

ENERGY TRADING POLICIES & PROCEDURES



Portland General Electric

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Energy Trading Policies and Procedures

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Introduction

Purpose of Energy Trading

PGE actively participates in the wholesale marketplace to achieve the Company's principal goals. While capitalizing on arbitrage opportunities and taking speculative positions in the market, PGE balances supply of power with demand to meet the needs of retail customers, manage price risk, and manage positions related to long-term wholesale contracts. Based on detailed analysis of market indicators, PGE also creates customized structured transactions to address customers' unique needs.

Regulated Load Management

PGE, as a regulated utility, is obligated to secure the power needed to serve retail (end-use) customers within the service area. As a result of this obligation to serve, PGE has a natural short position related to retail load and the overall focus of the group is to deliver energy to PGE's marketplace, whether wholesale or retail. This short position extends into future periods at least as long as current regulation may be expected to continue within Oregon (PGE expects to be providing power to all existing retail customers in a regulated environment at least until October 2001 and to residential customers for the foreseeable future). The retail short position is partially offset by generation capacity available to PGE from plants, but a significant portion of PGE's load is covered by long-term purchase contracts or purchases from the market.

Price Risk Management

Power Operations seeks to minimize power costs by 1) seeking the most economic supply – whether purchased or generated, 2) capturing arbitrage profits through short-term wholesale trading, and 3) taking speculative positions within approved risk limits. PGE trading is performed "around the assets", which is significantly less risky than trading performed by a traditional power marketer for several reasons. Purchases and sales are often matched to offsetting retail load or generation capacity available. In this sense, trading is generally performed to close retail load positions, rather than creating open positions.

PGE's trading is performed through the utilization of a combination of physical forward contracts and financial products, such as futures, swaps, and options, to hedge upside price risk and related demand spikes while arbitrage and speculative opportunities are sought. Further mitigating PGE's risk is the ability, as a generating utility, to cover physical forward positions using low-cost generating assets. In this sense, generation acts as an inexpensive call option to cover forward commitments.

Arbitrage and Speculation

As PGE trades in different physical and financial markets and commodities, anomalies may be recognized between correlated markets. These are recognized as arbitrage opportunities and offsetting transactions between the markets are then performed, allowing Trading to lock in profits with minimal risk. PGE's generation and transmission assets allow more arbitrage flexibility than power marketers have available.

Traders may take speculative positions, so long as the positions are within risk limits (credit, volume, value at risk) provided for in this document. While PGE's trading activity is not primarily performed for speculative purposes, it is recognized that positions that are not perfectly offset by another transaction represent speculative positions – these positions are unavoidable in a utility environment. Furthermore, PGE has had success with closely controlled and monitored speculative positions. Trading staff should ensure that speculative positions are within limits and reasonable given current and expected market conditions.

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Risk Management Committee members include:

Peggy Fowler	President & Chief Operating Officer
Walt Pollock	Sr. Vice President, Power Supply
Mary Turina	Vice President of Finance/Chief Financial Officer/Treasurer
Mack Shively	Legal
Dave Carboneau	Vice President, Retail Services
Pamela Lesh	Vice President, Rates & Regulatory Affairs

The Risk Management Committee meets at least quarterly or more frequently as needed to review key issues related to trading and risk management activities.

- The Risk Management Committee is responsible to:
 - approve corporate policies and guidelines for risk management and measurement;
 - oversight and review the risk management process and appropriate level of segregation;
 - approve and recommend risk limits to the Enron Risk Controls Group and Enron Board of Directors;
 - understand and approve methodologies used to measure and control risk taking;
 - review and approve exceptions and amendments to policies;
 - evaluate PGE's risk appetite;
 - review profitability and performance.
- On a higher level, the Risk Management Committee provides a valuable communication link between operating management, personnel, and Enron Corporate management. PGE's operating style and philosophy are communicated via the Risk Management Committee, including risk levels, financial reporting, compliance with policies and procedures, and the optimization of assets.

Enron Risk Controls Group

- The Enron Controls Group is a subset of Enron Corporate and is intended to be more involved with day-to-day activities, to provide direction as needed, and to act as a liaison between trading activities and the Enron Board of Directors.

Risk Management, Reporting & Controls (RMRC)

- The RMRC group provides a function separate and independent of the trading group. This function reports directly to the Vice President of Finance/Chief Financial Officer/Treasurer and is physically located on the trading floor. RMRC advises the Risk Management Committee and Enron Risk Controls Group on daily positions and trading risk.

Trading Business Structure

The PGE trading structure includes a Front Office (Trading), and Risk Management, Reporting, & Controls (RMRC).

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Front Office

- Responsibilities of the Front Office include:
 - execution of physical, financial, and transmission transactions for PGE;
 - management of the overall position of the portfolio;
 - portfolio hedging strategy;
 - management of trading business within overall corporate risk limits;
 - communication of market pricing curves;
 - customer relationship development; and
 - pre-scheduling functions.

Risk Management, Reporting & Controls (RMRC)

- The RMRC has responsibility for the following activities:
 - reviewing and validating valuation algorithms within the risk models;
 - understanding and approving risk measurement methodologies;
 - designing and monitoring internal controls processes;
 - overseeing compliance of trading policies and guidelines;
 - creating and maintaining risk measurement models;
 - participating with trading staff in the review of new products,
 - educating the Risk Management Committee and others on risk management tools and methodologies;
 - reporting daily position and risk exposure to the Risk Management Committee;
 - reviewing performance and profitability;
 - performing variance and exception analyses; and
 - all "back office" functions, including:
 - ensuring the proper recording of all transactions;
 - confirming and affirming all transactions;
 - performing end-of-day portfolio valuation;
 - performing market and credit risk measurement;
 - analyzing performance;
 - applying appropriate accounting treatments;
 - performing exception and variance analyses;
 - ensuring separation of duties between the trader and the RMRC activities and responsibilities;
 - calculating and verifying daily Mark-to-Market (MTM) information;
 - controlling and maintains all margin accounts;
 - maintaining the Counterparty information database;
 - preparing customer billings;
 - issuing payment receipt and instructions; and
 - supporting or performing transaction settlements.

