

**EXH. PAH-4C
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: PHILIP A. HAINES**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-240004
Docket UG-240005**

**THIRD EXHIBIT (CONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

PHILIP A. HAINES

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

FEBRUARY 15, 2024



ENERGY SUPPLY TRANSACTION AND HEDGING PROCEDURES MANUAL

APPROVED BY PSE'S ENERGY MANAGEMENT COMMITTEE
ON Oct 23, 2023

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1. CHANGE LOG

Document Owner	Document Approver	Date Issued / Revised
Director, Enterprise Risk Management	Energy Management Committee	10/23/23

Date of Change	Version	Summary of Change	Preparer
5/3/23	1.0	Original Draft for EMC Review	Kyle Stewart
10/18/23	1.1	Draft updated to reflect risk limit changes for 2024	Kyle Stewart

2. INTRODUCTION

Puget Sound Energy, Inc. (PSE or “the Company”) is a regulated gas and electric utility serving retail electric and natural gas customers, primarily in western Washington State. Under the existing state regulatory framework, the Company provides both delivery service and commodity supply to its retail electric and natural gas customers. The Company maintains a Power Portfolio and a Gas Portfolio to meet its customers' energy demand.

The electric supply portfolio (“Power Portfolio”) is composed of PSE-owned generating resources and long-term power supply purchase contracts. In addition, power supply purchases and sales are used to balance supply and demand in the short and medium-term. The fuel supply for the Power Portfolio (considered part of the Power Portfolio) is composed primarily of purchased gas supply and sales contracts associated with managing fuel for the gas-fired generation, gas transportation agreements and gas storage capacity, supplemented with periodic purchases of fuel oil and long-term coal supply contracts. The Gas Portfolio is comprised of purchased gas supply, sales contracts, gas transportation agreements and gas storage capacity. The Power and Gas Portfolios may be collectively referred to as the Energy Portfolio.

The Company’s risk management philosophy is articulated in a separate document called the *Energy Risk Policy* (“Policy”). This *Energy Supply Transaction and Hedging Procedures Manual* (“Procedures”) defines the roles and responsibilities, and outlines guidelines and processes for transactions used in the hedging of PSE’s Energy Portfolio consistent with the *Policy*. Pursuant to the *Policy*, these *Procedures* are approved by the Energy Management Committee (EMC). The *Procedures* address activities and employees in the following functional areas:

- Energy Supply Management (ESM);
- Energy Risk Control, Analytics, and Credit (ERC);
- Energy and Derivative Accounting (EDA);
- Resource Acquisition (RA); and
- Natural Gas Resources (NGR).

The *Procedures* contain references to various authority levels. The approval hierarchy for amendments or updates is as follows:

- 1) Board of Directors;
- 2) EMC;
- 3) Officers with responsibilities under these *Procedures*;
- 4) Director-level employees with responsibilities under these *Procedures*; and
- 5) Traders and other employees with responsibilities under these *Procedures*.

ERC maintains the Policy and Procedures and will make changes as needed during the calendar year to evaluate potential revisions, amendments or updates appropriate to adapt to changes in the industry, the Company’s rate structures, regulatory requirements, Company direction, or

other factors. Additionally, if during the normal course of business, requests are made to the EMC for approval of new strategies, limits, and/or activities that are governed by these Procedures, the request should also include proposed updates to the Procedures to facilitate revisions or updates. The Board of Directors or sub-committee will review changes to these Procedures annually and either approve or reject revisions. Each employee whose activities are covered by these *Procedures* must:

- 1 Read these *Procedures* annually;
- 2 Acknowledge receipt and understanding in writing to ERC; and
- 3 Comply with these *Procedures* and all laws, rules, regulations, and policies applicable to the business contemplated hereunder consistent with the Company's *Corporate Ethics and Compliance Code* and other corporate policies. Violations of these *Procedures* by any employee may be grounds for disciplinary action up to and including termination.

3. ROLES AND RESPONSIBILITIES

ENERGY MANAGEMENT COMMITTEE (EMC)

The Energy Management Committee (“EMC”) is delegated its authority from the CEO. The EMC Charter details the membership, roles, and responsibilities of the EMC. EMC is comprised of the officers noted below as listed in the EMC Charter:

- Executive Vice President & Chief Operating Officer, (Chair);
- Executive Vice President & Chief Financial Officer;
- Vice President Clean Energy Strategy and Planning;
- Vice President, Energy Supply; and
- Director Assistant General Counsel.

Key activities include:

- Reviewing and submitting the *Risk Policy* and *Procedures* annually for the Board of Directors approval;
- Approving intra-year amendments to the *Risk Policy* and *Procedures*;
- Overseeing the *Procedures* (including documenting meeting minutes of decisions made);
- Communicating, seeking guidance, and providing updates and reports as needed to the Board of Directors;
- Ensuring that energy portfolio performance and an account of material policy issues is reported to a sub-committee of the Board of Directors quarterly;
- Ensuring that the necessary resources and tools are in place to achieve all risk management objectives;
- Reviewing the adequacy and the compliance of the established risk tolerance and risk limits;
- Reviewing and assessing the performance and risks of existing strategies and strategy changes;
- Reviewing limits of authority delegated to Management;
- Maintaining adequacy and monitoring of internal control system; and
- Monitoring risk levels, DOA violations, and compliance violations.

Energy Supply Management (ESM)

ESM reports to the VP of Energy Supply and collaborates directly with the ERC and EDA. ESM is composed of Traders, Operators, and Schedulers.

The organization is led by the Director Energy Supply Merchant.

GAS AND POWER PORTFOLIO OPERATIONS

The following Managers lead the execution of business strategies:

- Power Portfolio Manager – Responsible for the day-to-day hedging and position management with respect to Power Generation and power load management;
- Gas Portfolio Manager – Responsible for the day-to-day hedging and position management with respect to Natural Gas hedging;
- Real-time Trading Manager – Responsible for the intra month trading/balancing and dispatch of the generation assets;
- Natural Gas Resources Manager – Responsible for implementing strategies related to natural gas resource activities for PSE;
- Operations Manager – Responsible for the day-to-day functions related to asset performance and reporting;
- Manager Real-Time Trading – Responsible for current trading day position management and interactions with the California Independent System Operator (CAISO) Energy Imbalance Market (EIM); and
- Energy Analysis Manager – Responsible for reviewing the day-to-day trading activity and performing various analytics as directed by ESM management.

Key activities include:

- Managing the Energy Portfolio in accordance with the *Risk Policy* and these *Procedures*;
- Trading activities and energy commodity position management;
- Managing physical operations;
- Consulting with internal stakeholders on potential long-term deals;
- Consulting with the EMC to mitigate exposure and price volatility, and to manage energy supply costs (with the support of ERC); and
- Informing the ERC or EMC of any product needs to provide a more comprehensive hedging solution.

ENVIRONMENTAL PORTFOLIO OPERATIONS:

The Environmental Portfolio operations team manages California Carbon Allowances (CCAs), Washington Carbon Allowances (WCAs), and Low Carbon Fuel Standard (LCFS) credits. PSE utilizes CCAs, WCAs, LCFS credits to meet operational requirements for utilization of green power in support of the state UTC requirements, compliance with the Washington Cap and Invest program, sales into California EIM market, and Renewable Energy Credits (RECs) for PSE's voluntary Green Power programs.

Key activities include:

- Procuring and selling CCAs, WCAs, RECs and LCFS credits on the open market;
- Providing market prices for CCAs, WCAs, RECs and LCFS credits to EDA upon request; and
- Informing ESM management of any regulatory policy possible upcoming changes that can affect the portfolio performance.

CLEAN ENERGY STRATEGY OPERATIONS:

The Clean Energy Strategy team manages Renewable Energy Certificates (RECs). PSE utilizes RECs to meet operational requirements for utilization of green power in support of the state UTC requirements, sales into California EIM market, and PSE's voluntary Green Power programs.

Key activities include:

- Procuring and selling RECs on the open market or in assistance with Environmental Portfolio Operations;
- Providing market prices for RECs to EDA upon request; and
- Informing ESM management of any regulatory policy possible upcoming changes that can affect the portfolio performance.

ENERGY RISK CONTROL (ERC)

ERC reports to the Board of Directors and is composed of a Director of Enterprise Risk Management, a Manager of Energy Risk Control, Analytics and Credit, a Manager of Market Risk and Analytics, and supporting staff.

Key activities include:

- Monitoring the market activities and operations of PSE;
- Maintaining the *Procedures* and reviewing the *Procedures* at least once per year or more frequently as needed;
- Validating trade entry against confirmations;
- Monitoring and reporting on positions and limits;
- Consulting EMC and ESM management when limits are exceeded;
- Informing the appropriate stakeholders of market and credit risk exposures; and
- Compliance reporting.

ENERGY DERIVATIVES ACCOUNTING (EDA)

EDA reports through the CFO organization. EDA is composed of the Director Controller & Principal Accounting Officer, and the Manager Energy and Derivatives Accounting who leads the day-to-day financial accounting for the activities of wholesale supply and trading.

Key activities include:

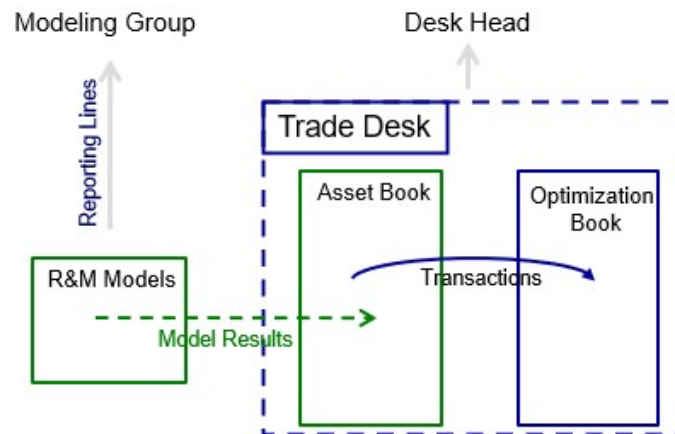
- Ensuring compliance with Generally Accepted Accounting Principles (GAAP);
- Actualizing volume quantities in ETRM systems;

- Managing accounts payable and receivables processes, including preparing invoices and resolving counterparty disputes); and
- Consulting the appropriate stakeholders of any discrepancies from accounts payable and receivable.

4. COMMERCIAL BACKGROUND

4.1 ELECTRIC COMMERCIAL STRATEGY

PSE employs an electric portfolio commercial strategy which seeks to match supply with customer load while optimizing excess generation capacity. This strategy requires the rebalancing of generation assets on a regular basis by buying and selling physical and financial energy instruments. The strategy is composed of two primary books: an Asset Book and an Optimization Book. The objective of the Asset Book is targeted to a price risk-neutral position relative to customer load, net an established reliability reserve, by transacting with the Optimization Book. The objective of the Optimization Book is to manage positions and risk within a defined set of limits as prescribed in the Schedule A – Limits. The graphic below depicts this process.



