

ORDINANCE NO. _____

AN ORDINANCE ADOPTING AN ENERGY RISK MANAGEMENT POLICY FOR THE NORTH LITTLE ROCK ELECTRIC DEPARTMENT; DECLARING AN EMERGENCY; AND FOR OTHER PURPOSES.

WHEREAS, the North Little Rock Electric Department (“NLRED”) manages the city-owned electric utility system for the City of North Little Rock (“the City”), providing electric service to areas in North Little Rock, Sherwood and surrounding areas within Pulaski County, Arkansas; and

WHEREAS, NLRED existed only as an electric distribution entity owning no generation or transmission assets until the following occurrences:

- 1989 completion of the Murray Hydroelectric Generation Plant, which currently provides approximately 15% of energy requirements;
- 2007 purchase power agreement with Waste Management, Inc. to buy all power produced at their Two Pines landfill gas generator, satisfying approximately 3% of energy requirements;
- 2010 acquisition of a 60MW interest in Plum Point Energy Station (a coal-fired generator in Osceola, Arkansas) which meets NLRED’s core baseload power requirements and provides as much as half of all energy needs; and

WHEREAS, combined with the above sources, NLRED acquires all other energy through bilateral contracts and the MISO market, along with minor distributed generation assets; and

WHEREAS, on October 12, 2009 with the adoption of Ordinance No. 8206, the City Council approved an Integrated Resource Plan (“IRP”), a planning guide for future transmission, power supply, demand management and conservation programs for customers served by NLRED, with the plan calling for NLRED to diversify its power supply beginning January 1, 2014, and also requiring the development and adherence to a Risk Management Policy; and

WHEREAS, NLRED staff have worked extensively to prepare a Risk Management Policy (“RMP”) to identify risks and their economic impact on NLRED, to manage or mitigate risks, and to establish and define procedures and controls to be used by NLRED staff and a third-party energy trading and risk management entity (“Power Manager”) to manage risk; and

WHEREAS, the City of North Little Rock believes it is in the best interests of the City, its citizens and residents, and those individuals or entities desiring connection to NLRED service lines, that the **Energy Risk Management Policy** be adopted.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF NORTH LITTLE ROCK, ARKANSAS:

SECTION 1: That the North Little Rock Electric Department **Energy Risk Management Policy**, attached hereto as Exhibit "A" and incorporated herein by reference, is hereby adopted.

SECTION 2: That all ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of the conflict.

SECTION 3: That the provisions of this Ordinance are hereby declared to be severable, and if any section, phrase or provision shall be declared or held invalid, such invalidity shall not affect the remainder of the sections, phrases or provisions.

SECTION 4: It is hereby found and determined that the community and NLRED customers will benefit from reliable and efficient delivery systems with a goal of providing a reliable, responsible and affordable electrical service in the City, and that the City and the residents thereof can best be served by the adoption of this Ordinance; THEREFORE, an emergency is hereby declared to exist, and this Ordinance being necessary for the immediate preservation of the public peace, health and safety, shall be in full force and effect from and after its passage and approval.

PASSED:

APPROVED:

Mayor Joe A. Smith

SPONSOR:

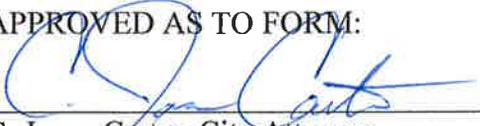
ATTEST:



Mayor Joe A. Smith

Diane Whitbey, City Clerk

APPROVED AS TO FORM:



C. Jason Carter, City Attorney

PREPARED BY THE OFFICE OF THE CITY ATTORNEY/b

FILED	11/30	A.M.	P.M.
By	City Atty Jason Carter		
DATE	10/20/15		
Diane Whitbey, City Clerk and Collector North Little Rock, Arkansas			
RECEIVED BY	PX		

North Little Rock Electric Department The City of North Little Rock, Arkansas

Energy Risk Management Policy

Adopted by the North Little Rock City Council

[Pick the date]



Table of Contents

I.	Scope, Objectives and Purpose of Policy	4
A.	Background/Purpose of the Policy	4
B.	Risk Philosophy	5
C.	Segregation of Duties	5
D.	Policy Approval.....	5
II.	Governance and Organizational Structure	6
A.	Roles and Responsibilities.....	7
1.	North Little Rock City Council	7
2.	Risk Management Committee.....	7
3.	City Attorney	9
4.	Finance Director.....	9
5.	General Manager.....	10
6.	Mayor’s Representative	10
7.	Power Supply Director.....	10
8.	Power Cost Accountant.....	10
9.	Power Manager - Front Office	11
10.	Power Manager – Middle/Back Office	11
III.	General Requirements for Risk Management	12
A.	Code of Conduct	12
B.	Counterparty Suitability	12
C.	Contract Documentation.....	12
D.	Off-Premises Dealing	13
E.	Transaction Recording	13
F.	Online Trading	13
G.	Transmission	13
H.	Policy Compliance.....	13
I.	New Products.....	13
IV.	Applicable Risks:.....	13
A.	Credit or Counterparty Risk	13
B.	Market/Commodity Risk	13
C.	Process Risk	14
D.	Liquidity Risk.....	14
E.	Volume Risk.....	14
F.	Operational Risk.....	14
G.	Opportunity Risk	14

H.	Organizational Risk	15
I.	Concentration Risk	15
J.	Regulatory Risk	15
V.	Risk Measurements/Metrics	15
A.	Market Risk Limits	15
B.	Exceedances of Market Risk Limits	16
C.	Exceedances of Risk Limits during Emergency Operations	16
D.	Risk Reporting	16
E.	Exception Reporting Process	16
VI.	Credit Policy	17
A.	Counterparty Approval	17
B.	Credit Analysis and Reporting	17
C.	Credit Limits	17
VII.	Policy Distribution, Counsel, & Revision	17
A.	Required Acknowledgements	17
B.	Duty to Report Violations	17
C.	Designated Counsel	17
	Appendix A - Definitions	18
	Appendix B - Approved Products and Instruments	21
	Appendix C - Authorized Regions	23
	Appendix D - NLRED RMC Delegations	24
	Appendix E - Hedge Plan	25

I. Scope, Objectives and Purpose of Policy

The North Little Rock Electric Department ("NLRED") manages the city-owned electric utility system for the City of North Little Rock, Arkansas ("City"). NLRED provides electric service to areas within North Little Rock, Sherwood, Arkansas, and surrounding areas within Pulaski County, Arkansas. The City is governed by an eight member council. Rates and fees are recommended by NLRED and then voted and established by the City Council, consistent with state law.