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Segregation of Duties

The Risk Management Committee ensures adequate segregation of duties with the organizational separation of Trading and the RMRC at an executive level. Specific segregation of duties for payment, transaction valuations, trade confirmations, calculation and booking of profits/losses, and limits monitoring are specified in this section. The following critical functions are the responsibility of the RMRC and are organizationally separate from trading.

Trade Confirmations

Daily transaction confirmations are critical to the trading process, providing proof of the specific transaction terms between PGE and counterparties. The RMRC has the sole responsibility for all incoming and outgoing trade confirmations and ensures all transactions on the books have been confirmed and acknowledged by the counterparty.

Transaction Valuations

After transactions are executed, the responsibility for valuing open positions resides with the RMRC. PGE uses option models for term trading to delta hedge trading positions. The RMRC runs models daily to evaluate positions for each PGE business segment. These segments include generation assets, customer retail loads, gas trading, and power trading. Although traders create the price curves used for this daily valuation, all trading curves are validated at least twice a month with supporting documentation reported to Enron Risk Controls.

Limit Monitoring

The RMRC is responsible for monitoring position and credit limits on a daily basis. The Portfolio Managers for both power and gas trading are responsible for ensuring the position, VaR, and credit limits are not exceeded.

Authorized Trading Products

Standard Physical Trading Products

Standard Physical Trading Products are governed by specific terms. These products are generally very liquid and are continuously quoted by market brokers, stated in terms of monthly time frames and standard quantities.

Standard Physical Trading Products are generally offered for a single month during the forward period, for combined months such as January - February, or for quarterly periods (i.e., January-March). Delivery periods are stated in terms of number of days multiplied by the number of hours per day. For example, a delivery period of six days (Monday - Saturday) for 16 hours per day would be represented as 6 x 16.

Non-Standard Physical Trading Products

Non-Standard Physical Trading Products consist of transactions in which the terms are not constant, or where delivery terms vary by month, day, or even hour. This type of transaction is generally structured to fit the specific needs of a customer and can be executed by either the trading group or through origination.

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Products

Currently, PGE is authorized to trade only physical and financial electricity and natural gas products and related transportation and transmission. Additional products may be traded only after following the New Product Introduction process detailed later in these policies. The following are types of products that could be traded in the commodity or structured markets:

- Firm or non-firm energy (electricity and/or gas)
- Interfuel (tolling) agreements
- Energy exchange based on different time or location
- Firm or non-firm transmission/transportation of electricity and/or gas
- Generation capacity for electricity
- Put and call options on physical electricity and/or gas
- Futures, forwards and swaps on electricity and/or gas
- Options on an electricity and/or gas index (cash-settled)
- Options on options
- EFPs (Exchange for Physical)

See Appendix B for the current list of approved products traded by PGE.

Authorized Traders

Only authorized traders are approved to enter into transactions in the name of PGE. Any personnel engaging in unauthorized trading activities are subject to significant disciplinary action, including dismissal. See Appendix C for the current list of authorized traders.

New Product Initiation Process

The purpose of this procedure is to insure the appropriate review of transactions that are not currently authorized. All staff in the trading and origination groups are responsible for following the requirements of this process prior to execution of a new product.

A "New Product" is defined as a transaction having two or more of the following characteristics:

1. The transaction is not a liquid product traded in the current energy markets;
2. The pricing methodology of the transaction departs significantly from current approved products, and lacks adequate pricing data;
3. The price quote for a transaction is at a location not routinely executed as either a pricing basis or delivery point;
4. The transaction involves a previously untraded, illiquid point or is of a volume magnitude which presents a liquidity problem at an unfamiliar trading point;
5. The transaction price is based on some other commodity or product than power, natural gas or a combination of the two;
6. The transaction does not have an existing price curve and is not accommodated by the existing Trading and Risk Management information systems;
7. The final delivery tenor of the transaction is outside the timeframe of the approved PGE Risk Limits.

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Responsibilities: The RMRC, in coordination with Trading Management, is responsible for the review and recommendation of New Products to the Sr. Vice President of Power Supply. The Sr. Vice President of Power Supply will review the new product and determine whether to proceed with the following process.

Review Process: Upon request for the approval to execute any new product Trading Management in coordination with the RMRC will present the risk exposure, estimated volumes and methodology for the use of any new product to the Risk Management Committee. If the Risk Management Committee approves the new product, the following steps will be implemented:

The Structuring Group in coordination with the RMRC will be responsible for the development, calculation and documentation of the following:

- definition of the New Product;
- pricing methodology for the New Product;
- breakdown of the transaction into its component parts for inclusion in the position management system.
- determination of the need for other internal reviews (Scheduling, Legal, etc.)
- the initial calculation of the risk impact and MTM of the proposed transaction.
- overall management of the review process;
- insuring that the reviewing parties (included any additional reviews required) receive the necessary data in a timely fashion;
- communication of the new product and appropriate adjustment of risk limits with the Enron Risk Controls Group.

Any new products approved via the above process will be added to the list of Approved Products, and will be distributed to Trading, Structuring, Origination and RMRC. In addition, copies will also be sent to members of the Risk Management Committee and Enron Risk Controls.

Market Risk Measurement

Market risk exposure is directly related to a change in the value of the portfolio due to changes in the business environment. Changes include, but not limited to, price fluctuations, changes in load and/or generation capabilities, and fluctuations in import or export volumes via transport or transmission constraints. The overall Market Risk Exposure is the risk PGE's portfolio will deviate from the current MTM value, resulting in an impact on earnings and cash flow. The RMRC uses a variety of tools to manage and measure market risk exposure.