- ❑ Single Point of Accountability for overall performance
- ❑ Transactions between the Asset and Optimization books are contained within a single reporting line
- ❑ Models are Run and Maintained (R&M) outside the Trade Desk. Results are delivered from the Modeling Group to the Trade desk
- ❑ Separate Competences (Modeling and Trading)

4.2 BOOK STRUCTURE

Deals will utilize the book / portfolio / master book fields within the system of record (as defined in procedure 6.2 Deal Capture) to indicate which trade book and sub-book they are associated with.

PSEE – PUGET SOUND ENERGY ELECTRIC

The PSEE book includes exposures related to PSE’s power generation assets. Price risk exposures are calculated in the ETRM system at least weekly and are transferred inter-book to the Optimization sub-book as financial swaps.

The PSEE book includes sub-books which are defined by generation type and associated hedging strategy, and further defined based on attributes including pricing type (e.g., fixed or index price, etc.) or instrument type (e.g., physical or financial, etc.).

SUB-BOOK (PORTFOLIO) NAME	DEFINITIONS	AUTHORIZED MODELS & TRANSACTIONS
GAS FIRED GENERATION (GFG)	CONTRACTS AND TRANSACTIONS RELATED TO PSE-OWNED NATURAL GAS-FIRED GENERATION (GFG) ASSETS	<ul style="list-style-type: none"> GFG ASSETS MODELED RISK-NEUTRAL POSITIONS WITH NATURAL GAS AND POWER HEDGES MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
COAL GENERATION	CONTRACTS AND TRANSACTIONS RELATED TO PSE-OWNED COAL-FIRED GENERATION ASSETS	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS POWER TRANSACTIONS (E.G., TRIGGERED BY PLANT OUTAGES ETC.)
HYDRO GENERATION	CONTRACTS RELATED TO HYDRO RESOURCES, WHETHER PSE-OWNED OR CONTRACTED	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
WIND GENERATION	CONTRACTS RELATED TO WIND RESOURCES, WHETHER PSE-OWNED OR CONTRACTED	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
OPEN TRANSACTIONS	EMC-APPROVED POWER AND GAS TRANSACTIONS TO MEET LOAD OR REDUCE EXPOSURES	<ul style="list-style-type: none"> POWER TRANSACTIONS GAS TRANSACTIONS
OPERATIONS TRANSACTIONS	EMC APPROVED POWER AND GAS TRANSACTIONS FOR PEAK SEASON PLANNING OR OTHER OPERATIONAL NEEDS	<ul style="list-style-type: none"> POWER TRANSACTIONS GAS TRANSACTIONS
TRANSPORT ASSET	MODELED CONTRACTS FOR TRANSPORT ASSETS	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
CONTRACTS	LONG-TERM, FIXED-PRICE AND FIXED-VOLUME CONTRACTS	<ul style="list-style-type: none"> SCHEDULE 915 PURPA CONTRACTS

		<ul style="list-style-type: none"> PPAS INTER-BOOK HEDGES
LOAD	SIMULATED ELECTRIC LOADS BASED ON THE OFFICIAL FORECASTS	<ul style="list-style-type: none"> POWER "SHORT" POSITIONS FROM MODELED LOAD FORECASTS INTER-BOOK HEDGES WITH THE SUB-BOOKS IN THE ASSET BOOK.
STORAGE	MODELED CONTRACTS FOR STORAGE ASSETS	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
BATTERY	MODELED CONTRACTS FOR BATTERY ASSETS	<ul style="list-style-type: none"> MODELED RISK-NEUTRAL EQUIVALENT POSITIONS
ASSET HEDGES	EMC-APPROVED POWER AND GAS TRANSACTIONS TO MEET LOAD, REDUCE EXPOSURES, PEAK SEASON PLANNING, OR OTHER OPERATIONAL NEEDS FOR POSITIONS NOT IN THE OPTIMIZATION BOOK.	<ul style="list-style-type: none"> POWER TRANSACTIONS GAS TRANSACTIONS
OPTIMIZATION BOOK (NET ASSET EXPOSURE)	NET AGREED UPON EXPOSURES INTER-BOOKED FROM THE ASSET BOOK.	<ul style="list-style-type: none"> INTER-BOOK TRANSACTIONS REPRESENTED AS FINANCIAL POWER OR GAS SWAPS AT DELIVERY LOCATIONS AS DEFINED IN APPENDIX II
OPTIMIZATION BOOK (HEDGES)	HEDGE TRANSACTIONS FOR INTERBOOKED POSITIONS.	<ul style="list-style-type: none"> APPROVED TRANSACTIONS AS NOTED IN APPENDIX II

PSE GAS BOOK (PSEG)

The Gas book contains the trading activities for PSEG. It is maintained against specific sub-books that are defined by gas strategy type and associated hedging strategy and further defined based on attributes including pricing type (i.e., Fixed or Index price) or instrument type (i.e., physical or financial):

SUB-BOOK (PORTFOLIO) NAME	DEFINITIONS	AUTHORIZED MODELS & TRANSACTIONS
STORAGE ASSET	MODELED CONTRACTS FOR OWNED AND CONTRACTED GAS STORAGE ASSETS	<ul style="list-style-type: none"> MODELED STORAGE CONTRACTS
TRANSPORT ASSET	MODELED CONTRACTS FOR CONTRACTED TRANSPORT ASSETS	<ul style="list-style-type: none"> MODELED TRANSPORT CONTRACTS

OPEN TRANSACTIONS	EMC APPROVED NATURAL GAS TRANSACTIONS TO MEET LOAD, REDUCE EXPOSURES AND/OR OPTIMIZE PORTFOLIO PERFORMANCE	<ul style="list-style-type: none"> • GAS TRANSACTIONS
SUPPLY TRANSACTIONS	EMC APPROVED NATURAL GAS TRANSACTIONS FOR PEAK SEASON PLANNING OR OTHER SUPPLY NEEDS	<ul style="list-style-type: none"> • PHYSICAL GAS TRANSACTIONS
TRANSPORT TRANSACTIONS	EMC APPROVED NATURAL GAS TRANSACTIONS TO LEVERAGE LOCATIONAL SPREAD AND OPTIMIZE PORTFOLIO PERFORMANCE	<ul style="list-style-type: none"> • GAS TRANSACTIONS
STORAGE TRANSACTIONS	EMC APPROVED NATURAL GAS TRANSACTIONS TO LEVERAGE THE TIME SPREAD OF THE STORAGE ASSETS AND OPTIMIZE PORTFOLIO PERFORMANCE	<ul style="list-style-type: none"> • GAS TRANSACTIONS
LOAD	SIMULATED FIRM AND INTERRUPTIBLE LOADS BASED ON THE OFFICIAL FORECASTS	<ul style="list-style-type: none"> • GAS "SHORT" POSITIONS FROM MODELED LOAD FORECASTS

4.3 OPERATIONAL ACTIVITIES

PORTFOLIO HEDGING

The Optimization book functions as hedge book for managing the net exposure from the Asset book. Transactions in the Optimization book consist of forward positions to optimize asset value and manage the associated market risk, in-line with approved limits outlined in Appendix I.

Key portfolio hedging activities include:

- Executing inter-book transactions with agreed upon instruments, volumes, and transfer pricing;
- Adhering to approved risk limits and products as defined in Appendix 1;
- Consulting appropriate stakeholders (ERC, EMC) on intra-week market movements that can cause large pricing changes; and
- Informing appropriate stakeholders (ERC, EMC, EDA) of new products approval requests or changes in market fundamentals.

INTRAMONTH POWER OPERATIONS

Intramonth Power Operations includes day-ahead and balance-of-month power transactions in short-term markets to manage power costs and balance the Power Portfolio.

Key intramonth power operations activities include:

- Consulting appropriate stakeholders (ERC, EMC) on intramonth market movements that can cause large pricing changes; and
- Informing appropriate stakeholders (ERC, EMC, EDA) of new product approval requests or changes in market fundamentals.

REAL-TIME POWER OPERATIONS

Real-time Power Operations forecasts short-term load and economically balances the hour-to-hour customer loads and resource generation.

Key Real-time Power Operations activities include:

- Assessing Company resources to ensure reliability and availability of economic dispatch;
- Preparing, updating and submitting necessary power schedules and required NERC tags to appropriate parties for all Real-time transactions (Real-time Power Operations participates in the intra hour CAISO EIM market and submits bids and base schedules);
- In the event of any real time operational issues, traders are consulted to assess any market or reliability impacts; and
- Informing appropriate stakeholders (EDA, EMC, ESM, ERC) of impactful real-time events.

ENVIRONMENTAL PORTFOLIO OPERATIONS

Traders in ESM manage environmental asset portfolios, including CCAs, WCAs, and LCFS credits.

Key activities include:

- Executing approved transactions consistent with EMC approved strategies and originating portfolio hedging strategies for environmental assets.
- Negotiating and originating commercial transactions for environmental assets;
- Serving as the main consultant to address any environmental changes expected to affect operations; and
- Informing internal stakeholders as environmental changes impact portfolio operations.

NATURAL GAS RESOURCES (NGR)

NGR manages and implements strategies related to natural gas resource activities for PSE, including Canadian and US pipeline rates and tariffs proceedings, resource planning, and additions to PSE's Energy Portfolio.

Key activities include:

- Coordinating and communicating transactions and acquisitions with ERC and ESM via email;
- Authorizes or assigns traders to facilitate transaction capture within the ETRM Systems; and
- Consulting with EDA when considering a transaction that gives PSE the right to use, operate, and direct others to operate or control access to property plant and equipment (the transaction may meet the criteria for a lease under ASC 842).

5. PRE-TRANSACTION PROCEDURES

These procedures use RACI terminology to tie groups and functions to individual procedures. RACI reflects the following terms: **Responsible (R)**, **Accountable (A)**, **Consulted (C)**, and **Informed (I)**. These terms are defined as follows:

- **Responsible** – A person, group, or function completes a process;
- **Accountable** – A person, group, or function signs off on the completion of a process;
- **Consulted** – A person, group, or function serves as a subject matter expert for a process; and
- **Informed** – A person, group, or function is kept apprised of the progress and completion of a process.

Every procedure will have one **accountable** party and at least one **responsible** party. Procedures will include **consulted** and **informed** parties as necessary.

5.1 STRUCTURED CONTRACT PRE-DEAL ANALYTICS

RACI	EMC	ESM	ERC	EDA
Structured Contract Pre-Deal Analytics	I	A/R	C/I	C/I

Prior to executing a structured contract:

- ESM is **accountable** for ensuring a pre-deal analysis is conducted;
- ESM is **responsible** for reviewing market fundamentals;
- ESM is **responsible** for assessing market liquidity and volatility and potential deal impact to portfolio;
- ESM **consults** ERC and EDA to discuss any contractual language for embedded optionality and associated risks on potential hedging transactions.; and
- ESM **informs** all pertinent stakeholders, including EMC, ERC, and EDA, of any approvals needed or obtained prior to entering hedging transactions.