Historically, NLRED existed as an electric distribution entity owning no generation or transmission assets. In 1989, NLRED completed construction of the 42MW Murray Hydroelectric Generation Plant ("Murray Hydro") which is located within the City limits. Today, Murray Hydro provides approximately fifteen percent (15%) of NLRED's energy requirements. In 2007, NLRED entered a purchase power agreement with Waste Management, Inc. to buy all power produced at their Two Pines landfill gas generator, which remains effective today. Two Pines satisfies approximately three percent (3%) of NLRED's energy requirements. In 2010, NLRED acquired a 60MW interest in Plum Point Energy Station ("PPES"), a coal-fired generator located in Osceola, Arkansas. PPES meets NLRED's core baseload power requirements and provides as much as half of all energy needs. NLRED acquires all other energy through bilateral contracts and the MISO market, along with minor distributed generation assets.

Prior to the existence of the MISO market in Arkansas, NLRED fulfilled remaining energy requirements exclusively through full-requirements contracts. Since the MISO market opened, NLRED has borne market risk for loss of production from organic assets, with remaining energy requirements filled through a load-following bi-lateral contract. Market risk has been managed through bilateral contracts or reasoned acceptance of market price fluctuation.

In 2009 the City Council approved an Integrated Resource Plan ("IRP") to guide planning for future transmission, power supply, demand management and conservation programs for the customers served by NLRED. The IRP calls for NLRED to diversify power supply beginning January 1, 2014. Implementation of the IRP requires the development and adherence to a Risk Management Policy.

As described herein, the City Council's objective in adopting this Risk Management Policy ("Policy") is to identify risks; to understand the economic impact of these risks on NLRED; to manage or mitigate risks to an acceptable level consistent with this Policy. This Policy will be implemented, in part, by a Risk Management Committee ("RMC") which will establish a Risk Management Plan ("Plan") defining the procedures and controls to be used by staff and a third-party energy trading and risk management entity ("Power Manager") to manage risk. Collectively, the Policy, Plan, and actions pursuant to both, define NLRED's Risk Management Program ("Program").

The Policy's scope covers all wholesale power and fuel contracts within or considered for NLRED's risk management portfolio. In addition to the wholesale contracts, the scope of the portfolio also includes electric power generation capacity, fuel requirements, forecasted electric power demand, transmission, and ancillary services.

Both NLRED and the Power Manager must recognize the need to formalize, install, and maintain management processes and controls related to power supply contracts, as well as related business activities, that inherently involve risk (as further described in Section V of this Policy). To that end, NLRED wishes to document the policies and procedures for managing such risk.

A. Background/Purpose of the Policy

NLRED contributes high value to its community and customers by providing energy and related services using reliable and efficient delivery systems. NLRED's goal is to serve the electric loads of its customer-owners in a reliable, responsible, and affordable manner, acting to optimize the value of our power supply

assets in order to minimize rates.

NLRED has set the following goals and objectives for its risk management program:

1. Manage the price volatility and volume risk of its net position consistent with the risk tolerance of the City Council.
2. Manage credit risks and monitor movements in the forward market price (mark-to-market) for wholesale power and fuel.
3. Provide the requisite information to NLRED staff given the responsibility for oversight of power management and the risks inherent in it.
4. Allow NLRED staff to proactively demonstrate to the City Council that appropriate diligence is being exercised regarding oversight of power supply activities.

This Policy sets minimum expectations, controls and procedures for the RMC to refine and implement. NLRED staff and the Power Manager will use this Policy, and the Plan, to manage NLRED's exposure to wholesale energy commodity market prices and to govern the Power Manager's contracting and trading activities, as they pertain to commercial energy transactions. This Policy details the risk management philosophy under which NLRED will conduct its activities; identifies organizational elements of the Program that reside within NLRED; identifies the risk management tools and techniques that NLRED and its Power Manager will utilize to manage NLRED's risk exposures; specifies the risk measurement methodologies to be used; and sets forth the reporting requirements. This Policy also recognizes that the basis for strong risk management is the expertise and judgment of the management and staff responsible for performing the specific processes and procedures necessary to comply with this Policy.

B. Risk Philosophy

NLRED recognizes that as a result of procuring a wholesale power supply to meet the majority of the electrical requirements of its customers, it is necessary to accept reasonable exposure to power market price volatility in order to maximize the benefits of its power supply portfolio. In achieving this goal, NLRED will not engage in speculative commodity market activities in an attempt to achieve additional gain. Also, NLRED and its Power Manager recognize the significant financial and operational threat of being physically short of power supply. Above all financial considerations, the reliability of electric service is paramount. All transactions shall be made to optimize resources and meet customer requirements.

C. Segregation of Duties

Segregation of duties, also referred to as "separation of function," is fundamentally required to control risk. Individuals responsible for legally binding the organization to a transaction will **not** also perform confirmation, clearance or accounting functions. NLRED will maintain appropriate segregation of duties in its organization and activities and will ensure the same within its Power Manager.

D. Policy Approval

The City Council must approve modifications to this Policy, except for the appendices, which may be amended with approval of only the RMC. RMC approved changes to the appendices must be reported to the City Council. The level of authority required to modify various aspects of NLRED's risk management program is set forth below.