Forward Price Curve

Forward curves are a critical part of the MTM process. Forward curves represent the fair market price of a commodity to be delivered at points in the future and are used in the MTM process to generate expected values of commitments to receive/deliver a commodity in the future. All forward curves are created each day by PGE's traders and used in the daily valuation process. The mid-point of the forward curves reflect the price PGE could close out current positions. This process results in market values for all physical and financial open trading positions by business segment.

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PGE's electricity and natural gas forward price curves are tested and validated by PGE's RMRC. The curves are tested at least twice a month and are compared to several sources of third-party information obtained directly by the RMRC. The independent sources include brokers, NYMEX, and ECT West to ensure each month's price for each delivery point is within 5% of the prices independently obtained. The traders are asked to explain any variations greater than 5%, and traders are expected to have a very clear line of reasoning if they feel the PGE curves should not be adjusted to within the 5% threshold. In addition to the 5% testing, the PGE curves are graphed against the ECT West curve to look for inconsistencies. Trades performed the day before and the day of testing are also compared to the curve to verify accuracy. The results from each curve validation are provided to Enron Risk Controls for review.

Sensitivity Analysis

Sensitivity analysis is used to measure a shift in the price of the commodity. Although this analysis does not incorporate changes in other factors (e.g., volatility), it is a good estimate of the sensitivity of the portfolio to changes in the price of electricity and gas. This analysis is performed by shifting the electricity forward price curve one dollar and then revaluing the portfolio.

Stress Testing

Stress testing measures PGE's exposure to given price movement scenarios. For example, PGE may want to determine the profit or loss resulting from a 10% increase in every curve against current positions. The main strength of stress tests is in predicting the possible exposure to devastating (several standard deviations) price movements that may not be captured by the VaR analysis. Stress tests for PGE's trading position are performed at least quarterly or as needed given market expectations.

Value at Risk

The Value at Risk (VaR) measure assumes a normal distribution and quantifies, within a 95% confidence level, the maximum expected losses from adverse market movements. VaR allows PGE to combine and quantify different market risks such as electricity, gas, interest rates, and foreign exchange rates. However, VaR does not provide a good measure of the losses possible given an unusual market movement. These market movements are better evaluated through stress testing.

PGE uses the most common method to measure VaR, which is a Mean-Covariance approach. In this method, historical return, price volatility, and covariance measures are used to measure expected losses within a given confidence level. VaR reports are calculated daily and compared to approved risk limits. The RMRC responsible for monitoring of VaR limits on a daily basis.

PGE Risk Limits & Reporting

Trading positions are aggregated daily for power and gas positions and compared to approved Net Open Position and VaR limits. See Appendix A for the current approved Net Open Position and VaR limits. The following reports are used to monitor PGE limits and related risks:

<u>Report</u>	<u>Frequency</u>	<u>Distribution</u>
Net Open Position (NOP), MTM and VaR	Daily	Book Managers, Traders & Trading Management
Weekly Summary of NOP, MTM & VaR	Weekly	PGE Management, Enron Controls Group; Traders
Market Risk and Regulatory Update	Quarterly	PGE Management, Enron Controls Group
PGE Scenario Analysis	Annually	PGE Management, Enron Controls Group

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Computer Operating Systems

PGE's information technology systems provide valuable information related to management of risk. By identifying net open positions (which represent an excess or deficit of gas or electricity in a given month or delivery point), trading may know exactly what purchases or sales are necessary in order to balance supply and demand. Value at Risk (VaR) and Option valuation models allow the precise quantification of risk and valuation of transactions. This market intelligence creates opportunities to generate profits by comparing prices of natural gas, fuel oil, and wholesale electricity. PGE has recognized the need for robust information technology systems to support trading; as a result, PGE continues to develop systems as the industry changes.

Physical and electronic access to each system is restricted in order to maintain data integrity and safeguard market intelligence. Data is routinely reconciled and reviewed for accuracy by the Risk Management, Reporting & Controls group, ensuring that the information accurately reflects individual risks, market data, positions held, and valuation.

Risk Management System (RMS)

- **RMS "Books"**

In order to allocate risk capital efficiently between trading portfolios, PGE needs to measure the relative performance of each portfolio. The Risk Management System (RMS) addresses this need by establishing transfer prices between each group and recognizing value added and additional costs incurred by each group. The RMS "books" quantify individual risk components such as interest rate risk, price risk, foreign exchange risk, and others. This allows PGE to assign the management of these risks to specific groups who then manage the risks on a "portfolio" basis.

- **Value at Risk (VaR)**

RMS includes a Value at Risk (VaR) calculation model, which estimates the maximum loss expected within a single day within a 95% confidence interval. The VaR model considers historical price volatilities and regional correlations and applies this statistical information to current positions valued on a mark-to-market basis. This model is run daily, allowing PGE to keep close watch over the risks inherent in the current portfolio.

- **Spread-option Model**

RMS also includes a "spread-option model" which calculates the optimal level at which to dispatch each plant based on the comparison of fuel costs to the cost of power in the wholesale market. This model allows PGE to take advantage of the flexibility of resources available (e.g., hydroelectric power, coal, natural gas, fuel oil, wholesale power, etc.) in order to procure energy at the lowest cost.

Credit Exposure Tracking System and Credit Aggregation System (CAS)

PGE has developed an internal tracking system called the Credit Exposure Tracking System to aggregate counterparty credit exposure from current systems including RMS, GMS, PSAS (real-time scheduling system) and Platinum (general ledger system). The ability to quickly determine credit exposure with a counterparty allows Credit to react very quickly if exposure exceeds the level at which the Credit Manager feels comfortable. It also prevents situations in which traders inadvertently exceed credit limits due to the fact that they do not know what the current exposure is.

PGE is in the process of incorporating the Credit Aggregation System (CAS) developed by Enron so Enron's extensive credit data may be incorporated into the Credit Exposure Tracking System.

