



Energy Risk Management Policy
Version 1.0

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Table of Contents

1. Philosophy, Objectives and Scope	1
1.1. Risk Philosophy.....	1
1.2. Business Activities	1
1.3. Transacting Objectives	2
1.4. Scope of Policy	2
1.5. Applicability	3
1.6. Policy Review and Amendments.....	3
2. Risk Strategy & Parameters	3
2.1. Counterparty Risk Management	3
2.2. Balanced Load	3
2.3. Minimum Coverage Requirements	3
2.4. Diversification of Portfolio	4
2.5. Purchase to Cover Load Serving Obligations - No Speculation.....	4
2.6. Use of Derivatives and Financial Transactions.....	4
3. Risk Controls.....	4
3.1. Control Principles	4
3.2. Internal Controls	5
3.3. Segregation of Duties.....	5
3.4. Conflicts of Interest.....	5
4. Roles, Responsibilities, & Organization.....	6
4.1. EBCE Board of Directors	6
4.2. Executive Director	6
4.3. Risk Oversight Committee.....	6
4.4. Front Office (Planning and Procurement).....	7
4.5. Middle Office Controls and Reporting	8
4.6. Back Office (Settlements and Recording)	8
4.7. Auxiliary Functions	8
4.8. Authorities, Delegations, Limits and Prohibitions.....	8
5. Policy Compliance	8
5.1. Compliance Exceptions	9
5.2. Reporting of Exceptions	9
5.3. Audit	9
5.4. Reserves	9
5.5. Systems, Tools and Training.....	9

1. Philosophy, Objectives and Scope

This Energy Risk Management Policy (ERMP) outlines the philosophies and objectives of East Bay Community Energy (EBCE) Board of Directors (Board). The Energy Risk Management Regulations (ERMR) also adopted by EBCE expand on the roles, strategies, controls and authorities authorized in this policy to form a comprehensive energy risk management program. The ERMR shall be read in conjunction with this ERMP.

1.1. Risk Philosophy

The overall goal of this ERMP is to:

- Serve the participating jurisdictions' needs subject to Board approved risk tolerance limits;
- Provide as much energy supply (generation and capacity) cost certainty for EBCE's customers as possible while maintaining a least cost supply portfolio; and
- Enhance the value of EBCE's assets to meet the financial goals and requirements of the participating jurisdictions.

As a joint powers authority, EBCE is in the business of generation, transmission and procurement of energy for the benefit of its participating jurisdictions. EBCE's objective is to develop the least cost supply portfolio to meet load requirements of its customers, while maximizing revenues from sales of surplus energy, capacity and other wholesale energy and transmission services (e.g. resource optimization). However, unlike a private-sector entity, EBCE's primary purpose in the power supply business is to serve its customers. EBCE's goal is to be a cost hedger for its participating jurisdictions' load and, is therefore, precluded by this policy from engaging in speculative activities typical to many organizations orientated toward profit maximization.

EBCE management recognizes that certain risks are incidental to normal power supply operations and hedging activities. EBCE's goal is to avoid unnecessary risk and to limit, to the extent practicable, any risks associated with normal cost-hedging activities. This document serves as a vehicle to describe and define the limits for activities considered as appropriate for EBCE in a normal course of business.

1.2. Business Activities

A primary part of EBCE's main business is to procure or produce power supplies, capacity, and reserves to meet its customer load requirements. The resource (capacity/energy) supply portfolio may consist of physical assets, such as power plants and distributed energy resources, fixed and variable priced supply contracts of varying lengths, and agreements for other related supplies and services needed to ensure reliable delivery of electricity to EBCE's customers.

1.3. Transacting Objectives

EBCE's overall transacting objective is to meet the load requirements of its customers with an optimized resource supply portfolio. EBCE's objectives when transacting on behalf of its customers for the procurement of energy and energy related supplies and services are as follows:

- Meet customer load requirements including energy, capacity and reserves;
- Provide stable rates for the participating jurisdictions;
- Obtain the best available price for power supply while complying with the requirements of this policy and other objectives established by the Board (e.g. renewable energy policy goals);
- Manage EBCE's assets to optimize value;
- Act to limit exposure to extreme market system changes;
- Follow effective wholesale counterparty credit management procedures; and
- Develop and maintain EBCE's investment grade credit rating.

1.4. Scope of Policy

This ERMP addresses risks arising from EBCE's participation in the wholesale energy markets, and applies to all energy and energy related transactions made by EBCE. This ERMP does not address the following types of general property and casualty business risk: fire, accident and casualty; health, safety, and workers' compensation; general liability; and other such typically insurable perils. The term "risk management," as used herein, is therefore understood to refer solely to risks related to participation in wholesale energy markets as herein defined.