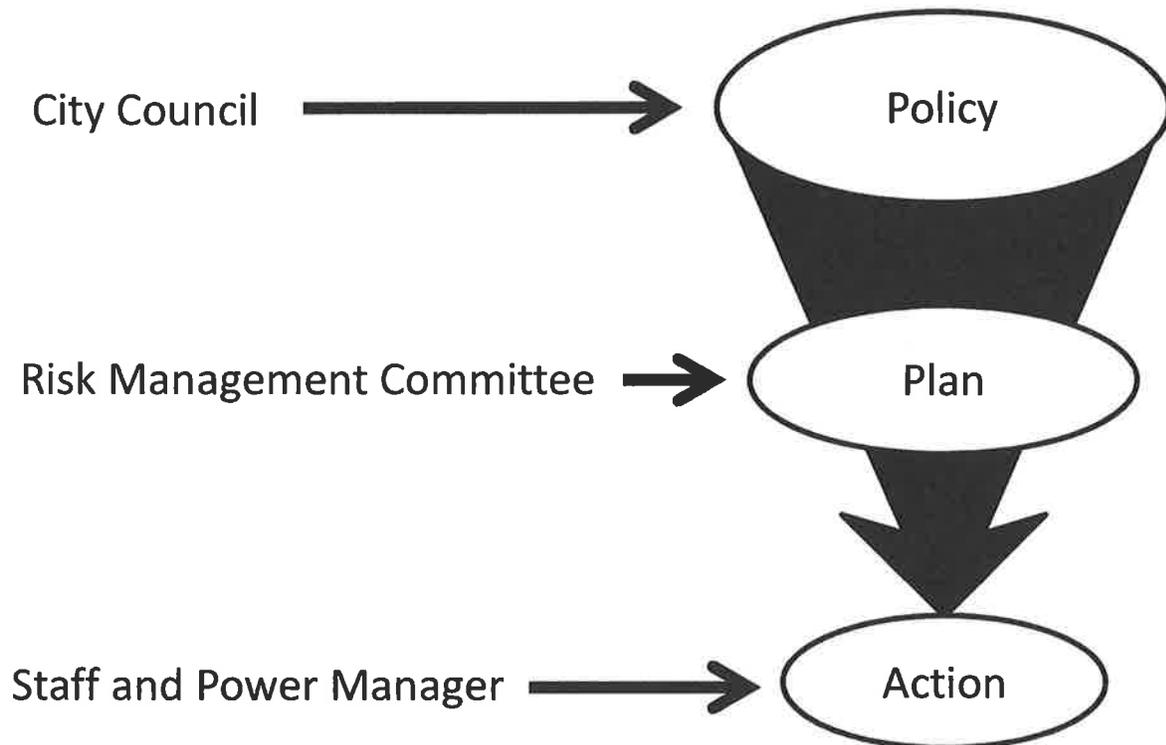
To Modify:	Requires the Approval Of:
Market and Credit Risk Limit	The City Council
Authorized Regions	RMC

Authorized Traders	RMC
Approved Products and Instruments	RMC
Approved RMC Delegations	RMC
Hedge Plan	The City Council

II. Governance and Organizational Structure

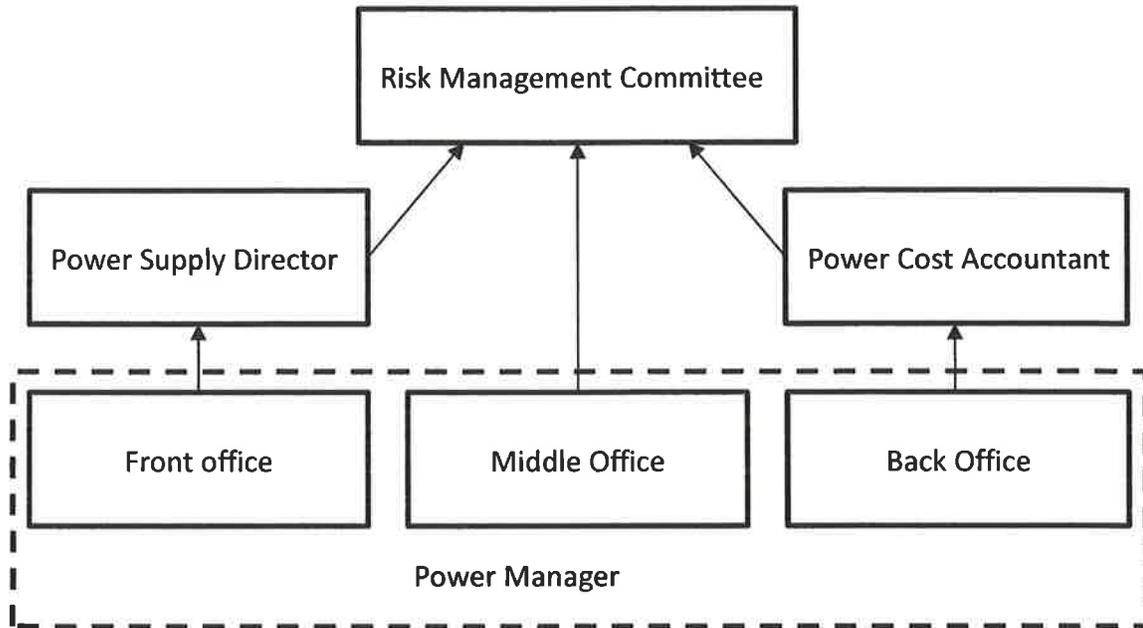
This Risk Management Policy is enacted by the NLR City Council under the authority of Ark. Code Ann. §§ 14-43-601 and 602; Ark. Code Ann. §§ 14-54-701 and 704; Ark. Code Ann. §§ 14-200-106, 109, 111, and 112; Ark. Code Ann. § 14-202-101, et seq.; and the common law of the State of Arkansas. The Program, and associated delegations of authority are specifically made under the same authority.

Framework of Risk Management Program



To facilitate risk management effectiveness, segregation of duties, and timely risk management communication, the NLR risk management framework implements a “Front-Middle/Back Office” model that provides for independent risk oversight. The RMC shall provide oversight of all activities governed by this Policy and ensure Policy requirements are met. In addition, it is anticipated that certain aspects of the execution of the “Front-Middle/Back Office” functions will be undertaken by the Power Manager.

Lines of Responsibility



A. Roles and Responsibilities

Responsibilities for monitoring NLRED's risk management program exist at all levels of management. Generally, the following delegations have been made:

1. North Little Rock City Council

The City Council is the approval authority of this Risk Policy, which shall not be delegated. The City Council expressly retains the following responsibilities:

- a. To use reasonable efforts to understand the nature of the risks encountered in managing NLRED's resource portfolio.
- b. To use reasonable efforts to understand the methods and procedures that will be employed to manage risk;
- c. To approve amendments to Policy Credit and Risk Limits, and be updated periodically, at least annually, as to their functioning;
- d. To review the RMC's compliance with this Risk Policy and reasonably respond to instances of noncompliance;
- e. To approve the NLRED Hedge Plan contained in Appendix E of the Policy; and
- f. To delegate implementation of the Risk Policy to NLRED's RMC.

2. Risk Management Committee

The RMC will establish the Plan used to implement this Policy. The RMC has primary operational risk oversight. The RMC shall be comprised of the following voting members: the NLRED General Manager, the Finance Director, and a representative of the Mayor. Additionally, the RMC shall be comprised of the following non-voting members: the City Attorney, the Power Supply Director, and the Power Cost Accountant. Each member of the RMC may temporarily designate a qualified and capable representative to serve in his/her absence.