Global Counterparty System and Global Contracts System

Global Counterparty is a system developed by Enron which serves as a centralized data repository to house extensive volumes of data on every counterparty with which Enron has transacted. It stores counterparty information for natural gas, financial, and power counterparties, pipeline companies, and banking institutions. It allows creation, maintenance, and retrieval of counterparty addresses, relationships (intra-company links), aliases, Dun & Bradstreet information, contacts, wire information, and more.

Global Contracts is a related system developed by Enron that is a detailed accumulation of all types of customer contracts by counterparty and their terms. The terms include contract type, status, term type, start date, deal limits, payment terms, services provided, commodities allowed, quantity obligations, penalties, and receipt/delivery points.

Power Scheduling and Accounting System (PSAS)

PSAS is the primary tool set used by the Energy and Transmission Schedulers, Generation Dispatchers, Power Accountants, and Management responsible for scheduling and operating PGE's energy and transmission assets as a Control Area Operator. Peak transaction volumes occur daily at about 3:00 – 4:00 p.m. (next day pre-schedule); every hour on the hour (dispatching); and month-end (reconciliation). PSAS operates 24 hours per day, 7 days per week, processing over 150,000 transactions per day.

Altra Gas Management System (GMS)

GMS is a very popular "off-the-shelf" natural gas trading system used for data capture of gas purchases and sales and for end-of-the-month accounting and reporting. It integrates a contract administration module and allows position reporting.

Credit Risk Management

Credit exposure is the risk that a counterparty will be unable to fulfill its financial obligations to PGE. As a result, PGE had developed a Credit Department responsible to assign a credit rating for each counterparty. PGE has established individual credit exposure limits based on that rating. See Appendix D for the current counterparty credit limits. This credit exposure extends to counterparties that execute physical and financial transactions with PGE. The industry standard calls for settlement accounting, or payment after delivery has been made in full. Also, substantial gains or losses may accrue in physical contract prior to actual delivery. Credit exposure also exists for OTC derivative transactions, as the value of any outstanding contracts can escalate substantially over time.

Managing credit exposure is an important component in PGE's overall risk management program. The creditworthiness of trading partners becomes a function of both qualitative and quantitative factors, focused on the credit rating assigned to a counterparty by the major credit rating agencies or PGE's evaluation of the counterparty's ability to pay. Information relating to the credit standing of any trading partner is determined using published credit ratings, market intelligence, electronic new releases and other public information.

Counterparty Credit Standards

Credit exposure to a counterparty is measured using the current accounts receivable, the cost of replacing the transaction in the market defined as the MTM value and, an estimate of the future replacement cost of the transaction using a probability analysis over the remaining term.

The replacement cost of a transaction evaluates the actual risk to PGE that a counterparty will fail to perform on its financial commitments. This is the current value of the transaction based on a price move in the underlying market which can be positive or negative. Potential exposure to any counterparty involves a probability component taking into account that the market will have some amount of volatility in the period during which the transaction is open. PGE's Credit Department uses the Enron Credit Aggregation system to evaluate both the replacement cost and the potential credit exposure with all counterparties.

The Credit Department establishes credit limits before transactions occur with a new counterparty. Daily monitoring of trading business compared to limits is done on a daily basis in the RMRC independent of the Trading group.

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Credit Process

PGE management has approved the following process to implement credit policies:

- 1) All questions from Trading regarding counterparty credit are directed to the RMRC representative on the Trading floor. Information will be disseminated based on the following:
 - a) Normal Priority Notifications – Requests to trade with new counterparties and counterparties over their limits will be communicated by the RMRC to Credit for resolution. Each trade requested beyond authorized tenor requires approval beforehand by the Sr. Vice President of Power Supply and the Vice President of Finance/Chief Financial Officer/Treasurer.
 - b) Credit Violation Notifications – Credit violations will be documented by the RMRC and notification will be made to Executive Management, Trading, and Credit. The Sr. Vice President of Power Supply and Vice President of Finance/Chief Financial Officer/Treasurer will decide on the appropriate disciplinary action in dealing with credit violations. Trading, Credit, and the RMRC will provide input.
 - c) Emergency Notifications – The RMRC will document developments in the market that may require emergency action (i.e., potential defaults) and immediately notify Executive Management. The RMRC will then call an impromptu meeting in which a plan of action is developed. This meeting will include representatives from Trading, Credit, and the RMRC.
- 2) No trades will occur with a specific counterparty until both of the following have been satisfied:
 - a) Credit Line – An authorized credit line is established. Depending on the counterparty, Credit may authorize a limited unsecured line for a certain period of time pending necessary collateral documentation.
 - b) Contract – Contract Administration will follow through with the counterparty and execute the appropriate enabling agreement or PGE tariff. Until final enabling agreements have been executed, Contract Administration may allow trading under interim agreements such as long-form confirmations. Contract Administration will work with Trading and Credit to prioritize which counterparties should be given the highest priority for execution of enabling agreements.
- 3) Each week, or more frequently as changes occur, Credit will issue a Credit Watch report to the RMRC and Trading indicating the status of each counterparty (trade/no-trade) and their maximum tenor (See Appendix E for an example of the Credit Watch Report). No trades may occur with a counterparty with a "no-trade" status. Approval of trades beyond the normal tenor or credit line may be requested as described in item 1)a) above.
- 4) A credit exposure report will be issued daily by the RMRC showing MTM credit exposure including accounts payable and accounts receivable (See Appendix F for an example of the Credit Watch Report). This report will include exposure for each counterparty on a netted basis only if the agreements in place provide for netting.
- 5) The RMRC will review the report daily to ensure no single counterparty accounts for more than 15% of the total credit exposure (in dollars and in MWhs). An exception to the 15% test will be made for the Bonneville Power Administration (BPA). Any violations will be communicated as described in item 1)b) above.
- 6) If a credit line has been or is about to be exceeded, the RMRC will contact Credit and request an increase in the credit line. Credit will then take the following action:
 - a) Review the counterparty and discuss with Trading Management to determine the possibility of an adjustment to the credit line.