5.2 PRE-DEAL REVIEW & APPROVAL

RACI	EMC	ESM	ERC	EDA
Pre-Deal Review and Approval		A/R	C	

Prior to executing any contract:

- ESM is **accountable** for ensuring that all pre-trade criteria are met prior to entering a transaction;
- ESM is **responsible** for confirming counterparty approval status;
- ESM is **responsible** for submitting the Know-Your-Customer (KYC) form and "On-boarding Form" if the counterparty is not approved;

- ESM is **responsible** for validating that the counterparty has sufficient available credit;
- ESM is **responsible** for reviewing the risk and tenor limits at the transaction and portfolio-level pre- and post-transaction;
- ESM is **responsible** for ensuring that the transaction is within approved DOA; and
- ESM **consults** ERC for new counterparties, credit limit extensions, or DOA exceptions.

For new counterparties, refer to procedure 5.3 Counterparty Onboarding.

For counterparty credit extensions, refer to procedure 5.5 Credit Review & Approval.

For DOA exceptions, refer to procedure 5.6 Delegation of Authority.

5.3 COUNTERPARTY ONBOARDING

COUNTERPARTY DUE DILLIGENCE

RACI	EMC	ESM	ERC	EDA
Counterparty Due Diligence	I	I	A/R	I

Prior to approving counterparty credit:

- ERC is **accountable** for ensuring appropriate due diligence is conducted for each new counterparty;
- ERC is **responsible** for reviewing customer on-boarding forms including the Know-Your-Customer (KYC) form that are submitted by ESM;
- ERC is **responsible** for conducting due diligence including researching anti-corruption and compliance with US and international trade regulations;
- ERC is **responsible** for conducting initial assessment of risk that a potential counterparty will engage in money laundering, terrorist financing, identity theft, and other criminal activities;
- ERC is **responsible** for providing input into the initial provisioning of credit. (See the Credit Risk Policy for relevant credit approval procedures);
- ERC is **responsible** for approving any additions or modifications to the authorized broker list in advance of any transactions with new brokers.;
- ERC **informs** ESM and EDA of counterparty onboarding completion; and
ERC **informs** the EMC, ESM, and EDA on significant credit events and changes to counterparty credit.

COUNTERPARTY SYSTEM SET UP

RACI	EMC	ESM	ERC	EDA
Counterparty System Set Up		I	A/R	I

Following the completion of counterparty due diligence:

- ERC is **accountable** for ensuring that approved counterparties are setup in the requisite risk systems;
- ERC is **responsible** for linking counterparty credit limits to counterparty master data to enable effective monitoring of exposure versus limits. This includes netting provisions;
- ERC is **responsible** referencing the existing counterparty database prior to system set-up of a counterparty to prevent duplicate entity entry;
- ERC **informs** ESM, EDA once the setup process is completed and approved; and
- ERC is **responsible** for performing an annual review of the counterparty database to update relevant data (e.g., name and address) and incorporating merger and acquisition effects (e.g., deleting or merging entities).

5.4 CONTRACT ADMINISTRATION

PSE routes standard contracts (e.g., ISDA, WSPP, NAESB, etc.) to ERC for approval, while non-standard contracts (e.g., PPAs, offtake agreements, etc.) are routed to the EMC for approval.

STANDARD CONTRACT APPROVAL

RACI	EMC	ESM	ERC	EDA
Standard Contract Approval		R/I	A/R	

Prior to entering a new standard contract:

- ESM is **responsible** for documenting key transaction details from negotiation with the counterparty;
- ESM is **responsible** for reviewing contractual terms with PSE legal and other appropriate internal stakeholders;
- ERC is **responsible** for reviewing terms and conditions of new contracts and enabling agreements (such as ISDAs, NAESBs and WSPPs) and providing commentary;
- ERC is **responsible** for communicating the commentary to PSE legal and internal stakeholders;
- ERC is **accountable** for approving or rejecting the commercial terms and conditions for new agreements; and
- ERC **informs** ESM when a contract or enabling agreement is approved.

A list of approved signatories is provided in the Appendix C of the Risk Policy.

NON-STANDARD CONTRACT APPROVAL

RACI	EMC	ESM	ERC	EDA
Non-Standard Contract Approval	A	R/I	A/R	

Prior to entering a new non-standard contract:

- ESM is **responsible** for documenting key transaction details from negotiation with the counterparty;

- ESM is **responsible** for reviewing contractual terms with PSE legal and other appropriate internal stakeholders;
- ERC is **responsible** for reviewing terms and conditions of new contracts and enabling agreements (such as ISDAs, NAESBs and WSPPs) and providing commentary;
- ERC is **responsible** for communicating the commentary to PSE legal and internal stakeholders;
- ERC is **accountable** for identifying the contract as non-standard and routing it to the EMC for approval.
- EMC is **accountable** for approving or rejecting the commercial terms and conditions for new non-standard agreements; and

A list of approved signatories is provided in the Appendix C of the Risk Policy.

CONTRACT ADMINISTRATION

RACI	EMC	ESM	ERC	EDA
Contract Administration		R/I	A/R	

After a contract is signed:

- ERC is **accountable** for ensuring action is taken to maintain compliance with contract terms and conditions;
- ERC is **accountable** for ensuring enabling contracts are signed and stored in the appropriate contract management system;
- ERC is **responsible** for ensuring credit guarantees are electronically stored in the appropriate system and included in exposure and margin calculations;
- ERC is **responsible** for monitoring the status of outstanding enabling contracts and follow-up with counterparties;
- ERC **informs** ESM of any counterparties that are non-compliant with contract terms;
- ESM is **responsible** for working with counterparties to help resolve contract non-compliance; and
- ERC is **responsible** for tracking enabling contract expirations and renew or cancelling contracts approaching expiry as necessary.

5.5 CREDIT REVIEW & APPROVAL

Credit is assigned for each counterparty at the time of on-boarding. Bilateral counterparty credit risk is managed by selecting highly rated entities, conducting on-going credit reviews, and monitoring collateral requirements. Available credit is impacted by the aggregate exposure with a counterparty and can be revised at any point due to changes in credit standing, risk profile changes, or business needs.

CREDIT LIMIT SETTING

RACI	EMC	ESM	ERC	EDA
Credit Limit Setting	(A)	I	A/R	

As part of the counterparty on-boarding process:

- ERC is **accountable** for approving credit limits consistent with the credit limit authorities for transactions established in the Credit Risk Policy;
- EMC is **accountable** for approving credit limits for
 - Any credit limit with terms greater than 3 years,
 - Any credit limit greater than \$50,000,000 US Dollars, and
 - Any credit limit equal to or larger than 7.5% of PSE’s total counterparty portfolio exposure;
- ERC is **responsible** for determining what credit mitigants, if any, are necessary (e.g., collateral postings for bilateral trades, etc.);
- ERC is **responsible** for updating credit limits in the applicable systems; and
- ERC **informs** ESM of credit limit utilization by distributing associated reports (refer to the Credit Risk Policy for additional details).

No transactions will be executed until ERC has authorized a counterparty and established appropriate limits.

CREDIT CONTROLS

RACI	EMC	ESM	ERC	EDA
Credit Controls		I	A/R	

As part of the continuous credit monitoring process:

- ERC is **accountable** for ensuring that counterparty credit is regularly updated;
- ERC is **responsible** for reviewing active counterparties with MTM exposures at least annually to ensure risk ratings and credit limits are appropriate;
- ERC is **responsible** for completing additional ad-hoc reviews of counterparty credit status or when credit support has changed; and
- ERC **informs** the EMC of significant credit events.

Additional details related to the PSE credit risk management can be found in the Credit Risk Policy.

5.6 DELEGATIONS OF AUTHORITY

Delegation of Authority (“DOA”) is the formal transfer of authority as defined in the Appendix D of the *Risk Policy*, and within limits defined in Schedules B and C of this document.

AUTHORIZED TRANSACTIONS

RACI	EMC	ESM	ERC	EDA
Authorized Transactions		A	A/C	

Prior to entering any transactions:

- ESM is **accountable** for validating that the transaction is authorized, per the appropriate risk limits and DOA;
- If a proposed transaction exceeds risk limits, ESM **responsible** for securing a Limit Exception;
- If a proposed transaction is not within the approved DOA, ESM is **responsible** for
 - Securing a contingent DOA, or
 - Receiving approval to permanently add the transacted commodity to their DOA; and
- ESM **consults** with ERC to confirm whether a transaction is within their DOA.

LIMIT EXCEPTIONS

RACI	EMC	ESM	ERC	EDA
Limit Exceptions	A/C	R	R/C	C

Prior to executing a proposed transaction that is outside of approved limits:

- ESM is **responsible** securing a limit exception prior to executing the transaction;
- ESM **consults** with ERC, EDA, and the Director of Energy Supply Management to understand the commercial risks associated with the transaction;
- ESM **consults** with Legal Counsel, the Manager of State and Regional Government Affairs, the Manager of Federal and Regional Policy, the Tax Director, and EMC Authorization to understand the regulatory or tax risks associated with the transaction;
- ESM is **responsible** for documenting any specific commercial, regulatory, or tax considerations/risks;
- ESM is **responsible** for presenting a proposed transaction business case to the EMC including demonstrating the consultations described above, and requesting authorization for the Proposed Transaction(s) and/or amendment of Schedule A;
- EMC is **accountable** for accepting or rejecting the proposed transaction based on the business case.

CONTINGENT DOA

Contingent DOA is the temporary transfer of DOA to other personnel. Contingent DOA transfer must be delegated to personnel with approved DOA equal to or greater than the grantor's.

RACI	EMC	ESM	ERC	EDA
Contingent DOA		A/R	R/C	

Prior to granting contingent DOA:

- The Director of ESM is **accountable** for assessing contingent DOA requests;
- The Director of ESM **consults** with the EMC on the risks associated with the request;
- The Director of ESM is **responsible** for approving or denying contingent DOA requests in writing, including the length of the approval, not to exceed 10 business days; and
- The EMC is **responsible** for approving extended contingent DOA beyond 10 business days. The written approval must specify the approval length and nature of the approval. Contingent delegation of authority should not be permanently delegated to a subordinate.

DOA REVISION DOCUMENTATION

RACI	EMC	ESM	ERC	EDA
DOA Revisions Documentation	A/R	I	I	I

Prior to permanently revising DOA:

- EMC is **accountable** for overseeing permanent changes to the DOA;
- EMC is **responsible** for documenting via email all authorizations and approves and amends in Schedules A and B; and
- EMC **informs** ESM, ERC, and EDA of revisions and providing an updated copy of Schedules A and B.

6. TRANSACTION DATE PROCEDURES

6.1 DEAL EXECUTION

STRATEGY MEETING

RACI	EMC	ESM	ERC	EDA	RA	NGR
Strategy Meeting		A/R			C	C

Prior to executing a transaction:

- The ESM Director is **accountable** for ensuring that traders are operating in-line with transaction and hedging strategies;
- The ESM Director is **responsible** for conducting a daily strategy meeting to share market information, review positions, and assess strategic direction; and
- The ESM Director **consults** with the Directors of Resource Acquisition, Generation, and Natural Gas Resources, to take into account any forecasted commercial transaction commitments with plant maintenance and operations.