Risk Management Committee

Voting members		
General Manager	Mayor's Rep.	Finance Director
Non-voting members		
Power Supply Director	City Attorney	Power Cost Accountant

The NLR Finance Director shall act as the Chairperson of the RMC. The Chairperson may recommend to City Council the addition of new voting members to the RMC; however, the new member must be approved by NLR's City Council before permanent voting rights are granted to the new member. Any member of the RMC may direct, through the General Manager, other NLRED personnel to attend and provide information or advice at the RMC meeting. The RMC may, by majority vote, add nonvoting members to the RMC. The City Council delegates to the RMC ongoing maintenance and enforcement of NLRED's approved policies and procedures for trading and risk management. The responsibilities of the RMC shall be:

- a. The development, implementation, revisions as necessary of NLRED's Risk Management Plan as described in the "Scope, Objectives and Purpose" of this Policy.
- b. To monitor the market price risk and counterparty risk of NLRED's portfolio to ensure that such risks are within approved limits and being managed in a manner consistent with these documented policies and procedures.
- c. To accept responsibility for the results of the RMC activities undertaken on NLRED's behalf.
- d. To receive and review risk reports submitted by Power Manager.
- e. To review and approve changes to existing, and any new, risk reports.
- f. To evaluate the risk/reward relationship of proposed transactions in order to ensure consistency with NLRED's overall business strategies, risk tolerances, and yearly budget plans.
- g. To approve new products and instruments in order to ensure that products are consistent with business and risk management infrastructure.
- h. To establish qualitative and quantitative limits for hedging products at levels that are more restrictive than those approved by City Council.
- i. To evaluate and approve methodologies and models used for long- and short-term load and resource forecasting, and market and credit risk measurement.

- j. To ensure that segregation of duties exists at the Power Manager.
- k. To approve procedural changes associated with maintenance and operation of trading and risk management, and recommend Policy changes to the City Council.
- l. To authorize the Power Supply Director and the Power Manager to execute certain specific and limited transactions. Such transactions will include: real-time and daily purchases and sales of power and fuel used in the production of electricity. The Power Manager also shall be granted limited term trade approval authority as described in Appendix D, Power Manager's Authorized Transaction Limits. Specifically, the Power Manager is authorized to commit NLRED to forward sales and purchases of electricity, and fuel used in the production of electricity, as necessary to stay within risk and hedge limits.
- m. To update the Power Manager on all NLRED Risk Policies, Procedures and Program changes.
- n. From time to time, and no less than once every two years, to direct a review of trading and risk management practices of the Power Manager, and to analyze the results of that review and enforce compliance with the Risk Management Policy.
- o. From time to time, and no less than annually, to review NLRED's and the Power Manager's Policies and Procedures for compliance and consistency.
- p. Following the reviews in "n" and "o" *supra*, to report to the City Council the sufficiency of the Power Manager's trading and risk infrastructure and its overall compliance with policies and procedures.
- q. To provide Risk Management Policy training on an annual basis to new and existing NLR City Council members.
- r. To approve variable rate components that reflect the cost of electricity provided to customers and inform City Council as directed.
- s. To recommend a Hedge Plan to City Council for approval.

The RMC will conduct regular monthly meetings. The Chairperson may call additional special meetings according to such rules and procedures as may be approved by a majority vote of the RMC. The RMC will submit quarterly reports to the City Council, and such additional reports as may be requested. The quarterly report will include an assessment of the program's results and effectiveness, confirmation that the program guidelines are being followed, and a discussion regarding recommendations for material modifications to this Policy. Meeting minutes will be approved by a majority vote of the RMC and filed with the NLR City Clerk.

3. City Attorney

The City Attorney is a nonvoting member of the RMC who functions as the RMC's primary representative in the aspect of legal compliance, including the Arkansas Freedom of Information Act, state fiscal law, and this Policy. The City Attorney shall have an independent duty to report any failure to comply with this Policy to City Council. While no procedural rules are mandated for the RMC, the City Attorney shall ensure meetings are conducted fairly, and in a manner generally consistent with other voting boards of the City. The City Attorney shall draft such documents as may be required by the RMC to implement this Policy, including such proposed amendments to this Policy that may, from time-to-time, be approved by the RMC.

4. Finance Director

The Finance Director is a voting member of the RMC who functions as the RMC's primary representative in the financial and controls aspects of trading and risk management. The Finance Director shall act as the Chairperson of the RMC. The RMC Chairperson will have independent reporting responsibility to the City Council, and will assure that the following responsibilities are carried out:

- a. Review specific risk and trading limits and hedging methodologies, and from time-to-time recommend changes to the RMC.
- b. Review credit policies and contract templates of the Power Manager.

- c. Engage the RMC with the purpose of facilitating the understanding of NLRED's risk position and the means to manage it;
- d. Monitor risk reports between RMC;
- e. Ensure that compliance with all policies and limits is maintained; report Policy violation or improprieties to the City Council;

5. General Manager

The NLRED General Manager is a voting member of the RMC who functions as the primary representative of NLRED in the reliability aspects of trading and risk management. The General Manager will ensure that adequate meeting space is available for the RMC, including teleconference access for the Power Manager. The General Manager will direct NLRED employees to attend the RMC meeting as requested by any member of the RMC.

- a. Review and update the RMC on the production and availability of organic generation resources.
- b. Participate in the RMC with the purpose of understanding NLRED's risk position and the means to manage it;
- c. Monitor risk reports between RMC meetings;

6. Mayor's Representative

The NLR Mayor shall appoint a person who shall be a voting member of the RMC and will act as the RMC's primary representative in the responsibility aspects of trading and risk management. The Mayor's Representative shall

- a. Review and update the RMC concerning environmental objectives of the City and the effect of those objectives on the Risk Management Program.
- b. Participate in the RMC with the purpose of understanding NLRED's risk position and the means to manage it;
- c. Monitor risk reports between RMC meetings;

7. Power Supply Director

The Power Supply Director is a nonvoting member of the RMC and will act as the RMC's primary representative in the operational aspects of trading and risk management. The Power Supply Director will communicate directly with the Power Manager's Front Office and, in this role, maintains day-to-day responsibility for the execution and management of transactions governed by this Policy, and the Plan implementing this Policy. In this capacity, the Power Supply Director will have the following duties and responsibilities:

- a. Review and recommend approval of the Monthly Operating Plans developed by the Power Manager for consistency with the Risk Management Policy and Plan;
- b. Review specific risk and trading limits and hedging methodologies and, from time-to-time, recommend changes to the RMC;
- c. Approve transactions that are beyond the Power Manager's limits but within RMC delegated authority of the Power Supply Director;
- d. Monitor risk reports between RMC meetings.
- e. Recommend new products for RMC approval

8. Power Cost Accountant

The Power Cost Accountant is a nonvoting member of the RMC and will act as the RMC's primary representative in the evaluation and cost assignment aspects of trading and risk management. The Power Cost Accountant will communicate directly with the Power Manager's Back Office and, in this role, maintains day-to-day responsibility in understanding and reporting market and credit exposure. The Power Cost Accountant will calculate the cost of power for determination of variable rate components by

the RMC.