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- b) For those counterparties whose credit cannot be increased, they will be added to the Credit Watch "no-trades" list. The new list will then be issued immediately to the RMRC and Trading.
- c) Upon review, Credit will contact the counterparty to request an early payment, guaranty or a Letter of Credit.
- 7) If a trader hears any information that may have an adverse impact on the financial health of a counterparty, traders should immediately convey that information to the RMRC they will work with Credit to re-evaluate the counterparty.

The RMRC will immediately notify Credit of any counterparty that has overdue payments. Credit and the RMRC will work together to determine whether the counterparty should be put on no-trade status until payment is received.

Contract Management

The Credit Watch report prepared by the Credit Department also incorporates all counterparties for which Contract Management has prohibited trading. As a result, Trading needs only to look at the Credit Watch report to determine if there are any trading restrictions related to credit or contracts.

PGE has approximately 100 active power, gas and financial counterparties. Power transactions by PGE vary from hour ahead to in excess of 20 years. Contracts are in place with identified financial counterparties. Purchases or sales of power or gas for periods of greater than one year are subjects of separate contracts. Power purchases and sales with a duration of one year or less are primarily done under the enabling tariff of Western Systems Power Pool (WSPP) and increasingly, PGE's market-based tariff.

Key reasons for moving to the market-based tariff for sales include the ability to describe with more specificity business terms and conditions for power transactions, clearer language on what does and does not excuse performance, and inclusion of credit terms and conditions. Credit terms and conditions in PGE's master contracts, whether less than or more than one year, include payment netting, margin requirements, material adverse change language, liquidated damages provisions and cross-default language. When warranted, PGE also secures parental guarantees or letters of credit.

Trading & Origination (Front Office) Procedures

Transaction Execution

Traders and Originators shall only enter into transactions that fall within the approved guidelines described in this Policy Manual.

General transaction execution guidelines applicable to all personnel are:

- Only authorized personnel, as determined in writing, can enter into a trade on behalf of PGE;
- Traders shall use only authorized and approved trading and risk management products; and
- Traders and Originators must abide by the process described in this manual before executing and new products.

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Transaction Approvals and Authorization

All transactions executed by Traders must fall within strategy guidelines, determined by Book Managers. In addition, each transaction executed must fall within specific approved limits and involve only approved trading products and counterparties.

The RMRC will provide Accounting, Credit, Structuring, Brokers and all counterparties with the names of those individuals authorized to trade on behalf of PGE, including updates as necessary. In addition, this notification of authorized traders will state that PGE traders are not allowed to trade electricity, natural gas, or other energy products for their own personal account.

Approved Counterparties

All counterparties must be approved by Credit with appropriate documentation in place prior to a trade. The following counterparty guidelines must be followed by all personnel involved in the transaction execution:

- only approved counterparties may be used to facilitate a transaction;
- the approved counterparty must have sufficient credit capacity under the approved line before the trader executes the trade; and
- a trader may enter transactions only with those counterparties who satisfy documentation requirements determined by Contracts and Credit.

Trade Execution

All personnel involved in trade order execution will:

- ensure that competitive pricing is obtained by requesting quotes from a number of counterparties; and
- ensure trades are executed only with counterparties on the approved credit list.

Transaction Recording

Personnel involved with trade execution will:

- record all details of the transaction on the appropriate trade ticket;
- diligently record all essential elements of the transaction with each counterparty without delay.

Exception Reporting

RMRC staff must document exceptions. The detail should include what the exception was, how it occurred and why. If remedial action was taken, the result of that action must be documented. Exception reports will be copied for and reviewed by the Sr. Vice President of Power Supply and the Vice President of Finance/Chief Financial Officer/Treasurer.

Exceptions to be reported include:

- trading beyond authorized limits (position or credit);
- trading with counterparties not yet approved;
- failing to record trades actually completed;

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- trading in-authorized instruments and/or unauthorized commodities;
- significant differences noted in the trade reconciliation process; and
- trade amendments or reversals not properly documented.

Transaction Input

The RMRC will be responsible for inputting the relevant details of the transaction into the Trading System, which will generate a numerically sequential number for the transaction.

Specific Daily Trading Procedures

Specific daily trading procedures are documented in Appendix G of this manual.

Structured Transactions (Origination and Structuring)

PGE's Origination and Structuring groups blend an advanced understanding of financial products with the innovative ability to provide a customer with a customized product designed to address unique needs. By using flexible delivery points and expertise in managing volatile energy prices, PGE may offer customers both physical and financial products, including volume, options, commodity, and pricing packages.

Structured transactions are seen as great opportunities for profit since customers are generally willing to pay more for a product built to their specifications. These complex transactions leverage PGE's market experience, diverse generation mix, flexible transmission assets, and analytical expertise. PGE expects the industry to develop growth opportunities for structured transactions in a number of areas, including industrial co-generation, full requirements contracts, distributed generation, and custom options to cover peaking loads.

In the unregulated market (large Oregon industrial and commercial customers will be able to choose suppliers in October 2001), PGE expects customers to include aggregators, retail industrial and commercial customers, power marketers, generators, distribution companies, and others. Until October 2001, PGE is developing a clear strategy regarding the use of structured contracts and will market them to wholesale and large retail customers.

Structured Transaction Process

A structured transaction will be transferred between groups as follows (also see diagram on the following pages):

Origination and Structuring

Following the corporate sales strategy, Originators identify potential opportunities among the current and prospective PGE customer base. They meet with these customers and determine their needs and the amount the customer would be willing to pay to fulfill his/her needs. The Originator and customer outline a rough idea of a structured product that may address the customer's needs and may develop a Request for Proposal (RFP). The Originator shares this product outline with the Structuring group.