TRANSACTION EXECUTION

RACI	EMC	ESM	ERC	EDA
Transaction Execution		A/R		

When executing a transaction:

- ESM is **accountable** for ensuring that all transactions are consistent with PSE's principles, limits, and prevailing tariffs, laws, and regulations, and represent PSE in a manner consistent with PSE's Corporate Ethics and Compliance Program;
ESM is **responsible** for executing a transaction only if it has a valid business purpose;
- ESM is **responsible** for initiating new contracts with counterparties under EMC approved guidelines, providing customer on-boarding form and Know-Your-Customer form as required by ERC;
ESM is **responsible** for conducting business only through authorized exchanges, approved bi-lateral counterparties, and with authorized brokers only; and
- ESM is **responsible** for executing and processing power, natural gas, and environmental transactions in accordance with flowcharts established as part of the SOX Section 404 reporting requirements adopted by the Company.

PSE personnel will **NOT**:

- Enter into “wash” or “round trip” trades or transactions (offsetting purchase and sale transactions entered into simultaneously with the same counterparty, at the same location for the same delivery period which serve no valid business purpose);
- Submit any false or misleading nominations or schedules to any pipelines, transmission providers or other third parties effecting the transmission of energy;
- Enter into pre-arranged transactions that assist other companies in transacting with each other, to the degree that direct transactions between those parties would be prohibited by law or regulation;
- Act as a Credit Sleeve provider;
- Enter into transactions to receive compensation for services it does not have the ability to provide (e.g., transactions for spinning reserves or congestion relief for which it does not have the appropriate tariff on file, etc.);
- Enter into simultaneous exchanges or circular schedules without the prior approval of the ESM Director and prior review and approval of the PSE legal and compliance groups;
- Conduct any commercial activity prohibited by any of PSE’s existing policies; or
- Conduct any commercial activity prohibited by law, regulation, or exchange rule.

INTER-BOOK PROCEDURES

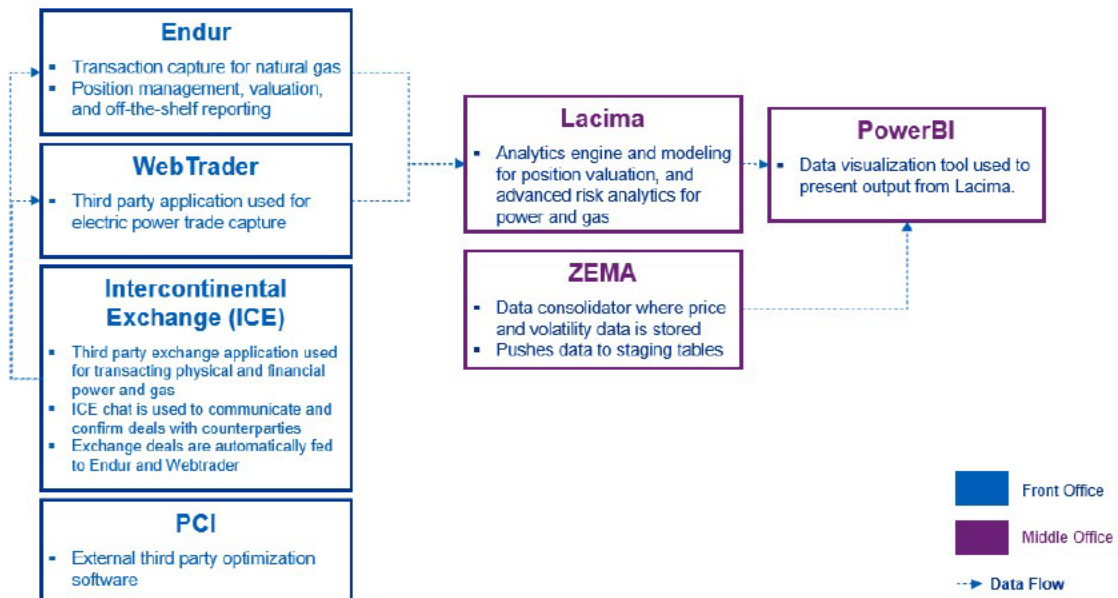
RACI	EMC	ESM	ERC	EDA
Inter-book Procedures	R	R	A/R	

Actively managed exposures are transferred from the Asset book to the Optimization book as follows:

- ERC is **accountable** for ensuring that exposures in excess of hedge reserves are regularly inter-booked from the Asset book to the Optimization book;
- ERC is **responsible** for generating a weekly report that details risk-neutral exposures available for inter-book, including:
 - Predefined tranches for the rate year;
 - Weekly inter-books based on updated asset risk-neutral exposures.
- ERC will **consult** ESM to determine reasonable transfer volumes and prices;
- ERC is **responsible** for determining final transfer volumes and prices for inter-book transactions;
- ESM is **responsible** for entering the inter-book transactions;
- ERC is **responsible** for confirming the inter-book transactions match the agreed-upon volumes and prices.

6.2 DEAL CAPTURE

PSE’s commercial transaction capture and risk systems are illustrated below:



DEALS ORIGINATING INSIDE ESM

RACI	EMC	ESM	ERC	EDA
Deals Originating Inside ESM		A/R	R/C/I	C

When entering an ESM-originated transaction into an ETRM system:

- ESM is **accountable** for deal entry integrity including the completeness and accuracy of required fields and data inputs;
- ESM is **responsible** for entering transactions into the system of record in a timely manner, not exceeding end of day, and sooner if an automated data feed exists or the exchange or regulatory rules require deal entry before end-of-day;
- ESM is **responsible** for clearly and completely documenting transactions at the time of entry into the ETRM systems, with the following fields required of all transactions at a minimum:

REQUIRED DEAL ENTRY FIELDS	
TRANSACTION ID	COUNTERPARTY TRADER, CONFIRMATION, AND SETTLEMENT CONTACT INFORMATION
TRADE DATE	PSE TRADER NAME
TIME STAMP	BUY / SELL INDICATOR
COMMODITY TYPE	DEAL TERM
PRODUCT	VOLUME (INCLUDING MIN/MAX OBLIGATIONS)

INSTRUMENT	VOLUME TYPE (DAILY, MONTHLY)
LOCATION (SPECIFIC NODES FOR POWER, AND PIPELINE RECEIPT / DELIVER POINTS FOR GAS)	PRICE OR PREMIUM / DISCOUNT
COUNTERPARTY LEGAL ENTITY NAME	PRICING BASES AND REFERENCE FOR FLOATING PRICES AND FORMULAIC TRANSACTIONS
BOOK / MASTER BOOK	UNIT OF MEASURE
CURRENCY	PRICE TYPE (FIXED, BASIS, INDEX)
BROKER NAME	FEES (BROKER, EXCHANGE, ETC.)

- ESM is **responsible** for utilizing the appropriate deal entry templates based upon commodity and instrument in the respective systems;
- ESM is **accountable** for deal capture or causing deal capture of EMC approved non-standard agreements that originate within ESM (e.g. PPAs, etc.)
- ESM will **inform** ERC of any transactions that cannot be captured in the corresponding ETRM system;
- The Director of ESM and ERC are **responsible** for determining how to resolve transactions that cannot be captured in an ETRM system;
- ESM is **responsible** for documenting and maintaining any off-system storage rates, transport costs, transmission, or other secondary costs;
- ESM **consults** ERC and EDA to ensure proper recording of fees, trade records, documenting all relevant commercial terms.

The intentional entry of incorrect information to effectuate a transaction is a serious violation and requires escalation per Appendix III of these Procedures.

All amendments after a transaction ID is assigned will be tracked and reviewed by ERC. See Section 6.3 Deal Amendments / Cancellations for the deal amendment processes.

DEALS ORIGINATING OUTSIDE OF ESM

RACI	EMC	ESM	ERC	EDA
Deals Originating Outside of ESM		R	A/R	

When entering a non-ESM originated transaction into an ETRM system:

- ERC and ESM is **accountable** for deal capture of contracts and obligations that originate outside of ESM (e.g., PPAs and Biogas contracts);
- ESM is **accountable** for assigning an Creator who is entering the deal on behalf of the deal maker (also referred as "Trader" or "Executing Trader" in Web Trader);
- ERC is **responsible** for ensuring the required deal entry field are completed within the trading systems and in accordance with the table below;
- If tracking actualized quantities (MWh) and settlements is required through the ETRM systems, ESM is **responsible** for entering the deal in the ETRM systems;

- If settlements are not required via the ETRMs trading systems, ERC is **responsible** for entering the deal in the risk management engine, Lacima, for modelling;
- In addition to the standard required deal entry fields, ESM is **responsible** for completing the following fields for all transactions originating outside of ESM:

REQUIRED DEAL ENTRY FIELDS	
DEAL TYPE	CREATOR (REFERRING TO THE AUTHORIZED TRADER WHO IS ENTERING THE DEAL ON BEHALF OF THE DEAL MAKER)
TYPE (FINANCIAL OR PHYSICAL)	FAS TRANSACTION TYPE (CHECK WITH EDA FOR ACCOUNTING TREATMENT THAT HAS BEEN DETERMINED AFTER REVIEW OF THE AGREEMENT.) "OTHER" TYPICALLY FOR BALANCE OF MONTH (BOM) TRANSACTIONS.
BOOK/MASTER BOOK (UNDERSTAND THE IMPACT TO LACIMA)	APPROVED BY (RMC WILL BE THE SELECTION FOR PPAS)
CONTRACT (USE APPROPRIATE CONTRACT TO MATCH THE TRANSACTION)	PORTFOLIO NAME (MOST PPAS WILL BE UNDER PSEE.LT CONTRACTS)
TRADER AND EXECUTING TRADER * (REFER TO DEAL MAKER'S NAME)	RMC HEDGE NO. – OBTAIN CORRECT HEDGE TRACKING NUMBER FOR THE DEAL

- For PPAs, if the contract requires settlement and actualization within the power trading system, ESM is **responsible** for entering the deal in TERM/Market-Term book so that it will flow into Lacima and Futrak.
- ESM is **responsible** for entering PPAs into WebTrader only when
 - The PPA is under a WSPP Agreement (which doesn't require modeling and will flow through to Lacima), or
 - The PPA is outside PSE's BAA (for scheduling and billing purpose and will not flow through to Lacima as it is under non-standard term book);
- ERC is **responsible** for entering PPAs into Lacima when
 - Long term contracts are within PSE's BAA (e.g., Schedule g1, certain other PPAs, etc.), excluding WSPP contracts which are entered based on internal/external forecasts, or
 - Projects that require modeling, regardless of whether it is within PSE's BAA (e.g., wind, hydro, thermal etc.);
- For deals that do not need to flow to Lacima, ESM is **responsible** for entering the deal in TERM/Non-Standard Contract-Term book within WebTrader; and
- ESM is **responsible** for entering deals in both WebTrader when the non-WSPP PPAs are outside of BAA.

Long-term resource acquisition deals are not always entered on the day of execution but are required prior to any actual flows or settlements.

