market,
4. Changes in value of emission allowances.

Liquidity Risk - The risk associated with the diminished market activity of a commodity.

Volume Risk – Supply or demand deviation from forecast (for example, the risk of not having enough or having too much power to meet predetermined obligations).

Calendar Risk -- Exposure due to time differential in commodity value between actual physical delivery and financial position expiration.

Basis Risk - Exposure due to a difference in commodity value between different delivery points or between cash market prices and the pricing points used in the financial markets.

Operations

Risk - (1) Unanticipated power shortages due to plant outages.

(2) Environmental limits and allowance allocations.

## CREDIT RISK

From a credit risk standpoint, KYMEA’s exposure is very different when transacting on the New York Mercantile Exchange (NYMEX) versus when transacting OTC.

The integrity of NYMEX trades offers KYMEA the better protection because the clearinghouse safeguards against default. Credit risk associated with exchange traded instruments is almost nonexistent because regulated exchanges guarantee financial performance.

Credit exposure does, however, exist for OTC traded derivative transactions because the financial integrity of the trade is dependent on the financial health of the counterpart. In OTC transactions, the credit rating of any prospective counterpart must meet qualified standards to manage potential exposure.

### ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

##### **KENTUCKY MUNICIPAL ENERGY AGENCY**

The Kentucky Municipal Energy Agency shall approve the Energy Risk Management Policy and all revisions thereto. The Board of KYMEA (the “Board”) shall at least annually receive a report from the Board Risk Oversight Committee on the Energy Risk Management activities for the preceding period.

##### **BOARD RISK OVERSIGHT COMMITTEE**

The Board Risk Oversight Committee shall be comprised of;

Board Member

CEO

CFO

Legal Counsel

One additional member recommended by CEO and approved by the Board

All five members are voting members of the Board Risk Oversight Committee.

The Board Risk Oversight Committee shall appoint an Internal Risk Management Committee (IRMC). The Board Risk Oversight Committee shall designate a Chairperson of the IRMC The IRMC shall be comprised of five members.

The Board Risk Oversight Committee shall monitor the activities of the IRMC to insure compliance with the Energy Risk Management Policy.

The Board Risk Oversight Committee shall at least quarterly receive a report on the Energy Risk Management activities for the preceding period from the IRMC.

The Board Risk Oversight Committee shall report on the Energy Risk Management activities and results to the Board of KYMEA at least annually.

The Board Risk Oversight Committee shall review and recommend changes to this Policy to the Board of KYMEA as required.

# INTERNAL RISK MANAGEMENT COMMITTEE

The Internal Risk Management Committee (IRMC) shall be formed upon the approval of this policy by the KYMEA.

The Board Risk Oversight Committee shall designate a Chairperson of the IRMC. The Committee shall be comprised of five members

The IRMC shall include;

CEO

Vice President of Market Analytics

Chief Financial Officer (CFO) and

Outside Counsel

External or Internal Individual knowledgeable of trading activities

recommended to Board Risk Oversight Committee by CEO

The Chairperson of the IRMC shall schedule meetings at least quarterly.

The IRMC shall approve each hedge recommendation prior to the commencement of the implementation of the recommendation. The approval shall specifically include the following:

1. Purpose of the hedge
2. Hedge instruments to be used
3. Duration of the hedge
4. Desired results of the hedge

The IRMC shall cause to be developed a Risk Management Operating and Administrative Procedures manual that shall specify the detailed procedures and reporting necessary to implement this Policy. The IRMC shall maintain this manual and approve all revisions thereto.

The IRMC shall monitor compliance with the Risk Management Operating and Administrative Procedures manual.

The IRMC will approve all individuals authorized to execute trades. At a minimum, the CEO and Vice President of Market Analytics shall be authorized to execute trades.

The IRMC shall approve all brokerage relationships and all ISDA master agreements and any other contractual agreement relating to energy risk management activities.

The IRMC shall establish requirements to determine counterparty creditworthiness prior to any proposed OTC transaction. Counterparties will be reviewed at periodic intervals to ensure they have maintained compliance with the requirements.

The IRMC shall develop a detailed position reporting system to assess the performance of each executed hedge recommendation relative to the approved objectives.

All IRMC members have authority to call committee meetings beyond those scheduled quarterly and each has responsibility to ensure that all activities are in accordance with the ERMP. The committee may meet in person, through telephone or electronic conference calls, and using electronic mail. The IRMC will keep regular minutes and records of its meetings and actions.

At any time, if any IRMC member believes that the committee has failed to adequately address a situation in which the member believes price or credit speculation is taking place, that member will submit a written statement describing the concern to the Chairperson of the Board Risk Oversight Committee.

### AUTHORIZATION AND LIMITS

**AUTHORIZATION**

The following are the only financial instruments that are authorized for use to conduct energy risk management activities:

Futures Contract - A standardized binding agreement to buy or sell a specified quantity or grade of a commodity at a later date. Futures contracts are freely transferable, can be traded exclusively on regulated exchanges and are settled daily based on their current value in the marketplace.