After understanding the Originator's outline, the Structuring group performs a preliminary evaluation in which the product is identified as a collection of components, which may be then bifurcated into standard products and non-standard products. Standard products may include marketable commodities or liquid financial products. Non-standard products may include illiquid commodities for which a trading market does not exist or financial products for which valuation is not readily determinable.

Feedback will then be solicited from plant operations to identify any plant and transmission operating constraints and determine how they may be circumvented, if possible. Credit will also be consulted to determine the counterparty's financial standing and quantify settlement risk.

After identifying the components, each is valued based on quoted markets for liquid components and complex statistical modeling for the illiquid pieces. The modeling may be performed using state-of-the-art option and pricing models developed by Enron. The pricing is aggregated, compared to the approximate price the customer may be willing to pay, and quoted to the customer.

If the customer requires a lower price, PGE may decide at this point the structured deal is not profitable enough, in which case it may be suspended before significant time and expenses have been incurred.

Contract Development

After negotiation with the customer, the Contracts group will draft a contract, which will be reviewed by Legal and Structuring to ensure the terms are appropriate before it is shared with the customer. When the customer signs the executed contract, a copy is forwarded to the Structuring group for further breakdown into manageable components.

Transaction Breakdown

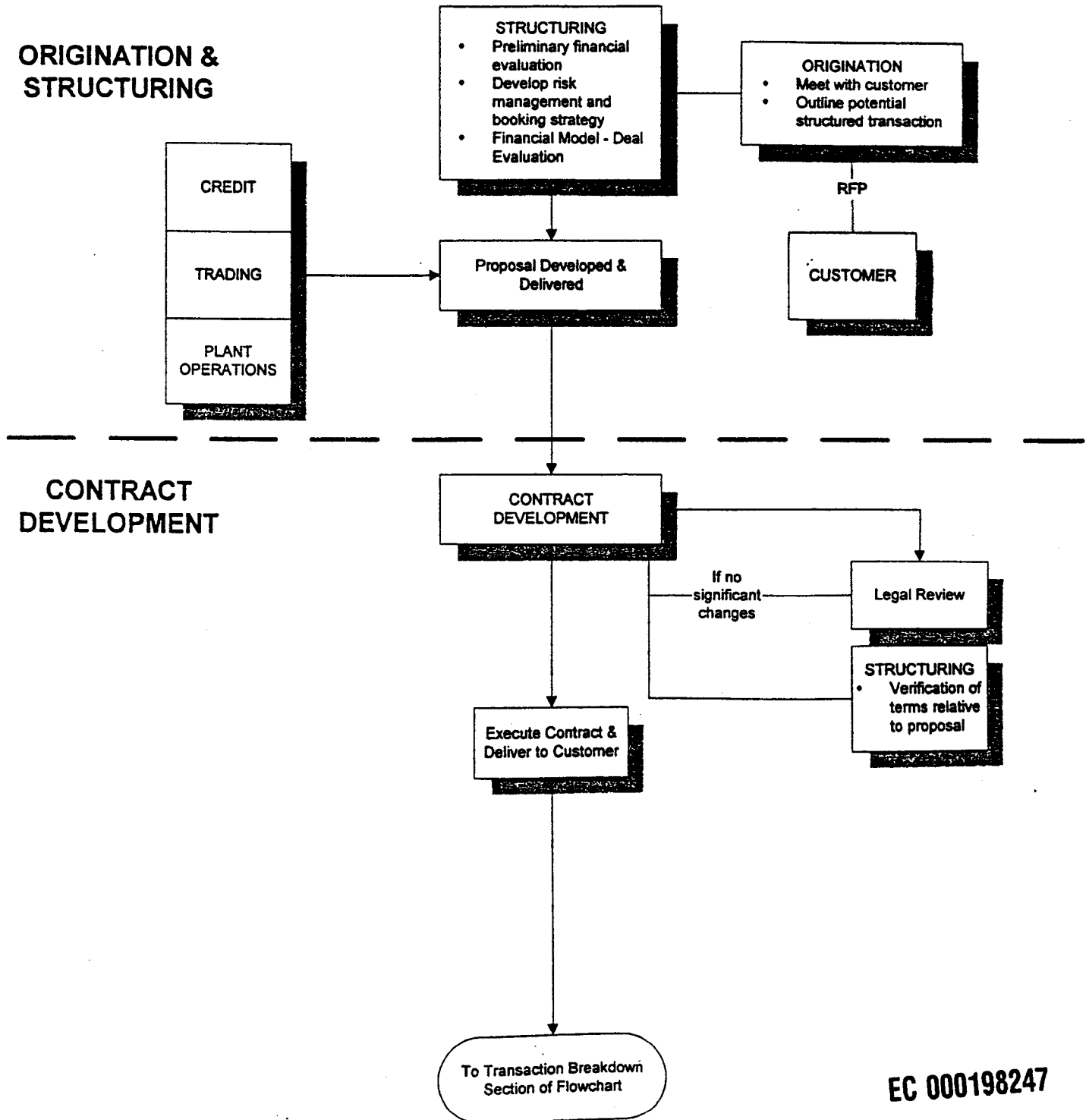
Based on the final contract terms and conditions, Structuring expands the preliminary evaluation performed during the preparation of the proposal. All embedded options, forwards, swaps, physical positions, etc. are bifurcated and allocated to portfolios in the Risk Management System (RMS). Selection of appropriate price curves or derivation of prices for illiquid points will be performed using the pricing model developed by Enron. Physical asset constraints and cross-commodity ramifications (i.e., correlation) will be incorporated into the Enron-developed option models for a refined understanding of each portion of the transaction.