INTRACOMPANY TRANSACTIONS BETWEEN PSEE AND PSEG

RACI	EMC	ESM	ERC	EDA
Intracompany Transactions Between PSEE and PSEG		A/R	R	

When entering an intracompany transaction:

- ESM is **accountable** for ensuring the transaction is entered according to the procedures described in the above sections;
- ESM is **responsible** for entering the transaction into ETRM systems at prevailing market prices including transportation or storage fees, as applicable; and
- ESM is **responsible** for ensuring that the value of intercompany transactions net to zero.
- ERC is **responsible** for reviewing intracompany transactions to validate that deal pricing is conducted at an “arm’s length” price.

PSEE is under no obligation to contract with PSEG, and PSEG is under no obligation to contract with PSEE, but each may elect to do so if a transaction is mutually beneficial. All transactions must be conducted at an “arm’s length” .

6.3 DEAL AMENDMENTS / CANCELLATIONS

RACI	EMC	ESM	ERC	EDA
Deal Amendments / Cancellations			A/R	

Prior to modifying a transaction:

- ERC is **accountable** for validating that the trade amendment or cancellation does not circumvent a control or risk limit either at original deal execution (under the amended terms) post amendment;
- ERC is **responsible** for tracking modifications to trades after a deal ID has been assigned;
- ERC is **responsible** for cataloging amendments / cancellations, including the effect to commercial terms and P&L.

6.4 OUT OF OFFICE TRANSACTION POLICY

RACI	EMC	ESM	ERC	EDA
Out of Office Transaction Policy	A	R	I	

Prior to executing a transaction while out of office:

- ESM Trader is **responsible** for ensuring that out of office transactions are conducted within the DOA of the Trader;
- EMC is **accountable** for approving or denying changes to out-of-office transactions policies;
- ESM is **responsible** for conducting the transaction using an approved method of communication (see 6.7 Compliance Monitoring); and

- If the transaction was conducted offsite, ESM is **responsible** for ensuring the transaction is captured into the ETRM system as described in 6.2 Deal Entry.

6.5 CONFIRMATIONS

RACI	EMC	ESM	ERC	EDA
Confirmations	I	R/C/I	R/A	

A confirmation is a document sent by one party to the other to memorialize the terms of a transaction. PSE requires that counterparties submit confirmations when appropriate. There are no confirmations for day-ahead, balance of the month or real time markets. For all other transaction types:

- ERC is **accountable** for ensuring that confirmations match the terms in the ETRM system;
- If any discrepancies exist, ERC **consults** the executing ESM trader and the counterparty to resolve the issue;
- ERC is **accountable** for recording each incoming confirmations as it is received updating the confirmations aging report;
- ERC is **responsible** for archiving the confirmation in the requisite system of record;
- When appropriate, ERC is **responsible** for confirming that the counterparty received PSE's confirmations;
- If a counterparty contacts ERC with a discrepancy, ERC is **responsible** for working with the counterparty to resolve the issue;
- If ERC cannot resolve the discrepancy, ERC **consults** the original ESM Trader to ensure a resolution is reached with the counterparty;
- If no confirmation has been received from the counterparty within 2 business days for qualifying transaction types, ERC is **responsible** for following up with the counterparty; and
- If no confirmation is received within 5 business days, ERC is **responsible** for sending a new confirmation using a predefined template and requests counterparty acknowledgement in a timely fashion.
- If the ERC does not receive acknowledgement from the counterparty, the ERC will **inform** the EMC and ESM and determine a course of action, up to cancelling the trade.

6.6 TRADE VALIDATION

RACI	EMC	ESM	ERC	EDA
Trade Validation		A/R/C	R/I	

After a transaction has been entered into ETRM systems:

- ERC is **responsible** for validating the accuracy of trade data entered into ETRM systems;
- ERC **consults** ESM for any supplemental data necessary to validate the accuracy of trade data;

- ERC is **responsible** for producing daily transaction reports summarizing transactions entered into ETRM systems;
- ESM is **responsible** for reviewing daily transaction reports;
- ESM is **accountable** for the attesting that the deals they entered into ETRM systems match the commercial terms of the deals executed;
- ERC is **responsible** for conducting an end-of-day system review for deal entry completeness and accuracy, including validating that all trades entered in a day were executed the same day;
- If a transaction record is incomplete or inaccurate, ERC is **responsible** for notifying the ESM Trader and confirming the completion / correction of the record;
- ERC is **responsible** for validating the corrected transaction are within the approved DOA and risk limits;
- If a trade is unauthorized or limits are breached, ERC is **responsible** for notifying the ESM Director for resolution, up to and including unwinding the transaction;
- ERC is **responsible** for maintaining deal entry statistics and evaluating trends, including deal entry errors analyzed for frequency, severity, and root cause to facilitate process improvement; and
- ERC **informs** EMC of any material trade entry issue by providing a summary report at the next scheduled meeting.

6.7 COMPLIANCE MONITORING

Compliance Monitoring involves monitoring trading activities and data, and analyzing both for Prohibited Transactions or other indications of misconduct. The scope of surveillance activities includes the review of trade and transactional data as well as electronic and audio communication. Additional details on compliance monitoring can be found in the PSE Front Office Compliance Audit Procedure document.

APPROVED METHODS OF COMMUNICATION

RACI	EMC	ESM	ERC	EDA
Approved Methods of Communication		R/C		

To ensure that all transactions are reviewable, the methods of communication are limited as follows:

- ESM traders are **responsible** for ensuring all PSE transactions that are orally-agreed will be confirmed on a recorded telephone line during PSE business operating hours. Phone records of traders and schedulers are recorded and archived by VPI Empower;
- Exceptions to this rule during regular business operating hours may occur for unusual circumstances (e.g., malfunction of the recording equipment, facility closure, etc.), but the ESM trader is **responsible** for consulting the ESM Director as soon as possible and the transaction will be subsequently confirmed on a recorded line;

- In the event transactions must be entered into outside of PSE business operating hours for purposes of balancing PSE’s Power or Gas Portfolios, the ESM trader is **responsible** for confirming the transaction again with the counterparty on a recorded line the following business day;
- During extreme events (e.g., extended facility closure due to pandemic or other acts of God), the ESM trader is **responsible** for requesting permission from the ESM Director to use other recording method such as ICE chats (archived by Global Relay), Cloud 9 for broker calls, emails and/or other means deemed acceptable by ESM compliance team in the future;
- ESM traders are **responsible** for ensuring all PSE transactions that are entered into on an electronic exchange such as ICE, Web Exchange, or Cloud 9 shall be documented by uploading the transaction record information into the PSE system of record (WebTrader or Endur, as applicable); and
- ESM traders are **responsible** for ensuring all PSE transaction (including any Bookout) that is entered into using an Instant Messaging (IM) or text system shall be performed only on an IM or text system expressly approved by the Company for that purpose (such transactions shall be documented and captured by the IM company as well as any other PSE contracted IM archive service company).

TRADE COMPLIANCE MONITORING

RACI	EMC	ESM	ERC	EDA	Trade Compliance
Trade Compliance Monitoring	I		R		A/R

To ensure transactions comply with PSE policies:

- Trade Compliance is **accountable** for the designing and maintaining an effective trade surveillance program;
- Trade Compliance is **responsible** for operating monitoring and surveillance tools to ensure accuracy and completeness trade compliance testing;
- Trade Compliance is **responsible** for identifying and investigating issues raised by the trade established process and tools that are used for monitoring;
- Trade Compliance is **responsible** for investigating, documenting, and analyzing all findings (including identifying and disposing of “False Positives”);
- Trade Compliance **informs** the EMC of all unresolved issues;
- Trade Compliance is **responsible** for preserving records per the PSE records retention policy (Procedure 8.7 Records Retention);
- ERC is **responsible** for confirming the sufficiency of existing controls; and
- ERC is **responsible** for assisting in validating issues and in determining the path forward for confirmed exceptions.

6.8 RISK MEASUREMENT AND LIMITS

RISK LIMIT FRAMEWORK REVIEW AND UPDATE

RACI	EMC	ESM	ERC	EDA
Risk Limit Framework Review	R/C	A/C/I	R	

ERC is **responsible** for recalculating risk limits each year;

- EMC is **responsible** for reviewing historical Earnings-at-Risk (EaR) associated with the portfolio, realized earnings, current positions, and market conditions to determine an acceptable risk appetite and tolerance for the energy portfolio. This serves as the portfolio's EaR limit;
- ERC **consults** ESM to allocate a portion of the overall EaR limit to quarterly and monthly tranches that defend against the concentration of risk within a particular month or quarter;
- ERC measures price volatility for each commodity and location;
- ERC **consults** EMC to determine Management's tolerance for trading loss limits;
- EMC is **responsible** to review and is **accountable** to approve annual risk limits, and;
- ERC **informs** ESM of the updated trading limits.

MARKET RISK

RACI	EMC	ESM	ERC	EDA
Market Risk Reporting		R/I	A/R	

Market risk is measured and reported as follows:

- ERC is **responsible** for updating the risk exposure calculations for asset books (including generation, load, long-term PPAs, etc.) as described in the risk-neutral calculation desk procedure;
- ERC is **responsible** for generating daily/weekly Position Reports and Exposure Reports for each portfolio and distribute reports to the ESM group and other parties as required by the EMC;
- ERC is **responsible** for quantifying risk levels utilizing risk analysis models and techniques including, but not limited to, earnings-at-risk analysis, portfolio value analysis, exposure analysis, stress testing, and scenario analysis; and
- ESM is **accountable** for signing off on the accuracy of the market risk limit reports associated with their positions.

CREDIT RISK

RACI	EMC	ESM	ERC	EDA
Credit Risk Reporting		R/I	A/R	

Credit risk is measured and reported as follows:

- ERC is **responsible** for generating daily Counterparty Credit Exposure Report for each portfolio and distributing reports to the ESM group and other parties as required by the EMC;
- ERC is **responsible** monitoring and reporting on counterparty exposure daily;
- ERC **informs** ESM if any credit risk limits are exceeded;
- ERC is **responsible** for reporting the credit risks stemming from the physical and financial positions of the Energy Portfolio; and
- ESM is **accountable** for signing-off on the accuracy of the credit limit reports associated with their positions.

Refer to the Credit Risk Policy for additional details.

RISK LIMITS COMPLIANCE

RACI	EMC	ESM	ERC	EDA
Risk Limit Compliance		R/I	A/R	

Risk limits are reviewed, and violations resolved as follows:

- ERC is **accountable** for ensuring that the energy portfolios' daily exposure reports and limit reports (market and credit) are within limits;
- ERC is **responsible** for determining compliance with established limits (Schedules A, E, F), including but not limited to volumetric limits, transactions authorized to trade, exposure limits and approval authority limits, Earnings-at-Risk limits, etc.;
- ERC is **responsible** for monitoring transaction activity in relation to EMC-approved hedges;
- ERC **informs** ESM of any known or suspected violation of these Procedures and established limits;
- If a limit violation exceeds a trader's authority, ERC is **accountable** for notifying EMC;
- If a violation is not corrected, or if there is not a valid reason for the exception to the limit, EMC is **responsible** for determining whether to dispose of the position;
- ERC is **responsible** for working with ESM to determine an acceptable plan for resolving risk limit violations; and
- ESM is **responsible** for reducing their positions as described in the plan provided by ERC.