EBCE is exposed to three quantifiable risks: load and resource variability (volumetric), cost variability (price), and counterparty credit risk. From the perspective of risk mitigation, EBCE's primary objective is to cover load and optimize the value of assets. Taking risks in order to arbitrage market opportunities, or risks unrelated to EBCE's normal power supply business activities, is not permitted.

EBCE is also exposed to regulatory and operational risks. However, these exposures are not quantifiable as they affect structural change. As a result, these risk categories are managed as separate enterprise risk exposures and are not directly governed by this ERMP.

This ERMP prescribes the management organization, authority and processes to monitor, measure and control the risks to which EBCE is exposed in the normal course of business. Specific methodologies used to measure, monitor and control these risks shall be established by the Executive Director's Risk Oversight Committee (ROC), in accordance with sound utility practices and included in the ERMR.

1.5. Applicability

This ERMP is effective immediately upon its adoption by the Board. It applies to EBCE's wholesale supply operations, long-term contracting for energy/capacity and services, acquisition of generation resources, credit risk management and other related ancillary activities undertaken by EBCE.

1.6. Policy Review and Amendments

Prudence is required in implementing any and all policies and procedures. Market and industry norms, technology and risk tolerances tend to change over time. Therefore, this policy should be reviewed as needed, in order to make adjustments in response to changes in business objectives and/or industry norms. Amendments to this ERMP shall be done only by approved Resolution of the Board.

2. Risk Strategy & Parameters

An important aspect of implementing an overall energy risk management policy is the development of related strategies to mitigate all of the related risks associated with energy transacting activities. The key strategies of EBCE are outlined below.

2.1. Counterparty Risk Management

Counterparty risk is defined as the exposure to economic loss resulting from default by a party to a contract (e.g., a *counterparty*). Counterparty risk affects both contracts requiring physical settlement and those specifying monetary settlement. For all fixed price energy transactions, the counterparty must possess at least a BBB- (or equivalent investment grade rating) by a nationally recognized statistical rating organization (NRSRO). EBCE staff may consider counterparties with a rating below investment grade, or a counterparty without a NRSRO rating on a case-by-case basis, with the approval of the ROC.

Effective wholesale counterparty management and credit analysis is essential to mitigate the counterparty risks associated with commodity transactions in the energy markets. The objective is to preserve EBCE's capital, liquidity, and supply reliability by limiting counterparty credit risk and supplier concentration to acceptable levels. Methodologies to achieve this objective are set forth in the ERMR.

2.2. Balanced Load

EBCE shall maintain an integrated and balanced portfolio of resources to cover its customer load within a dual volume and cost-at-risk framework.

2.3. Minimum Coverage Requirements

EBCE shall establish minimum coverage requirements, combined with defined cost-at-risk metrics, for capacity and energy as determined by the ROC and outlined in the ERM.

2.4. Diversification of Portfolio

EBCE shall strive to develop a resource portfolio that includes diversification in fuel type, contract duration, geographic location, counterparty, pricing terms, cash reserves and types of products.

2.5. Purchase to Cover Load Serving Obligations - No Speculation

As discussed in Section 1.3, EBCE's overall objective for energy procurement activities is to cover the load serving obligations of its customers. In the course of performing these activities, EBCE shall not engage in activities that expose its participating jurisdictions to speculative transactional risks, and shall only utilize approved transaction parameters as determined by the ROC and outlined in the ERM.

2.6. Use of Derivatives and Financial Transactions

Use of financial derivatives or transactions (as opposed to physical or "embedded" options) is allowed in limited circumstances by EBCE. These include transactions used to set price caps and floors, or hedge against load/price volatility. Examples include:

- Exchange traded Puts and Calls;
- Electric Futures;
- Electric Options; and
- Weather Derivatives.

Use of certain types of financial derivatives is necessary in order to mitigate various risks outlined in this policy while optimizing the resource portfolio. Such types of allowable financial derivatives or transactions (but not individual transactions) must be approved by the ROC as outlined in the ERM as developed by the ROC in accordance with this policy.

3. Risk Controls

3.1. Control Principles

EBCE will strive to conduct its energy risk management activities in accordance with best practices of the energy industry, but implementing such practices must be cost justified and balanced between costs and benefits. Processes and control systems must be in place that allow EBCE to identify, measure, monitor, control and track its risk exposures. These processes and control systems shall include the following risk management control principles:

- Appropriate segregation of duties and internal controls will be used;
- Appropriate systems to ensure accurate and effective management reporting;
- Necessary resources in place to achieve management objectives;
- Attract and retain skilled and trained personnel;
- Cross-train and provide cross coverage;
- Employees conducting energy transactions are free of conflicts of interest;
- Authority and approval delegation is commensurate with accountability and capability;
- Performance measurement and reporting incorporate risk and return measures; and
- Ongoing monitoring of control effectiveness.