9. Power Manager - Front Office

The Front Office of the Power Manager reports to the Power Supply Director. The Power Manager's Front Office has overall responsibility for (1) managing all commodity and transportation activities related to procuring and delivering fuel to NLRED's generating facilities, (2) the analysis of fundamentals affecting load and supply factors that determine NLRED's net position, and (3) trading within the limits in Appendix D to balance loads and resources, maximize the value of NLRED's assets through the exercise of approved optimization strategies, for forecasting load and resource output during the last days prior to delivery. Other duties associated with these responsibilities include:

- a. Prepare (with Middle Office oversight) a forward net position report not less frequently than monthly and report the results to the RMC.
- b. Assist in the development and analysis of risk management hedging products and strategies, and bring recommendations to the RMC.
- c. Execution of term fuel transactions
- d. Review of all commodity and transportation arrangements to ensure adequacy of transactions and compliance with pipeline and generator requirements
- e. Develop, analyzes and negotiates natural gas hedging transactions, and bring to the RMC for consideration.
- f. Prepare each month a monthly operating plan for the prompt 3 months that will give direction to the day-ahead and real-time trading and scheduling staff regarding the optimization of NLRED's resource portfolio. The operating plan, at a minimum, will contain the following analysis and information:
 - i. Forecast of expected loads, and extreme loads during winter and summer months
 - ii. Expected generation output and availability, to include known generator outages
 - iii. Discussion of any relevant technical analysis or regulatory requirements
- g. Formula for determining incremental cost of natural gas-fired generation and any information regarding operating restrictions
- h. Develop, price and negotiate hedging products
- i. Forecasting day-ahead and monitoring/ forecasting same-day loads;
- j. Planning and executing transactions in the pre-schedule and real time markets for power and transmission to balance load and maximize the value of the resource portfolio;
- k. Planning and executing natural gas transactions for commodity and transportation to balance gas requirements.
- l. Keeping accurate records of all transactions they enter.

10. Power Manager - Middle/Back Office

The Power Manager Middle Office will report to the RMC Chairperson. The Power Manager Middle Office provides independent market and credit risk oversight. The Power Manager Middle Office is functionally and organizationally separate from the Front Office. The Power Manager Back Office reports to the Power Cost Accountant and provides support with a wide range of administrative activities necessary to execute and settle transactions and to support the risk control efforts (e.g. transaction entry and/or checking, data collection, billing, etc.) consistent with this Policy. The Power Manager Back Office is functionally and organizationally separate from the Front Office.

The Power Manager's Middle and Back Offices have primary responsibility for trading controls and for ensuring agreement between NLRED and its counterparties regarding the terms of all trades, including forward trading. The Power Manager has the primary responsibility for:

- a. Estimate and publish daily forward monthly power and natural price curves for a minimum of the balance of the current year through the next calendar year;
- b. Calculate and maintain the net forward power and fuel positions of NLRED;
- c. Ensuring that NLRED adheres to all risk policies and procedures of both NLRED and the Power Manager in letter and in intent;
- d. Maintaining the overall financial security of transactions undertaken by the Power Manager on behalf of NLRED; and
- e. Implementing and enforcing credit policies and limits.
- f. Handling confirmation of all power and natural gas trades (physical and financial) and reconciling differences with the trading counterparties;
- g. Reviewing trade tickets for adherence to approved limits, etc
- h. Ensuring all trades have been entered into the appropriate ETRM System;
- i. Ensuring that both pre-schedule and actual delivery volumes and prices are entered into the physical database;
- j. Carrying out month-end checkout of all physical and financial transactions each month.
- k. Review models and methodologies and recommend RMC approval to the Finance Director.
- l. Forwarding all month-end settlement information to NLRED's Director of Power Supply or his designee.

III. General Requirements for Risk Management

A. Code of Conduct

All NLRED staff shall abide by the business ethics policies contained in NLRED's Personnel Policies and Procedures Manual. Employees shall not participate in any transaction or similar activity for the benefit of any party other than NLRED. In particular, no NLRED employee may engage in trading electricity, natural gas or related derivative instruments for their personal account, consistent with the ethical standards for local government employees in Arkansas.

B. Counterparty Suitability

Prior to the execution of any trade, the Power Manager's trading personnel will verify that the company represented by the contact they are dealing with is an authorized counterparty and check counterparty credit availability. No transaction may be executed without first following the approved procedures to ensure the transaction falls within the unutilized credit limit for the counterparty.

C. Contract Documentation

Transactions can only be made with parties with an existing approved agreement. The Power Manager may enter in to industry standard agreements such as an EEI, NAESB, or an ISDA, or a master document that has been prepared and reviewed by the Power Manager's Contracts Department and NLRED's RMC including NLRED's Counsel.

D. Off-Premises Dealing.

All transactions executed by the Power Manager Front Office shall be executed at the Power Manager's offices or at off-site locations established in accordance with the Power Manager's "Disaster Recovery Plan". The Power Manager RMC may authorize exceptions when deemed necessary to conduct business.

E. Transaction Recording

The Power Manager shall record all transactions in a commercially reasonable manner.

F. Online Trading

On-line trading through authorized services is permissible within the limit structure and controls set forth in this Policy.

G. Transmission

NLRED will be permitted to buy and sell transmission of the term, maturity and volume needed to facilitate physical power transactions. Any transmission purchase is subject to the limits set forth in this Policy.

H. Policy Compliance

Before any transaction is executed, the individual executing is required to ensure that the transaction/product is approved and appropriate for the risk tolerance defined in this Policy. This requirement will be fulfilled by analyzing the transaction and its associated hedges to ensure that the resulting incremental credit and market exposures do not exceed the limits set forth in this Policy. The required analysis and review will vary depending upon the type of transaction and its inherent risks.

I. New Products

As markets evolve, NLRED may wish to approve new products for the purposes of hedging activities. The RMC is responsible for ensuring that each new product structure meets the following criteria prior to engaging in a new product transaction:

- All risks are identified and understood by the RMC and authorized trading personnel.
- Front office as well as support staff involved in transaction processing (confirmations, scheduling, settlements, and accounting) have received adequate training and demonstrate familiarity with the products.
- A system is in place for the revaluation and risk monitoring of each product.
- Accounting and tax policies associated with the product have been identified.