KEY RISK REPORTS

Key reports used to manage the commercial risk exposure include:

REPORT NAME / TYPE	GRANULARITY	SOURCE SYSTEM	RECIPIENTS
DAILY POSITION	COMMODITY, BOOK, MONTH	LACIMA	ESM, ERC

WEEKLY PROFIT AND LOSS	COMMODITY, BOOK, MONTH	LACIMA	ESM, ERC, EDA
WEEKLY EARNINGS-AT-RISK	COMMODITY, BOOK	LACIMA	ERC, ESM
DAILY LIMITS	COMMODITY, MONTH	LACIMA	ESM, ERC, EMC
INTER-BOOK	COMMODITY, MONTH	LACIMA	ESM, ERC
COUNTERPARTY CREDIT EXPOSURE REPORT	COUNTERPARTY MASTER AGREEMENT DAILY	LACIMA	ESM, ERC, EMC
OFFICIAL PRICE MARKS	CURVE MONTHLY, DAILY	PLATTS, NGI, ZE	ESM, ERC

6.10 MARKET DATA VALIDATION

MARKET DATA VALIDATION

RACI	EMC	ESM	ERC	EDA	IT
Market Data Validation		C	A/R	I	I

Market data, including forward price curves, settlement prices, and volatilities, are validated each day as follows:

- ERC is **accountable** for ensuring market data required to value PSE's Wholesale Supply books has been captured at end of day by the appropriate ETRM systems (including complete and accurate settlement prices for fixing the final price of floating transactions);
- ERC is **responsible** for validating power and natural gas price marks daily;
- ERC is **responsible** for validating any curves provided by third-parties or ESM;
- ERC is **responsible** for running a price reasonableness check which highlights any data that may be out-of-range or erroneous (where technically feasible, this check must be run before the EOD batch valuation and risk reporting processes commence);
- ERC **consults** ESM on any prices that may not be reasonable;
- ERC **informs** the appropriate functions (typically ESM, EDA, or IT) of any data gaps and errors; and

- ERC is **responsible** for determining any course of action to delay or amend market data-dependent processes such as end-of-day (EOD) valuations and risk reporting (e.g., overriding stale or missing market prices).

MARKET DATA SYSTEMS

RACI	EMC	ESM	ERC	EDA	IT
Market Data Systems			A/R		R/C

Systems requirements and activities for market data systems as described below:

- ERC is **accountable** for the accuracy and availability market data in the ETRM and associated systems;
- ERC is **responsible** for regularly testing the automated upload feed processes;
- ERC is **responsible** for implementing exception-based alerts to enable efficient, ongoing monitoring and validation;
- ERC is **responsible** for approving the process for storage and retention of all market data;
- ERC is **responsible** for archiving all historical market data;
- ERC is **responsible** for defining the back-up and retention strategy for data as defined by regulatory requirements (e.g., FERC price index reporting requires 5 years);
- ERC **consults** IT for support designing and implementing systems and workflows that will result in effective retention of all market data; and
- IT is **responsible** for providing any technical support necessary to maintain the ETRM and associated systems.

6.11 PROFIT AND LOSS (P&L) PREPARATION

RACI	EMC	ESM	ERC	EDA
Profit and Loss (P&L) Preparation			A/R	

P&L data is extracted and reported weekly as described below:

- ERC is **accountable** for the timeliness and accuracy of mark-to-market and P&L data;
- ERC is **responsible** for running the end-of-day process to mark the book to market and export the data (long-tenor PPAs are not included in the end-of-day process on a weekly basis);
- ERC is **responsible** for importing the end-of-day data into Excel and generating the P&L report;
- ERC is **responsible** for distributing validated mark-to-market and P&L commentary to ESM and Management.

7. POST-TRANSACTION PROCEDURES

7.1 SCHEDULING & NOMINATIONS

Physical operations at PSE include scheduling activities for physical power and gas, storage of natural gas, and managing the fuel supply mix in line with regulatory requirements for renewable energy.

POWER SCHEDULING OPERATIONS

RACI	EMC	ESM	ERC	EDA
Power Scheduling Operations		A/R		

Power-scheduling operations include the following activities:

- ESM is **accountable** for coordinating the scheduling of power transactions between PSE and counterparties;
- ESM Power Schedulers are **responsible** for setting up scheduled power receipts and deliveries for the next pre-schedule day(s), based on the market transactions executed by the Company;
- ESM Power Schedulers are **responsible** for balancing power deliveries and receipts at all transaction points, including the identification of and/or resolution of potential bookout transactions;
- ESM Power Schedulers are **responsible** for generating and transmit the required NERC tags;
- ESM power schedulers are **responsible** for scheduling power 24 hours and beyond (or refer to WECC pre-schedule calendar);
- ESM Power Schedulers are **responsible** for communicating the physical flow of electricity across transmission assets and at power nodes;
- ESM Power Schedulers are **responsible** for maintaining Process and Controls (including flowchart and reporting activities).

Power Schedulers are not authorized to enter trades in the power trading system.

Separately, the real-time power desk maintains responsibility for buying quantities of power in the real-time markets to cover shortages and/or selling excess capacity on the spot market.

GAS SCHEDULING OPERATIONS

RACI	EMC	ESM	ERC	EDA
Gas Scheduling Operations		A/R		

Gas Scheduling Operations include the following activities:

- ESM is **accountable** for coordinating the scheduling of gas transactions between PSE and counterparties;
- ESM Gas Schedulers are **responsible** for planning the physical flow of natural gas to pipeline operators;
- ESM Gas Schedulers are **responsible** for interacting with interstate and intrastate pipeline Electronic Bulletin Boards (EBBs) to submit nominations;
- ESM Gas Schedulers are **responsible** for procuring gas as needed during holidays and weekends;
- ESM Gas Schedulers are **responsible** for reconciling storage inputs for injections and withdrawals from monthly pipeline reports to the trading system of record;
- ESM Gas Schedulers are **responsible** for scheduling gas receipts and deliveries based upon market transactions as executed by Traders for the PSE portfolios;
- ESM Gas Schedulers are **responsible** for balancing gas deliveries and receipts at all transaction points, including the identification of and/or resolution of potential Bookout transactions and ensures city-gate load is balanced;
- ESM Gas Schedulers are **responsible** for balancing gas deliveries and receipts for fuel supplies for gas fired generation portfolio, including the identification of and/or resolution of potential Bookout transactions; and
- ESM Gas Schedulers are **responsible** for scheduling gas deliveries and receipts for transactions with third parties, in addition to scheduling supply for delivery to storage facilities in the Company's Portfolio.

STORAGE

RACI	EMC	ESM	ERC	EDA
Storage		A/R		

PSE engages in the storage of Natural Gas in periods of lower demand and for use in periods of higher demand or reduced supply. Storage activities include:

- Gas schedulers are **accountable** for managing the natural gas stored in PSE storage assets; and
- Gas schedulers are **responsible** for nominating natural gas in and out of storage facilities.

7.2 ACTUALIZATIONS

RACI	EMC	ESM	ERC	EDA
Actualizations				A/R

Actualization activities include:

- EDA is **accountable** for actualizing quantities for gas and power in ETRM systems;
- EDA is **responsible** for performing reconciliation with counterparties for power and natural gas accounts to ensure accuracy and completeness of transactions for the month; and

- EDA is **responsible** for monitoring and confirming the accuracy of alternative fuel purchases deal entry.

7.3 INVOICING

INCOMING INVOICES

RACI	EMC	ESM	ERC	EDA
Incoming Invoices		R/C	C	A/R

Incoming invoices validated as using following activities:

- EDA is **accountable** for ensuring that incoming invoices are checked for accuracy and sent for services rendered and ensuring payments and receipts are made within contractual periods for gas and power transactions;
- EDA is **responsible** for review incoming invoices, and that only one invoice is used for netted positions;
- EDA is **responsible** for validating incoming invoices;
- EDA is **responsible** for preparing incoming invoices for the payment labels/invoices for approval and signature by the designated approvers;
- EDA is **responsible** for reviewing any discrepancies on payments;
- EDA **consults** ESM and ERC as necessary for a resolution;
- ESM is **responsible** for approving payment labels and invoices;
- ESM is **responsible** for signing the payment labels/invoices, within signature authority limits consistent with corporate policy, for Non-Purchase Order (Non-PO) payments;
- For counterparties that are paid via the PO process (e.g. other energy payments, etc.), ESM is **responsible** for approving Purchase Requisitions (PR) in advance, assuming transactions are approved by authorized approvers through the PR; and
- EDA is **responsible** for recording payments in SAP, which will be routed to Accounts Payable (AP) for payment disbursement.

ISSUING GAS AND POWER VOUCHERS

RACI	EMC	ESM	ERC	EDA
Issuing Gas and Power Vouchers				A/R

The following activities are associated with issuing gas and power vouchers:

- EDA is **accountable** for reviewing all invoices and matching to corresponding vouchers;
- EDA is **responsible** for generating vouchers and transmitting invoices to the appropriate counterparties for payment;

- EDA is **responsible** for pushing data from ETRM systems with the vouchers information; and
- EDA is **responsible** for researching any discrepancies and contact counterparties as necessary to resolve.

7.4 SETTLEMENT

RACI	EMC	ESM	ERC	EDA
Settlement		C	C	A/R

Settlement activities include:

- EDA is **accountable** for ensuring transactions are settled timely and accurately;
- EDA is **responsible** for adhering to the settlement and payment schedules according to the CAISO for relevant transactions;
- EDA is **responsible** for validating that the settlement price, volume, and cashflow on the invoice matches the settlement price, volume, and realized cashflow in the ETRM system;
- EDA **consults** ESM and ERC as necessary to resolve counterparty disputes;
- EDA is **responsible** for reconciling and re-marking valuations as required; and
- EDA is **responsible** for reviewing and reconciling counterparty collateral/margin valuations.

7.5 CASH DISBURSEMENT AND RECEIPTS

CASH DISBURSEMENTS

RACI	EMC	ESM	ERC	EDA
Cash Disbursements				A/R

Cash disbursement activities include:

- EDA is **accountable** for ensuring cash disbursement are timely and accurate;
- EDA is **responsible** for verifying payment instructions with counterparties the day before settlement for deals other than same-day settlement;
- EDA is **responsible** for authorizing payment disbursement of funds; and
- EDA is **responsible** for payment processing.

CASH RECEIPTS

RACI	EMC	ESM	ERC	EDA
Cash Receipts				A/R

Cash receipt activities include:

- EDA is **accountable** for managing receivables and resolving late payments;
- EDA is **responsible** for monitoring late payments (receivables aging);

- EDA is **responsible** for contacting counterparties to resolve late payments; and
- EDA is **responsible** for escalating unresolved late payments to Management.

7.6 FINANCIAL REPORTING & HEDGE ACCOUNTING

RACI	EMC	ESM	ERC	EDA
Financial Reporting & Hedge Accounting		I		A/R

Financial reporting and hedge accounting activities include the following:

- EDA is **accountable** for ensuring all transactions are reported in accordance with GAAP;
- EDA is **responsible** for performing on-going analyses of PSE's Energy Portfolio necessary to meet the ASC 815 requirements for hedge accounting;
- EDA **informs** ESM of any new accounting rules which might change the way PSE accounts for certain assets or contracts in its Energy Portfolio; and
- EDA is **responsible** for ensuring that all purchase and sale transactions that are entered into the ETRM system meet the criteria for recording a purchase or sale, as defined in the Accounting Procedures.