Option - A contract which gives the holder the right, but not the obligation, to purchase or sell the underlying futures contract at a specified price within a specified period of time in exchange for a one-time premium payment. The contract also obligates the writer, who receives the premium, to meet these obligations.

Over-the-Counter Instruments (OTC) - Any financial or physical instrument that is customized and created by a counterpart to replicate the risk profile associated with a commodity.

# LIMITS

Volume Limit

The IRMC may hedge up to 100% of the expected volumes of individual fuel types at the time of execution as long as they do not exceed the Financial Limits listed below.

**Financial Limits**

The maximum exposure of open financial (all futures, options, and OTC) instruments expressed as the total gross current market value (“notional value”) of outstanding financial positions under this Policy shall not exceed a percentage of the annual fuel component of the energy procurement budget as follows:

1st Year - 40% of approved annual fuel component of energy budget

2nd Year - 35% of forecasted annual fuel component of energy budget

3rd Year - 30% of forecasted annual fuel component of energy budget

4th Year - 25% of forecasted annual fuel component of energy budget

5th Year - 20% of forecasted annual fuel component of energy budget

# Environmental Emission Allowances Limit

KYMEA may buy, sell or trade emission allowances to assure compliance with the United States Environmental Protection Agency emission limits. KYMEA will not purchase, sell or trade emission allowances for speculative purposes. KYMEA will maintain a sufficient quantity of allowances necessary to comply with emissions limits relative to its forecasted generation.

KYMEA may execute, purchase, sell or trade transactions to achieve the level of emission allowances needed.

KYMEA will calculate emission allowance needs based on the following:

* Forecasted emissions
* Allocated emission allowances
* Risk management factor of 20% of forecasted emission allowance needs

Written approvals by the Vice President of Market Analytics and the CEO (or other individual responsible for environmental compliance i.e. “Responsible Officer”) must be obtained before any emission allowance transaction is valid and requisite for KYMEA. Documentation of all analysis and calculations will be provided to the IRMC for review prior to approval.

All emission allowance transactions will be documented by an agreement signed by authorized representatives of all parties.

On a quarterly basis an Environmental Emission Allowance report including current balances and actual consumption along with forecasted consumption and future balances will be provided to the IRMC.

# Renewable Energy Attributes Limit

KYMEA may buy, sell or trade Renewable Energy Attributes to provide financial benefit to KYMEA and to assure compliance with any applicable regulations or standards that may be implemented. If a mandated renewable energy standard is implemented, KYMEA will maintain a sufficient quantity of Attributes necessary to comply with the standard.

The Vice President of Market Analytics or Responsible Officer will have responsibility for maintaining KYMEA’s Renewable Attributes inventory from all sources and making recommendations to hold, buy, or sell Attributes. Renewable Attribute sources may include, but are not limited to: landfill gas, solar, wind, biomass, and other generation sources.

On a quarterly basis the Vice President of Market Analytics or Responsible Officer will report to the IRMC Committee: KYMEA’s Renewable Attributes inventory and make a recommendation to hold, buy or sell Attributes. If a recommendation to buy or sell Attributes is made, the Renewables division will provide all necessary documentation for consideration by the IRMC.

Written approvals by the Vice President of Electric & Water Production and the Vice President responsible for Renewable Energy Attributes must be obtained first before any Renewable Energy Attributes transaction is presented to IRMC. Once this approval is obtained, documentation of all analysis and calculations will be provided to the IRMC and a request for IRMC approval of the transaction will be requested by the Sustainable Services business unit.

All Renewable Attributes transactions will be documented by an agreement signed by authorized representatives of all parties.

### INTERNAL CONTROLS

In addition to the authorization of acceptable instruments, limits, and credit standards, a segregation of departmental responsibilities shall be established to verify and reconcile the integrity of KYMEA’s risk management activities.

The Risk Management Operating and Administrative Procedures manual shall specify a clear separation between transacting, credit review and approval, margining and cash settlements, and accounting.

### CONFLICTS OF INTEREST

Personnel responsible for executing and managing KYMEA’s trading activity will not engage in nor give the appearance of engaging in personal business activity that could conflict with the proper execution of the Energy Risk Management Program or which could impair their ability to make impartial energy risk management decisions. These personnel shall disclose to the Chief Financial Officer any material financial interests in financial institutions that conduct business with KYMEA, and they shall further disclose any large personal investment positions that could be related to the performance of KYMEA.

### POLICY REVIEW

At least once during the first 12 months following approval of this ERMP Policy and on an annual basis subsequently, the IRMC will review this policy and jointly make a recommendation to the Board Risk Oversight Committee on the adequacy of the policy and any necessary changes. Any recommended changes to the policy will be brought to the Board of KYMEA by the Board Risk Oversight Committee for approval.