IV. Applicable Risks:

This Policy is intended to cover the management of all material risks faced by NLRED while participating in wholesale energy markets. Among the most critical of these risks are:

A. Credit or Counterparty Risk

Credit or Counterparty risk is the inability or unwillingness of a supplier or trading counterparty to perform in a bilateral transaction, including timely payment of invoices, delivery of commodity, and other contractual obligations. The Power Manager will manage counterparty risk through the Credit limit structure and controls set forth in this Policy.

B. Market/Commodity Risk

Market/Commodity Risk is the potential loss in the value of a transaction arising from changes in the market price of a commodity. Commodity risk is comprised of price risk, volatility risk, forward

price risk, correlation risk and liquidity risk. These risks vary with product type, location and time. NLRED's exposure to market/ commodity risk will be managed by the Market limit structure and controls set forth in this Policy.

C. Process Risk

Process Risk is risk of financial and opportunity loss and legal liability attributable to process problems such as inaccurate data capture, untimely trade execution, and clearance and/ or settlement problems. NLRED will manage Process Risk by:

- a. Understanding the Power Manager's formal procedures to detail the key business processes underlying NLRED's activities; and
- b. Information systems that support the effective, accurate and efficient processing of approved transactions and flexible data access and reporting tools.

D. Liquidity Risk

Liquidity Risk is the risk that the market is constrained or limited with the potential inability to initiate or liquidate positions due to low trading volumes. NLRED will manage liquidity risk with a process for the approval and managed implementation of new products (financial and physical) and transactions set forth in this Policy.

E. Volume Risk

Volume Risk is the risk that supplies exceed requirements or requirements exceed supplies, creating an unplanned net resource excess or resource deficient position. NLRED will manage Volume Risk by:

- a. careful attention to those factors driving volumetric uncertainty (e.g. weather);
- b. establishing specific authorizations and limits on transactions; and
- c. a risk control function that monitors compliance.

F. Operational Risk

Operational Risk is the risk that occurs when extreme load conditions and energy assets fail to perform as expected such as resource or transmission outages. NLRED will manage operational risk as follows:

- a. Electric supply risk is managed by maintaining adequate planning resource margins and operating reserves.
- b. Fuel supply risk is managed by owning or contracting for storage services and maintaining fuel supply inventories to assure continued operations under the majority of potential shortage conditions
- c. Emergency action and customer curtailment plans are maintained to respond to emergency conditions.

G. Opportunity Risk

Opportunity Risk is the risk that occurs when NLRED fails to capitalize on market opportunities to reduce costs or increase revenues. Opportunity risk is managed through effective forecasting, planning and hedging mechanisms, including participation in the Day Ahead or Real Time energy markets.

H. Organizational Risk

Organization Risk is the risk that occurs when there are problems with internal processes such as unclear lines of authority, inadequate staffing, or a lack of clear accountability over specific deals. Organizational risk is managed through clear delegation and separation of duties and accountability of staff, both at NLRED and at NLRED's Power Manager. A system of checks and balances results from the division of responsibilities within the organizational structure.

I. Concentration Risk

Concentration Risk is risk that occurs when the overall spread of outstanding transactions is with a small number or types of counterparties. Concentration risk will be managed by the Power Manager with their ability to have a larger number of approved trading counterparties.

J. Regulatory Risk

Regulatory Risk arises from participating in regulated markets. With the Independent System Operator (ISO) implementation of Federal Energy Regulatory Commission (FERC) Order 741, NLRED faces increasing regulatory risk when participating in wholesale energy markets. To ensure compliance with applicable regulations related to commercial activities, regulatory risk is managed by:

- a. Annual Compliance Training for all employees participating in regulated markets;
- b. Integration of the appropriate compliance culture within the organization;
- c. An independent monitoring and exposure measurement on transactions that could trigger an increase in regulatory risk.

V. Risk Measurements/Metrics

A. Market Risk Limits

A limit structure is essential to control the amount of risk in NLRED's portfolio. NLRED will manage and report on its market risk using volume, location and term/maturity/value limits. The NLRED Power Supply Director and the Power Manager are responsible for ensuring that NLRED remains within these limits. The RMC may, from time-to-time, establish limits that are lower than the limits set forth in this Policy.

1. Volume Limits

The total volume of hedged transactions may not exceed the volume of the hedgable commodity.

2. Locational Limits

Transmission and Transportation transactions must support one of NLRED's generation units, native load or transaction locations.

3. Term/Maturity/Value Limits

Transaction limits for the NLRED are listed below. Individuals authorized to execute transactions within the limits below may be delegated by the NLRED RMC and are contained in Appendix D. In addition to being subject to Credit Limits, transactions for amounts in excess of those listed may be executed only upon approval of the Council. This term, maturity and value structure is not intended for use when transacting day-ahead and real-time in the MISO market.

Additionally, the NLRED RMC understands there are times when the value of a position may be uncertain until after the fact, for example MISO capacity that clears through an auction process, and when a position of this type exceeds the limit below the NLRED RMC will notify the City Council and this will not be considered a breach of the Policy.

Position	Maturity Limit	Term Limit	Notional Dollar Limit (\$)
Risk Management Committee	72 Months	60 Months	\$10,000,000

B. Exceedances of Market Risk Limits

In addition to the other notifications provided for herein, it shall be the responsibility of anyone that observes that NLRED has exceeded Term/Maturity /Value limits or any of the Net Position limits to notify the RMC of the status of NLRED's Net Positions for so long as NLRED is exceeding its limits. The RMC will review NLRED's Net Positions and determine whether any liquidation or offsetting of positions is warranted.

Should NLRED's Term/Maturity/Value limits, or Net Position exceed 150% of the limits set forth in the Policy, NLRED must liquidate enough of its Net Positions to bring it in compliance with the limits set forth in the Policy unless it has obtained the prior approval of the City Council, in which case NLRED must act within the limits established by the City Council.

C. Exceedances of Risk Limits during Emergency Operations

NLRED or Power Manager personnel involved in day-ahead or same-day trading activities may exceed their authorized trading or credit limits or the approved trading and credit limits for a counterparty if such actions are required, during a system emergency, to: (i) balance load and resources, (ii) avoid shedding NLRED customer load, (iii) avoid punitive energy imbalance charges, or (iv) if directed to make such transactions, for system reliability reasons, by the NERC Regional Security Coordinator or the appropriate RTO Coordinator. Under these conditions, the purchase or sale price of the associated power will not be a deciding consideration in executing these transactions. If NLRED or Power Manager executes trades under any of these circumstances, the Trader involved will inform the NLRED RMC Chairperson as soon as possible of the situation, followed up with an email memo that: (i) describes in detail the reason for the trading or credit exception, (ii) includes an estimate of the dollar amount of the credit exceedance, (iii) includes an estimate (at the time the action was taken) of the punitive penalties avoided and/ or (iv) an estimate of the avoided load loss. This email memo must be forwarded to the NLRED RMC Chairperson before the close of business or the end of the Trader's shift.