3.2. Internal Controls

Internal controls shall be based on proven principles that meet the stringent requirements of generally accepted auditing standards (GAAS), financial institutions and credit rating agencies. The required controls shall include all customary and usual business practices designed to 1) prevent errors and improprieties, 2) ensure accurate and timely reporting of results of operations and other information pertinent to management, and 3) facilitate attainment of business objectives.

3.3. Segregation of Duties

Responsibilities related to energy transacting shall be segregated in a manner consistent with the control principles listed above by means of clearly defined roles and responsibilities for the Front Office, Middle Office and Back Office operations. Such roles and responsibilities can also be provided by a qualified third party services provider. Specific roles, responsibilities and organizational structure of these functions are outlined in Section 4 of the ERMP.

These controls shall be fully integrated into all business activities of EBCE, and there shall be active participation by senior management in risk management processes.

3.4. Conflicts of Interest

All EBCE employees who are engaged in energy supply resource transactions, counterparty credit evaluation, or oversight of the foregoing and are employed in any job classification listed in the EBCE Conflict of Interest Code are required to complete annual conflict of interest filings on FPPC Form 700 and disclose investments as required by that code.

In addition to the foregoing disclosure requirement, EBCE employees engaged in energy supply resource transactions, counterparty credit evaluation or oversight of the foregoing, are barred from investing in any company with whom EBCE has consummated energy or related purchases or sales within the last two years.

Such employees must divest existing direct holdings in energy counterparties prior to engaging in any negotiating, evaluating, transacting or oversight functions. The ban on investment and requirement for divestment applies regardless of whether or not the investment would be of sufficient size (\$2,000) to require disclosure on FPPC Form 700.

EBCE employees supervising staff who are subject to this policy are responsible for routinely reviewing Form 700 of each such staff member for the purpose of identifying potential financial conflicts of interest. General Counsel will assist in reviewing these forms and providing legal advice in connection with such reviews upon request.

4. Roles, Responsibilities, & Organization

This section of the ERMP defines the overall roles and responsibilities for implementation of this ERMP. The coordinated efforts of personnel across several divisions are required to successfully implement EBCE's risk management program. Section 4 of the ERMP outlines the basic roles and responsibilities of each organizational function. Specific details and the specific roles and responsibilities of the oversight and operational divisions within the energy risk management program structure at EBCE are outlined in the ERMR, as developed by the ROC and revised from time to time.

4.1. EBCE Board of Directors

The Board has the ultimate oversight over EBCE operations and is responsible for establishing an organizational-wide framework for risk management and ensuring that risk management results are achieved as planned. The Board shall approve and establish organizational policies for risk management and delegate to the Executive Director the responsibility for implementing the ERMP. With responsibility for the ultimate oversight over EBCE operations, the Board shall be responsible to insure the risk management results are achieved in accordance with the ERMP.

4.2. Executive Director

The Executive Director has overall responsibility for implementing the ERMP and for communicating risk management issues to the Board. The Executive Director shall be responsible for delegating specific duties for carrying out the policy and insuring compliance with it by all affected EBCE employees or contractors. The Board acknowledges that the Executive Director shall established the ROC as a member/staff function and may delegated certain functions to the ROC, which delegation is ratified by this ERMP.

4.3. Risk Oversight Committee

The Risk Oversight Committee (ROC) is responsible for overseeing compliance with risk management policies within EBCE. The ROC serves as the highest level of organizational risk management reporting to the Executive Director. The ROC shall consist of EBCE Management,

participating jurisdictional representatives and EBCE's legal counsel, as designated by the Executive Director from time to time. A quorum for the ROC to do business shall be not less than three Committee members (including not less than one participating jurisdictional representative) or their designees.

The two participating jurisdictional representatives shall be appointed to the ROC by the Executive Director. These participating jurisdictional representatives shall reflect the diversity of EBCE's customers (including larger and smaller jurisdictions). The participating jurisdictions may nominate potential ROC members. The Executive Director shall select ROC representatives based on those recommendations.

Each ROC member shall have one vote, and may appoint a voting alternate with the approval of the Executive Director. Participating jurisdictions not represented on the ROC may send representatives to attend ROC meetings and participate in ROC discussions; however, these non-ROC participants will have no voting rights.

The ROC will meet at least quarterly, to act on the responsibilities mentioned above. Individual participating jurisdictions may request the ROC to convene in a timely fashion if ROC approval is required for any transaction affecting EBCE. Minutes to each meeting will be maintained according to EBCE policy.

The ROC shall make regular reports to the Board regarding business transacted by the ROC at such intervals as the Board shall direct.