Based on this understanding, Structuring and Origination document financial assumptions and ideas as to how the transaction should be traded. They convey these assumptions to Trading and the Plant Resource Coordinator in order to allow Trading to maximize the value of the transaction. These assumptions and a synopsis of each functional area's principal responsibilities related to the deal are included in a deal summary prepared by Structuring. The deal summary is then distributed to the Power Supply portfolio manager and to Risk Management, Reporting & Controls to ensure the coordination of trading, risk management, billing, and reporting activities. At that time, the transaction is marked-to-market and transferred to the traders' portfolios at market prices. This allows the quantification of value added by each part of the structured transaction process.

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Structured Transaction Process



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Structured Transaction Process

(Continued)

TRANSACTION BREAKDOWN

From Contract Development
Section of Flowchart

STRUCTURING

Breakdown deal into basic components:

- Bifurcate and allocate to books: options, forwards, physical positions, strike prices, etc.
- Identify price curves
- Non-traded risks
- Transmission
- Physical asset constraints
- Cross-commodity ramifications
- Financial assumptions used in deal valuation

DEAL SUMMARY

Outline responsibilities of all major areas:

- Portfolio Manager
- Plant Operations (Resource Coordination)
- Trading
- Risk Management
- Back Office

IMPLEMENTATION

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PORTFOLIO MANAGER

- Develop portfolio trading strategy & instruct Plant Operations & Trading

RISK MANAGEMENT, REPORTING & CONTROLS

- Quantification of mark-to-market value, risk, reporting, and billing

PLANT OPERATIONS

- Identify operational requirements
- Develop procedures
- Implement required infrastructure
- Schedule and deliver power

TRADING

- Coordinate with Plants, Quant. Analysis, and Asset Planning
- Execute trading strategy

DOCUMENTATION

- Identification of structured deals in the trading system
- Legal follow-up on contract terms

FUNDAMENTAL QUANTITATIVE ANALYSIS

- Uses information to support Plants, Trading, Options, & Portfolio Management

PRICING

- Verify that the appropriate price curves are used for settlement & MTM

RISK MANAGEMENT

- Ability to generate structured deal specific reports

ASSET PLANNING

- Use financial model to track performance

Risk Management, Reporting & Controls (RMRC) Procedures

The RMRC should review the following points after a new trade is input into the Trading System:

Physical	Futures	OTC
<ul style="list-style-type: none"> • Date and time • Counterparty • Buy/Sell • Volume or notional quantity • Commodity reference • Term parameters (start & end dates) • Price • Settlement instruction/dates • Delivery or receipt point • Trader 	<ul style="list-style-type: none"> • Date and time • Clearing broker • Buy/Sell • Quantity or number of contracts • Commodity and month • Price • Trader 	<ul style="list-style-type: none"> • Date and time • Counterparty • Buy/Sell • Volume or notional quantity • Commodity reference and/or contract type • Term parameters (start & end dates) • Price • Settlement instructions and/or dates • Trader

Trade Input

The details of the transaction are input by the RMRC and confirmed with the counterparty via fax within 24 hours of the transaction. The trade details for exchange traded transactions are verified to a Clearing House broker's statement the following business day by the RMRC. Each trade is checked to ensure that the trade is within approved limits and the input matches the counterparty details.

RMRC will contact the Trader to review any discrepancies. The Trader will review the information provided by the counterparty and indicate in writing on the trade ticket the appropriate changes and initial, indicating his/her approval.

Confirmations

RMRC is required to provide written confirmation of relevant business terms and conditions for all PGE sales and to verify all incoming confirms for purchases. The following confirmation procedures are to be completed by RMRC personnel:

- generate written confirmations for every OTC transaction;
- verify confirmations against PGE's records upon receipt;
- maintain a record of outstanding confirmations;
- maintain responsibility of minimizing any confirmation backlog; and
- communicate outstanding confirmations which are more than one week old to Trading Management for further action.

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Confirmation Reconciliation

The RMRC is responsible for confirmation reconciliation, including:

- review of the confirmation, verifying that trade details match trade data input;
- examination of the confirmation to ensure there are no unusual terms or conditions;
- ensure that each confirmation falls within the terms approved by the ISDA master agreement or Enabling Agreement;
- follow-up immediately with the counterparty to correct any discrepancies within the confirmation before the first settlement date; and
- maintaining a control process to ensure resolution of outstanding issues

Confirmation Signing Authority

All incoming confirmations that have been reviewed and verified by the RMRC will be signed by the designated signatories and returned to the counterparty as soon as possible. The list of signatories for PGE is in Appendix H of this manual. While the number of signatories on the list should not be large, the list should be broad enough to avoid delay.

Valuation Reporting

All books will be marked to market and reported to senior management on a daily basis. The report will include the following:

- net dollar position (positive or negative);
- net position in the form of number of contracts or physical volume long or short;
- net change on the day; and
- net change for the current calendar month and year.

The PGE RMRC performs these valuations which are reviewed by Enron Risk Controls.

Settlement Responsibilities

The RMRC is responsible for after-the-fact activities in support of the trading process, including the following:

- maintain customer information;
- perform realized P&L reconciliations;
- prepare customer billings;
- issue payment receipt/instructions;
- support or perform transaction settlements;
- complete energy transaction journal entries into the general ledger by the accounting deadline; and
- supply transaction data necessary to appropriate departments for Securities & Exchange Commission, Federal Energy Regulatory Commission, and other regulatory agency filings.

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Reconciliation and Accounting Transactions

Exchange Traded Activity Reconciliation

Futures exchanges require a deposit of funds, referred to as the Initial Margin, against potential losses on open positions. The Initial Margin amount is a function of the requirements set by the exchange, subject to change at the exchange's discretion. These margin deposits must be sent to the Clearing House no later than the day following the transaction.

The RMRC is responsible for broker statement reconciliation and variations of the margin account once the exchange traded transactions are verified by the Mid-Office.