D. Risk Reporting

At a minimum, the Power Manager's Risk Control group and Credit group will prepare reports on a daily basis, as directed by the RMC. Such reports may include, but not be limited to the following report types:

- Trade Activity Report
- Credit Utilization Report
- Position Report, including Net Positions
- Mark-to-Market Report

E. Exception Reporting Process

The RMC will review all exceptions to this Policy on at least a monthly basis. The RMC Chairperson will report all such exceptions to NLRED's City Council on at least a quarterly basis.

VI. Credit Policy

NLRED shall follow the credit practices of the Power Manager as follows:

A. Counterparty Approval

The manager of the Power Manager's credit department will approve all counterparties for credit purposes and will maintain a listing of all approved counterparties, with the credit limits and authorized products for each.

B. Credit Analysis and Reporting

The Power Manager's credit analysts will perform a credit analysis, and the manager of the Power Manager's credit department or RMC will approve initial credit limits, changes to limits, and exceptions to limits for all counterparties. In establishing the credit limit, the anticipated transaction volume, duration/ maturity of expected transactions and potential future credit exposure (based on market volatility) will be considered.

The manager of the Power Manager's credit department will be responsible for the accuracy of credit reports that will be available to the Power Manager's marketers and traders so that counterparty suitability, credit limits and exposure can be checked prior to executing transactions. The manager of the Power Manager's credit department is responsible for monitoring credit exposure and notifying the RMC of any exceptions.

C. Credit Limits

Required Credit Review

The Power Manager's manager of the credit department will establish a dollar volume credit limit for each trading counterparty, not to exceed \$5,000,000. No transactions may be executed until a credit analysis has been performed and a credit limit has been established.

VII. Policy Distribution, Counsel, & Revision

A. Required Acknowledgements

All NLRED employees participating in the activities or transactions covered by this Policy shall sign, on an annual basis or upon any revision to this Policy, a statement approved by the RMC that they (i) have read this Policy and any other applicable policies, processes, or procedures, (ii) understand this Policy and the related policies, processes, and procedures, and (iii) have and will continue to comply with this Policy and the related policies, processes, and procedures. Signed acknowledgement by all affected employees will be maintained in their associated personnel files. Any deliberate violation of this Policy shall be grounds for disciplinary action in compliance with the disciplinary procedure of the personnel policies and procedures of NLRED.

B. Duty to Report Violations

Any employee that observes a violation of this Policy is required to promptly report such violation to NLRED's RMC Chairperson or General Manager.

C. Designated Counsel

Questions about the interpretation of any matters of this Policy should be referred to NLRED's General Manager, who will also provide clarification and explanation on any updates to the Policy. If there are further interpretation concerns, the issue should be brought to the attention of the NLRED's City Attorney.

Appendix A - Definitions

- 1) Arbitrage - A trading strategy where profit is created by taking advantage of inefficiencies in the markets, as reflected in certain non-random changes in market price differentials. Arbitrage transactions tend to be inherently low-risk in terms of market risk, but may involve substantial credit risk. In order to be market-risk neutral, all legs of the arbitrage strategy must be executed nearly simultaneously
- 2) Back Office - That part of an organization that handles transaction accounting, confirmations, management reporting, and working capital management.
- 3) Basis Risk- The uncertainty of an entity's financial performance due to fluctuations and/ or uncertainty in price relationships between two products or instruments. Type of product, time of delivery, quality or grade of a commodity, delivery point called for in the two instruments, etc., can differentiate basis.
- 4) Book- A set of forward transactions that each match criteria defined by the Book Structure.
- 5) Book Structure - The organizing principle according to which a portfolio is divided into a set of books for management and reporting.
- 6) Broker - A derivative agent, who introduces counterparties to a transaction, arranges the transaction, and charges a fee for this service. The broker never takes a principal position in the market.
- 7) Capacity - The rated load-carrying capability of electrical equipment such as generators or transmission lines typically expressed in megawatts or megavolt amperes.
- 8) City – The City of North Little Rock, Arkansas, a political subdivision of the State of Arkansas organized as a City of the First Class with a mayor/council form of government.
- 9) City Council – The governing body of persons duly elected to, *inter alia*, manage the finances and risk of the City.
- 10) Closed Position -A transaction whose value is locked-in and is not susceptible to changes in market prices or credit factors.
- 11) Commodity - A basic good used in commerce that is interchangeable with other commodities of the same type. Commodities are most often used as inputs in the production of other goods or services. The quality of a given commodity may differ slightly, but it is essentially uniform across producers. When they are traded on an exchange, commodities must also meet specified minimum standards, also known as a basis grade.
- 12) Delta- A measure of the sensitivity of the change in an option's value with respect to a change in the underlying commodity price.
- 13) Delta-Adjusted Position Equivalent - The net volumetric exposure (in MWh or MMBTU) calculated by adjusting the notional quantity of option positions in a portfolio by each option's respective Delta.
- 14) Derivative- A financial instrument derived from a cash market commodity, futures contract or other financial instrument. Derivatives can be traded on regulated exchange markets or over-the-counter. For example, energy futures contracts are derivatives of physical commodities and options on futures are derivatives of contracts.
- 15) Expected Cash Flow - The cash flows expected to be received during a future period or periods.
- 16) Finance Director – The person appointed by the Mayor to manage City finances and the Finance Department. The Finance Director has defined duties in this Risk Management Policy.
- 17) Financial Forward- An agreement regarding a position in a specified commodity, a specified price,

and a specified future settlement date, that does not result in physical delivery of the commodity. Rather one party in the agreement makes a payment to the other party on the basis of the commodity price at the future date.