The ROC shall have the responsibility for ensuring that business is conducted in accordance with the ERMP. The ROC shall adopt and keep current "Energy Risk Management Regulations," which shall define in detail the internal controls, strategies and processes for managing risks covered under the ERMP. Specific ROC responsibilities are outlined in detail in the ERMR.

4.4. Front Office (Planning and Procurement)

The Front Office is responsible for resource planning and procuring resources to meet the physical, financial and contractual requirements of EBCE, with load/resource balancing provisions and such other arrangements as may be approved by the Board in the future. The function includes contract administration, managing the risk assumptions for electricity transactions, including physical and financial needs analyses, energy purchases and sales, procurements of capacity, ancillary services and coordinating energy delivery scheduling. The Front Office is responsible to ensure that the procedures and processes needed to transact business within the ERMP are in place and they perform all duties related to actual transacting in the wholesale energy markets. The Front Office is the primary interface with potential wholesale transacting counterparties. The Executive Director and Director of Power Resources are responsible for managing the Front Office, and can be supported by qualified third party suppliers. Front Office activities and detailed responsibilities are outlined in the ERMR.

4.5. Middle Office Controls and Reporting

The duties of the Middle Office will be conducted by the Finance and Administrative Services Department, and/or are supported by a qualified third party supplier. Its primary purpose is to manage risk oversight and controls. The Middle Office provides independent oversight of the risks assumed by the Front Office in the course of transacting energy products and services. The Middle Office must be independent from the Front Office functions. The Director of Finance and Administrative Services is responsible for managing the Middle Office. Detailed responsibilities of the Middle Office are described in the ERMR.

4.6. Back Office (Settlements and Recording)

The Back Office is primarily responsible for settlement of bills, recording transactions, bookkeeping and accounting, and contract compliance. It is responsible for providing assurance of accurate transaction records and settlements. Back Office functions are conducted by personnel in the Finance and Administrative Services Department, and/or are supported by a qualified third party supplier. Detailed responsibilities of the Back Office are described in the ERMR.

4.7. Auxiliary Functions

Additional issues impacting the overall power supply and risk management program include establishment of financial reserve requirements, which are generated by auxiliary support functions in the Finance and Administrative Services Department.

The Finance and Administrative Services Department is responsible for preparation of the budget and the calculation of rates used to bill customers for their related power supply usage. In addition, the Finance and Administrative Department is responsible for establishment of necessary reserve levels for the various projects owned by EBCE, if any, and for the EBCE in general. The Finance and Administrative Services Department is also responsible for establishment of reserves necessary for credit risks related to counterparty credit as mentioned in the ERMP, but as more clearly defined in the ERMR.

4.8. Authorities, Delegations, Limits and Prohibitions

All executed transactions shall conform to the policies set forth herein. It shall be the responsibility of the ROC, with approval of the Executive Director, to establish appropriate individual transacting authority limits for the various personnel involved in the Front Office function. All staff with designated responsibility for Middle Office or Back Office functions are strictly prohibited from executing any wholesale transactions. The Middle Office shall be responsible for informing counterparties of such approved authorizations, including transacting authority and restrictions, along with product types and/or term and dollar limits.

5. Policy Compliance

5.1. Compliance Exceptions

Compliance exceptions are actions which violate the authority limits or directives set forth herein or in the ERMR as developed and adopted pursuant hereto by the ROC.

5.2. Reporting of Exceptions

The Executive Director shall notify the ROC of exceptions to mandated policies, procedures and regulations within 48 hours after they are identified, and ensure Front Office prepare a full report for review and discussion at the next ROC meeting.

5.3. Audit

Compliance with this ERMP and with the specific ERMR requirements instituted pursuant to this ERMP, shall be subject to examination by EBCE's independent auditors or by such other reviewers that EBCE or ROC may appoint to evaluate the effectiveness of mandated controls.

5.4. Reserves

The ROC and the Executive Director, or his/her designee, are responsible for ensuring adequate reserves for energy price exposure and credit losses are maintained by EBCE. The reserve estimate methodology, as established by the Finance and Administrative Services Department, shall be reviewed and approved as needed to ensure appropriate reserve levels are maintained and funded.

5.5. Systems, Tools and Training

EBCE employees who are authorized to perform energy risk management functions on behalf of EBCE shall be provided with the necessary systems and tools to support all risk management processes.

Provision shall be made in the budgets submitted for each division which performs market risk management functions on behalf of EBCE for the acquisition and maintenance of computer systems, software, communications equipment, data services and other analytical, measurement and reporting tools.

Provision shall also be made in the budgets submitted for each EBCE division/department which performs market risk management functions on behalf of EBCE for managers and staff to attend seminars and courses in risk management on a regular basis.