Broker Statement Reconciliation

The calculation of equity associated with maintaining open futures positions will be checked daily. The RMRC maintains an independent verification of open futures positions, margin account, and cash with each broker with whom PGE has a futures account. The following steps are completed daily:

- The broker provides RMRC with an account summary statement which is compared to an internally generated statement to ensure that the daily trades, trade offsets, and cash receipts or payments are accurately reflected.
- The RMRC verifies open positions with Trading, make any adjustments and corrections, and ensure the total equity balances are in agreement daily.
- Any exceptions to a proper reconciliation in the above process are noted in an exception report.

Variation Margin Account Payment

The amount of variance in the margin account as a result of futures market price fluctuation is variation margin. The RMRC is responsible for maintaining a record of open positions for each Clearing House account carried by PGE. All transactions affecting the futures account are recorded and maintained. The RMRC uses this record to check against the brokerage statement sent daily by the Clearing House to confirm account equity and open positions. The RMRC is responsible for independently determining the margin requirements and comparing these to the margin account on a daily basis.

After daily reconciliation with the broker, the RMRC determines whether an amount should be sent from or received by PGE to settle the Clearing House account. The RMRC reconciles this statement and any differences positively resolved by the end of each business day.

RMRC has the following daily margin account responsibilities:

- payment initiation for all margin account deficits;
- ensuring that Treasury handles all payments (at *no* time will anyone from PGE's Trading or RMRC group be involved with payments or the receipt of payments); and
- retaining copies of paid invoices.

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Internal Controls Review & Audit Coordination

In order to ensure that personnel are complying with the existing policies and procedures, the RMRC reviews current processes and controls with External Auditors in support of their review. Such audits shall be performed at least once a year. The RMRC will conduct periodic transaction testing to ensure compliance with all policies and procedures.

Findings from audits shall be shared with the appropriate department management and responsible officer so that corrective actions may be taken. The RMRC in coordination with Trading will make the necessary improvements to ensure compliance with all audit issues.

Employee Standards of Conduct

All employee activities shall adhere to the letter and intent of Enron's Code of Conduct. Only the Sr. Vice President of Power Supply, in coordination with the Vice President of Finance/Chief Financial Officer/Treasurer, may authorize exceptions to the Policies contained herein on a case by case basis. Exceptions shall be documented and a copy distributed to the Risk Management Committee. No employee shall engage in any trading practices that constitute fraudulent, deceptive, or manipulative acts or practices under applicable laws and regulations.

Conduct Violations

Activities constituting violations of conduct include, but are not limited to:

- **Trader to Counterparty Limitations**
 - Trader may not act in an advisory capacity to a counterparty.
 - Derivative risk advice is not to be provided to a counterparty.
 - Scenario or sensitivity analyses may not be provided to a counterparty.
 - Trader may not provide assistance evaluating any type of risk to a counterparty.
 - Trader may not recommend third party Futures Commission Merchant and/or financial advisors to a counterparty.
- **Insider Trading**
 - No Trader shall trade any energy derivatives for personal or third-party benefit. Such derivatives include, but are not limited to: electricity, gas, oil, coal, and emission credits.
- **Inducements**
 - No employee shall offer, solicit, or accept inducements to or from employees or representatives of other institutions in exchange for conducting business.
 - Entertainment and gifts of nominal value offered and accepted in the ordinary course of business do not necessarily constitute inducements.

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- **Proprietary Information**

- All Energy Transaction information acquired during the course of Company business is the sole property of PGE.
- No Energy Transaction information or intelligence gained during the course of Company business may be disseminated without supervisory approval.
- General market observations of the type normally shared with industry publications may be conveyed without prior approval.

- **Conflict of Interest**

No employee engaged in Energy Transactions shall engage in activities constituting a conflict of interest. Such activities include, but are not limited to:

- engaging in Energy Transactions for the employee's benefit and risk;
- independently providing energy trading advice to third parties;
- independently providing energy trading analyses to third parties; and
- independently providing any Energy Transactions Futures Commission Merchant functions to third parties.

- **Rumors**

- Employees shall refrain from spreading rumors or misinformation that the employee knows or believes to be false or misleading.

Disciplinary Actions

Disciplinary actions are necessary to ensure adherence to the policies and Standards of Conduct outlined in this manual. The form of disciplinary action taken will depend on the extent of the violation.

- **Reporting of Violations**

- Violations are to be reported to the party's immediate supervisor and the Sr. Vice President of Power Supply and the Vice President of Finance/Chief Financial Officer/Treasurer. Violations of a significant nature will also be reported to the Risk Management Committee.

- **Sanctions**

- Sanctions in response to a violation will be determined by the Sr. Vice President of Power Supply, the Vice President of Finance/Chief Financial Officer/Treasurer and/or the Risk Management Committee.
- Specific sanctions are to be determined in a case by case manner depending on the severity of the violation.
- Severe violations may result in termination and/or civil action.

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Policy Manual

Policy Review

These policies will be deemed effective upon their formal approval by the Risk Management Committee. Once approved, these policies will be in effect for all employees of PGE. In order to ensure that all necessary employees are aware of these policies, each member of the departments listed below must sign the Certificate of Acknowledgment (included in these policies) and return it to the Internal Trading Controls Manager. See Appendix G for executed Certificates of Acknowledgment.

- Trading and Origination
- Structuring
- RMRC
- Credit

Policy Modifications

All modifications must be approved by the Risk Management Committee and distributed to all staff members required to acknowledge the policies as described in the previous section. Modifications must be acknowledged in the same manner as the original manual.

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Certificate of Acknowledgment

of the

PORTLAND GENERAL ELECTRIC TRADING POLICIES MANUAL

I certify that I have read and understand the Trading Policies Manual for Portland General Electric and agree to abide by the policies set forth in them. I further understand that the rules set forth in this Manual may not be changed without following the procedures set forth therein, and I am bound to follow these rules (and any authorized changes) regardless of any contrary instructions given to me.

Agreed and accepted:

Name

Signature

Date

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