- 18) Front-Middle-Back Office Model - A framework for organizing trading and risk management activities into independent areas that implement a series of "checks and balances" to ensure accurate information flow and manage operational risk.
- 19) Front Office- That part of an organization that solicits customer business, services existing customers, executes trades and ensures the physical delivery of commodities.
- 20) Fully Hedged Transaction - The aggregation of a set of transactions (two or more) in which the market/price risk of all the transactions combined is zero (i.e. the combined transaction produces a mark-to-market of zero regardless of future price movements).
- 21) Futures Contract - A standardized contract which is traded on an organized exchange, for delivery in the future of a specified underlying asset.
- 22) Hedging Transaction - A transaction designed to reduce the risk of a specific outstanding position or portfolio; "fully hedged" equates to complete elimination of the targeted risk and "partially hedged" implies a risk reduction of less than 100%.
- 23) Mark-to-Market - To mark-to-market is to calculate the value of a financial instrument or commodity (or portfolio of such instruments and commodities) at current market rates or prices rather than the amount it was originally purchased or valued. Marking-to-market on a daily (or more frequent) basis is often recommended in risk management guidelines.
- 24) Maturity- The time between the date a transaction is executed to the last date that power or gas will flow (in the case of physical transactions) or be settled financially (in the case of financial transactions).
- 25) Middle Office- That part of a trading organization that measures and reports on market risks, develops risk management policies and monitors compliance with those policies, manages contract administration and credit, and keeps management and the Risk Management Risk Committee informed on risk management issues.
- 26) Net Open Position -The sum of all Open Positions by product type (i.e. hourly, weekly, monthly, quarterly...) in the Portfolio.
- 27) NLRED General Manager - The person appointed by the Mayor to manage the North Little Rock Electric Department. The NLRED General Manager has defined duties in this Risk Management Policy.
- 28) North Little Rock Electric Department (or NLRED) – The City department functionally responsible for providing electricity to all customers in a reliable, affordable and responsible manner.
- 29) Open Position- That portion of a specific transaction that has not been fully hedged or matched-up back-to-back within the Portfolio; a portfolio-wide market/price risk is created.
- 30) Option- The right but not the obligation to buy or sell an asset at a specified price for a specified period of time.
 - a) OTC: Over the Counter
 1. Physical: The asset is a commodity that is deliverable.
 2. Financial: The asset is a cash settled product.
 - b) Exchange-Traded Option: An option traded and cleared on an organized securities or derivatives exchange.
 1. A Call Option gives the buyer of the option the right but not the obligation to buy

the underlying asset at a specified at a specified time in the future. The seller has the obligation to provide the underlying asset if the option is exercised

2. A Put Option gives the buyer of the option the right but not the obligation to sell the underlying asset at specified price at a specified time in the future. The seller has the obligation to take the underlying asset if the option is exercised.
- 31) Physical Market - The cash market in which the actual commodity is bought and sold.
- 32) Portfolio - A collection of transactions which may or may not be subdivided into Books.
- 33) Power Cost Accountant – The NLRED employee whose responsibilities include calculating and reporting the cost of power, and recommending rate adjustments to the RMC.
- 34) Power Manager - An energy trading and risk management entity hired by NLRED to manage its energy supply and the associated costs and risks.
- 35) Power Supply Director – The NLRED employee whose responsibilities include the procurement of wholesale electric power, and related risk management products, consistent with this Risk Management Plan and the RMC.
- 36) Power Pool - A system of trading wholesale electricity that determines which generating sets or plants are called to meet demand for power at any particular time and sets the price of power for that time period. Pools are deemed necessary by their proponents because electricity generally cannot be stored easily and demand has to be met through simultaneous production.
- 37) Pre-Purchased Transmission - Transmission purchased in advance of actual need.
- 38) Realized Gains/ (Losses) - The amount earned (or lost) from a transaction, considered to be realized once the time for performance has lapsed (e.g., delivery of power in the case of physical transactions or expiration of an option in the case of financial transactions).
- 39) Replacement Cost - The current market value of a financial instrument less its market value at inception. In credit risk terms, it is the cost of replacing a given contract if the counterparty defaults.
- 40) Strike Price - The predetermined price level at which option exercise takes place.
- 41) Swap - An agreement between parties to exchange future cash flows according to a formula developed in advance.
 - a) Fixed for Floating: buy/ sell fixed price and sell/buy some floating index
 - b) Heat Rate: buy/ sell a fixed heat rate and sell/buy a floating heat rate
 - c) Swing: buy/ sell either fixed price or some floating index and sell/buy some floating index
- 42) Term - The total duration of a contract defined as the number of days between the beginning flow date and ending flow date, inclusive.
- 43) Unrealized Gains/ (Losses) - The amount an entity expects to earn (lose) on a specific transaction(s); however, the time for performance has not lapsed. The total value of an entity's Unrealized Gains/ (Losses) is the Mark-to-Market value.
- 44) Volatility - A measure of the variability of a market factor, most often the price of the underlying instrument.

Appendix B - Approved Products and Instruments

All commodity and financial products are subject to the limits in this Policy

Commodities:

Physical

Physical Power Products

- Energy Commodity Product
- Physical OTC Option
- Power Capacity
- Power Capacity Option
- Transmission
- Transmission Option – Any transaction that gives an entity the right to acquire transmission.

Physical Fuel Products

- Natural Gas Commodity
- Coal Commodity
- Diesel Oil Commodity
- Physical OTC Option
- Transportation
- Natural Gas Capacity

MISO Products

- Capacity
- Day-Ahead Energy
- Real-Time Energy
- Financial Transmission Right/Annual Auction Revenue Rights
- Virtual Transactions
- Operating Reserves and Ancillary Services
- Energy Tags (into and out of the MISO footprint)
- Financial Schedules

Financial Assets:

Financial Power Products

Any of the instruments listed below or any combination thereof that has electric energy as the underlying commodity, and which: (a) is customarily settled financially, and (b) the primary intent of which is to settle financially. This excludes RTO Products classified as Swaps for ISOs that have petitioned and been approved by FERC in the CFTC RTO Final Order.

- Heat Rate Swap
- Financial OTC Options
- Cleared Futures Contracts
- Cleared Options on Futures Contracts

Financial Natural Gas Products

Any of the instruments listed below or any combination thereof that has natural gas as the underlying commodity, and which: (a) is customarily settled financially, and (b) the primary intent of which is to settle financially.

- Cleared Futures Contracts
- Fixed for Floating Swap

Float for Floating Swap
Swing-Swap
Heat Rate Swap
Cleared Options on Futures Contracts
Financial OTC Options

Financial Crude Oil and Refined Products

Any of the instruments listed below or any combination thereof, that has crude oil, residual fuel, or distillate as the underlying commodity, which: (a) is customarily settled financially, and (b) the primary intent of which is to settle the transaction financially.

Cleared Futures Contracts
Fixed for Floating
Cleared Options on Futures Contracts
Financial OTC Swaps

Appendix D - NLRED RMC Delegations

The NLRED RMC may delegate transactional authority to the Power Supply Director and the Power Manager up to specified limits, subject to all limits contained in the Policy. Delegations will be reported to City Council according to the following format:

<u>Name</u>	<u>Term</u>	<u>Maturity</u>	<u>Volume</u>	<u>Value</u>
Power Supply Director				
Power Manager				

Appendix E - Hedge Plan

Not attached at the time of filing.