8. NON-CYCLE PROCEDURES

8.1 UPDATING THE COMMERCIAL STRATEGY

STRATEGY DEVELOPMENT

RACI	EMC	ESM	ERC	EDA
Strategy Development		A/R	C	C

Strategy development activities include the following:

- ESM is **accountable** for developing hedging and transaction strategies and providing market updates and any information pertinent to exceptions of the Energy Portfolio limits;
- ESM is **responsible** for developing hedging strategy options developed with a view toward the potential impact over the entire Energy Portfolio;
- ESM **consults** ERC when analyzing the risk of the Energy Portfolios, incorporating various hedging strategies;
- ESM **consults** ERC and EDA to assess the operational impact of proposed Energy Portfolio activity prior to presentation of recommendation to EMC;
- ESM **consults** EDA to determine the accounting treatment and implications; and
- ESM is **responsible** for ensuring that strategic options include hedging strategy alternatives, including benefits/risks of each hedging strategy and provide recommended hedging parameters (e.g., volume, price, and/or notional dollar amount).

STRATEGY APPROVAL

RACI	EMC	ESM	ERC	EDA
Strategy Approval	A/R			

The following activities are carried out during strategy approval processes:

- The EMC is **accountable** for evaluating changes to the commercial strategy;
- The EMC is **responsible** for determining whether to approve strategies for hedging and transactions; and
- The EMC is **responsible** for documenting meeting minutes to include strategy and hedging decisions.

EMC may delegate one or more of its members to act as a sub-committee to approve certain types of strategies or receive notices in accordance with the attached Schedules. Delegation will be recorded in EMC documentation (including minutes, memos, or email) and notice will be provided to ERC.

STRATEGY IMPLEMENTATION

RACI	EMC	ESM	ERC	EDA
Strategy Implementation	I		A/R	

Strategy implementation requires the following activities:

- ERC is **accountable** for validating approved strategies;
- ERC is **responsible** for monitoring actual hedges against approved hedge plans and report any substantive deviation of the execution plans to the EMC;
- ERC is **responsible** for reporting back on a timely basis to the EMC if the hedging strategies cannot be successfully executed within the parameters previously approved by the EMC; and
- If hedges are not being executed in accordance with the EMC approved strategy, then ERC **informs** the EMC.

8.2 JOINERS / MOVERS / LEAVERS

RACI	EMC	ESM	ERC	EDA
Joiners / Movers / Leavers		R	A/R	

Joiners / Movers / Leavers (JML) refers to related acts of hiring new employees, transferring personnel between functions, and personnel leaving the Company. As the JML process is accompanied by changes to employee permissions and restrictions, a robust set of activities are put in place to prevent accidental violations of PSE's Three Lines of Defense model during those transitions. JML activities are noted as follows:

- ESM is **accountable** for formally notifying ERC of staff changes on a timely basis;
- ERC is **responsible** for maintaining a list of user access privileges across commercial systems for which are in ERC's purview;
- ERC is **responsible** for allocating or revoking DOA to staff within systems;
- ERC is **responsible** for updating system access privileges including web-based applications;
- ERC is **responsible** for communicating staff changes to IT for further system access permissions for systems outside of ERC's purview;
- For any planned joiner/leaver/movers, ESM is **responsible** for notifying ERC in writing five (5) business days in advance;
- For any unplanned terminations, ESM is **responsible** for notifying ERC in writing within twenty-four hours of incident occurring; and
- Upon a change in job title, ERC is **responsible** for reviewing user profiles for appropriate access rights.

8.3 BUSINESS CONTINUITY

Maintaining business continuity is of critical importance to Company's operations and customers. The company maintains a Business Continuity Plan which is tested regularly and should be reviewed by all employees.

8.4 GOVERNING DOCUMENTS

MAINTAINING THE POLICY DOCUMENT

RACI	Board of Directors	EMC	ESM	ERC	EDA
Maintaining the Policy Document	A	R	R	R	R

The Policy needs to be maintained on a regular basis. The following activities should be carried out for that maintenance:

- EMC is **responsible** for reviewing and updating the Policy as needed;
- ERC is **responsible** for updating the Policy document, as well as communicating changes to the document; and
- The Board of Directors is **accountable** for accepting or rejecting changes to the Policy annually.

MAINTAINING THE PROCEDURES DOCUMENT

RACI	Board of Directors	EMC	ESM	ERC	EDA
Maintaining the Procedures Document	A	R	R	R	R

The Procedures need to be maintained on a regular basis. The following activities should be carried out for that maintenance:

- ERC is **responsible** for updating the Procedures as necessary to adapt to changes in the industry, the Company's rate structures, regulatory requirements, Company direction, or other factors;
- ERC is **responsible** for communicating changes to the Procedures document to all relevant teams;
- The EMC is **responsible** for updating the Procedures as necessary to incorporate approval of new strategies, limits, and/or activities;
- The Board of Directors is **accountable** for approving or rejecting changes to the Procedures annually; and
- ESM, ERC, and EDA are **responsible** for creating the requisite desk-level procedures to execute tasks required to comply with the Policy and this Procedure document.

8.5 IT INTERACTION, SYSTEMS, & DATA MANAGEMENT

SYSTEM ACCESS

RACI	EMC	ESM	ERC	EDA	IT
System Access		R	A/R	R	R

System access activities pertinent to *The Procedures* are as follows:

- ERC is **accountable** for ensuring appropriate systems are updated and data integrity is maintained to ensure compliance with risk management and financial reporting requirements;
- ERC is **responsible** for executing user access change requests for specific technologies that support wholesale supply and hedging activities;
- ESM and EDA are **responsible** for submitting user access requests;
- ERC is **responsible** for reviewing the requests and authorized traders list;
- IT is **responsible** for granting system access;
- ERC is **responsible** for reviewing the circumstances of the personnel movement and determining the timing and disposition of the user's system access points; and
- ERC is **responsible** for tracking activity pertaining to personnel movement including changes in roles or separation from the Company and confirming that access is updated as necessary.

SYSTEM AND DATA AVAILABILITY

RACI	EMC	ESM	ERC	EDA	IT
System and Data Availability	C	C	A/R	C	R

System availability activities include:

- ERC is **accountable** for ensuring the availability of all risk reports;
- ERC is **responsible** for maintaining the trading and risk management systems that process end of day simulations;
- ERC is **responsible** for maintaining data integrity within ETRM systems;
- IT is **responsible** for providing technical support to maintain ETRM systems as necessary; and
- ERC **consults** report recipients, including ESM, EDA, and the EMC, to investigate and resolve discrepancies.

Relevant systems, vendors, functionality, and uses are noted in the table below:

APPLICATION	VENDOR	FUNCTIONALITY	COMMODITY
ENDUR	ION TRADING (FORMERLY OPENLINK)	GAS TRADING, PHYSICAL OPERATIONS FOR GAS DEAL LIFE CYCLE, DERIVATIVES, RISK MANAGEMENT, FINANCIAL REPORTING	PHYSICAL GAS, FINANCIAL GAS, EXCHANGE-TRADED PRODUCTS, DERIVATIVES, STRUCTURED CONTRACTS, PIPELINE CONTRACTS STORAGE CONTRACTS
WEB TRADER	OPEN ACCESS TECHNOLOGY INTERNATIONAL, INC. (OATI)	POWER TRADING, PHYSICAL OPERATIONS FOR POWER DEAL LIFE CYCLE, DERIVATIVES, RISK MANAGEMENT, FINANCIAL REPORTING, POWER SCHEDULING AND TAGGING	PHYSICAL POWER, FINANCIAL POWER, EXCHANGE-TRADED PRODUCTS, DERIVATIVES, STRUCTURED CONTRACTS, TRANSMISSION
LACIMA	LACIMA GROUP	RISK SYSTEM	RISK MANAGEMENT, LIMITS MONITORING, P&L REPORTING
PCI	POWER COSTS, INC.	EIM BASE SCHEDULE, BIDS, SETTLEMENTS, CCAS TRACKING AND PERFORMANCE OPTIMIZATION	PHYSICAL POWER PLANNING, BIDDING, AND MARKET COMMUNICATION

SAP	SAP GLOBAL	GENERAL LEDGER AND NON-MARKETS FACING BUSINESS ACTIVITY	GENERAL LEDGER PURCHASING AND PAYABLES FIXED ASSETS
FUTRAK	FUTRAK	BACK-OFFICE; FOR EVALUATING THE PHYSICAL AND FINANCIAL TRADES	FINANCIAL TRADES

8.6 REGULATORY REPORTING & INDEX PARTICIPATION

RACI	EMC	ESM	ERC	EDA	Regulatory	IA
Regulatory Reporting & Index Participation			R		A	R

PSE has certain reporting obligations for its energy purchases and sales to federal, state, and provincial regulators, and other third parties. Activities related to those obligations include:

- PSE’s Regulatory team is **accountable** for ensuring that accurate reports of PSE wholesale transactions are filed with federal, state, and provincial regulatory agencies;
- ERC is **responsible** for collecting trade transaction data, generating reports of such data, and coordinating with other PSE departments or requesting parties to facilitate transmission of requested data;
- For reports to be submitted by other departments, ERC is **responsible** for providing the necessary data to other PSE departments necessary to meet energy purchase and sale reporting obligations; and
- Internal Audit is **responsible** for conducting required regulatory audits, including evaluating the processes and controls related to power and natural gas price index reporting in line with FERC’s Policy Statement on Natural Gas and Electric Price Indices on a Bi-annual basis.

8.7 RECORDS RETENTION

RACI	EMC	ESM	ERC	EDA
Records Retention	A/R	R	R	

The following activities are related to records retention:

- EMC is **accountable** for maintaining a records retention plan in conformance with laws, regulations, and company policies;
- The EMC Secretary is **responsible** for the maintenance of EMC records,

- Minutes of EMC meetings will be taken by the Secretary and forwarded to all meeting participants,
- The EMC Chairperson will accept the meeting minutes upon approval by the EMC members, and
- Minutes will be maintained for all EMC meetings;
- EMC is **responsible** for documenting strategies approved by the EMC;
- If EMC approves strategies or transactions outside of regularly scheduled EMC meetings, the Secretary is **responsible** for retaining records of such approvals in the EMC binders and electronic files, with approvals in written or email format forwarded to ERC;
- ERC is **responsible** for maintaining documentation tying transactions to EMC-approved hedges as appropriate, wherein
 - Contemporaneous documentation will be provided to ERC by Traders who enter into transactions on behalf of the Company, and
 - Documentation will reference, at a minimum, the strategy behind the hedge and the reasons for execution of the hedge;
- ERC is **responsible** for maintaining the Company's official Forward Price Curves, which includes
 - Maintaining forward price curves for all market locations in which the Company actively engages in physical and financial energy transactions, and
 - Archiving forward price curves for future reference;
- ESM is **responsible** for retaining copies of fundamental market analysis that the Company subscribes to or develops internally and uses for decision-making purposes;
- ESM is **responsible** for maintaining records of counterparty communications related to transactions consistent with FERC or other applicable regulatory or legal requirements (e.g., recorded lines, instant messaging records, etc.), which must include complete transaction documentation in addition to negotiation documentation if appropriate and available;
- ESM is **responsible** for maintaining documentation related to PSE transactions that are entered into through bilateral negotiations with a counterparty.

8.8 BOOK STRUCTURE

RACI	EMC	ESM	ERC	EDA
Book Structure		C/I	A/R	

PSE tracks performance of business strategies in corresponding books, which contain the current position details and unrealized P&L. Book structure activities include:

- ERC is **accountable** for annually reviewing the trading book structure to confirm relevancy;
- ERC **consults** ESM to understand whether the current book structure is sufficient for their needs;
- ERC is **responsible** for retiring stale books;
- ERC is **responsible** for assessing the ability of the book structure to reflect how PSE views their business and how the Company is organized;
- ERC is **responsible** for the creation and approval of new books in the ETRM system; and

- ERC informs ESM of any changes to the book structure.

8.9 NOTICE OF VIOLATION OF PROCEDURES

RACI	EMC	ESM	ERC	EDA
Notice of Violation of Procedures	I	I	A/R	I

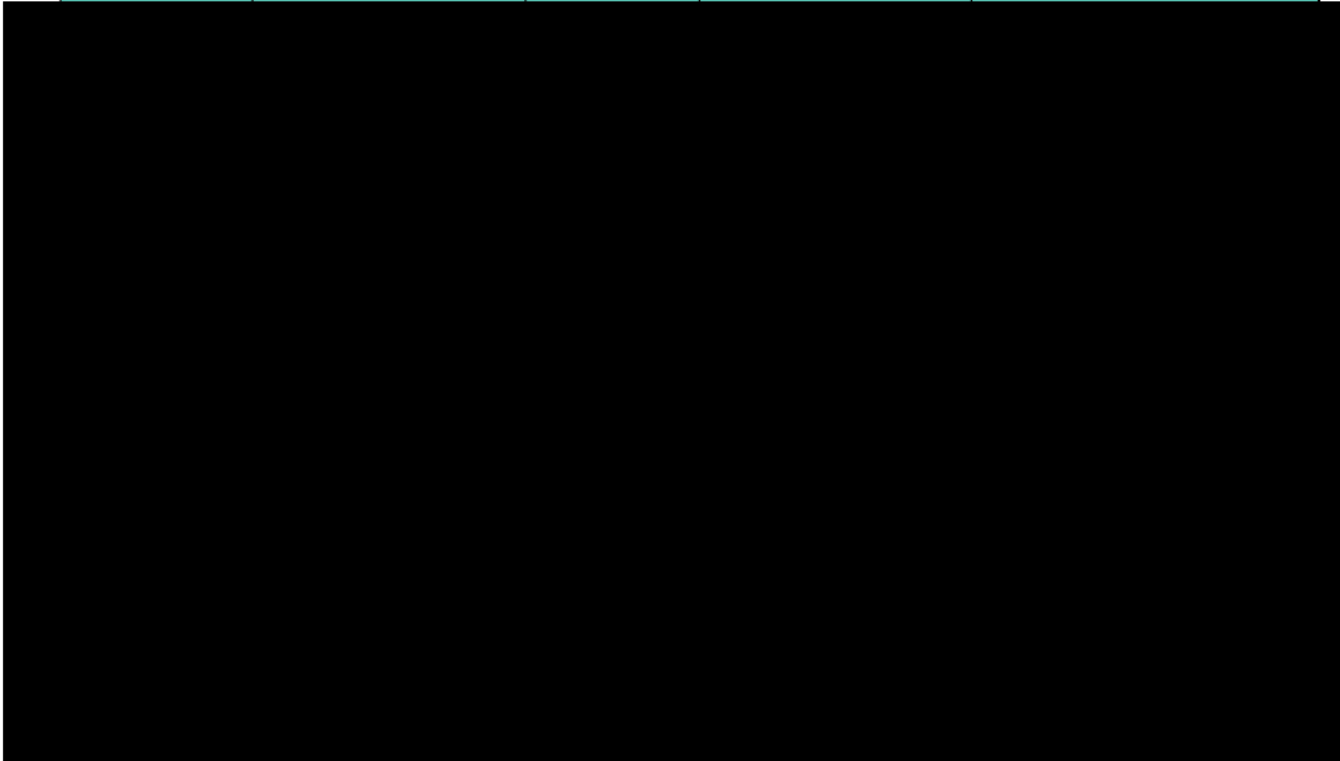
Violations to these *Procedures* and the associated *Policy* are conducted in a manner consistent with the Compliance Audit Procedure document. When a potential violation is identified:

- ERC is **accountable and responsible** for responding to potential violation of the procedures outlined in this document;
- ERC is **responsible** for collecting information, determining the investigation team, and documenting relevant information in an Investigation Log;
- ERC **informs** the appropriate party consistent with the escalation protocol outlined in Appendix III for any non-compliance with these Procedures and/or established limits;
- ERC is **responsible** for drafting an Investigation report outlining findings; and
- In the event of non-compliance with these Procedures, ERC **informs** the supervisor of the person(s) violating these Procedures.

9. SCHEDULES

SCHEDULE A – POWER EXPOSURE LIMITS

Portfolio	Exposure Limits	Frequency	Report	Violation
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SCHEDULE B - AUTHORIZED TRANSACTIONS, LOCATIONS, AND INDICES⁸

LAST UPDATED 2/10/2023

COMMODITY	INSTRUMENT	LOCATIONS	PRICE	PURCHASE	SALE	INDICES
GAS	PHYSICAL CONTRACT	SUPPLY LOCATIONS ON PIPELINES OR AT STORAGE LOCATIONS WHERE PSE HOLDS CAPACITY (SEE GAS PIPELINE TRANSPORTATION AND GAS STORAGE CAPACITY LOCATIONS BELOW).	FIXED PRICE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX IN SCHEDULE B.	YES	YES	PLATT'S-INSIDE FERC (IFERC) – MONTHLY, PLATT'S GAS AND NATURAL GAS EXCHANGE (NGX).
GAS	SWAP	SUMAS, AECO, ROCKIES	FIXED PRICE, BASIS, OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX LISTED IN SCHEDULE B.	YES	YES	PLATT'S-INSIDE FERC (IFERC) – MONTHLY, PLATT'S GAS DAILY, AND ICE.
GAS	CALL AND PUT OPTIONS, FINANCIAL	SUPPLY LOCATIONS ON PIPELINES OR AT STORAGE LOCATIONS WHERE PSE HOLDS CAPACITY (SEE GAS PIPELINE TRANSPORTATION AND GAS STORAGE CAPACITY LOCATIONS ABOVE).	FIXED PRICE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX LISTED IN SCHEDULE B.	YES	NO	PLATT'S-INSIDE FERC (IFERC) – MONTHLY, PLATT'S GAS DAILY
POWER	PHYSICAL CONTRACT	APPROVED REGIONS: WECC AND CAISO	FIXED PRICE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX LISTED IN SCHEDULE B.	YES	YES	ICE MID-C DAILY AND COB-ICE DAILY
POWER	SWAP	MID-C AND COB	FIXED PRICE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX IN SCHEDULE B.	YES	YES	ICE MID-C DAILY AND COB-ICE DAILY
GAS STORAGE CAPACITY	FIRM, INTERRUPTIBLE, & CAPACITY RELEASE ₅	JACKSON PRAIRIE (NORTHWEST PIPELINE LLC), CLAY BASIN (MOUNTAINWEST PIPELINE LLC) & PLYMOUTH (NORTHWEST PIPELINE LLC)	FIXED PRICE CONSISTENT WITH FERC AND CER RULES FOR PIPELINE STORAGE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED	YES	YES	PLATT'S-INSIDE FERC (IFERC) – MONTHLY

			INDEX LISTED IN SCHEDULE B.			
GAS PIPELINE TRANSPORTATION CAPACITY	FIRM, INTERRUPTIBLE, & CAPACITY RELEASE ⁴	NOVA GAS TRANSMISSION LTD., FOOTHILLS PIPE LINES LTD., GAS TRANSMISSION NORTHWEST LLC, WESTCOAST ENERGY INC., CASCADE NATURAL GAS, & NORTHWEST PIPELINE LLC	FIXED PRICE CONSISTENT WITH FERC AND CANADA ENERGY REGULATOR (CER) RULES FOR THE PIPELINE PATH AT THE LOCATION OF THE TRANSACTION OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX LISTED IN SCHEDULE B.	YES	YES	MONTHLY, PLATT'S GAS DAILY, (ICE), AND NATURAL GAS EXCHANGE (NGX).
WASHINGTON CARBON ALLOWANCES (WCAS)	PHYSICAL FIRM CONTRACT	WASHINGTON STATE	FIXED PRICE	YES	SEE APPENDIX IV	NA
RENEWABLE ENERGY CREDITS (RECS) (GREEN-E CERTIFIABLE)	PHYSICAL FIRM CONTRACT	RECS GENERATED FROM PSE OWNED FACILITIES WHICH ARE NOT REQUIRED TO MEET PSE RPS REQUIREMENTS.	FIXED PRICE	YES	YES	NA
CALIFORNIA CARBON ALLOWANCES (CCAS)	PHYSICAL FIRM CONTRACT	APPROVED REGIONS: WECC AND CAISO	FIXED PRICE	YES	SEE APPENDIX II	NA
POWER	ANCILLARY SERVICES	APPROVED REGIONS: WECC AND CAISO	FIXED PRICE OR INDEX PRICE APPROXIMATING THE SUPPLY LOCATION OF THE TRANSACTION AND BASED ON A SPECIFIED INDEX IN SCHEDULE B.	YES	NO	ICE MID-C DAILY AND COB-ICE DAILY

SCHEDULE C – MARGIN AND COLLATERAL POSTING

Energy Risk Control is responsible for daily reporting of margin and collateral requirements associated with the Company's exchange traded accounts. These reports are delivered to Treasury and ESM operations. ERC also has primary responsibility for initiating wire requests and ensuring collateral balance requirements and applicable deadlines are satisfied for the Company's trading accounts. Manager of ERC and Manager of Treasury operations have authority to post collateral to established thresholds that support routine operations. Collateral and margin postings in excess of these thresholds require VP Energy Supply or Senior VP & CFO authorization and notification to the EMC.

Manager Treasury and ERC Authority

Intercontinental Exchange (ICE)	< \$50M
Natural Gas Exchange (NGX)	< \$50M

Director ERM and Corporate Treasurer Authority*

Intercontinental Exchange (ICE)	< \$100M
Natural Gas Exchange (NGX)	< \$100M

VP Energy Supply and Senior VP & CFO

Intercontinental Exchange (ICE)	> \$100M
Natural Gas Exchange (NGX)	> \$100M

*Margin posting requirements that trigger Director ERM and Corporate Treasurer thresholds require escalation notification to the CFO and VP Energy Supply

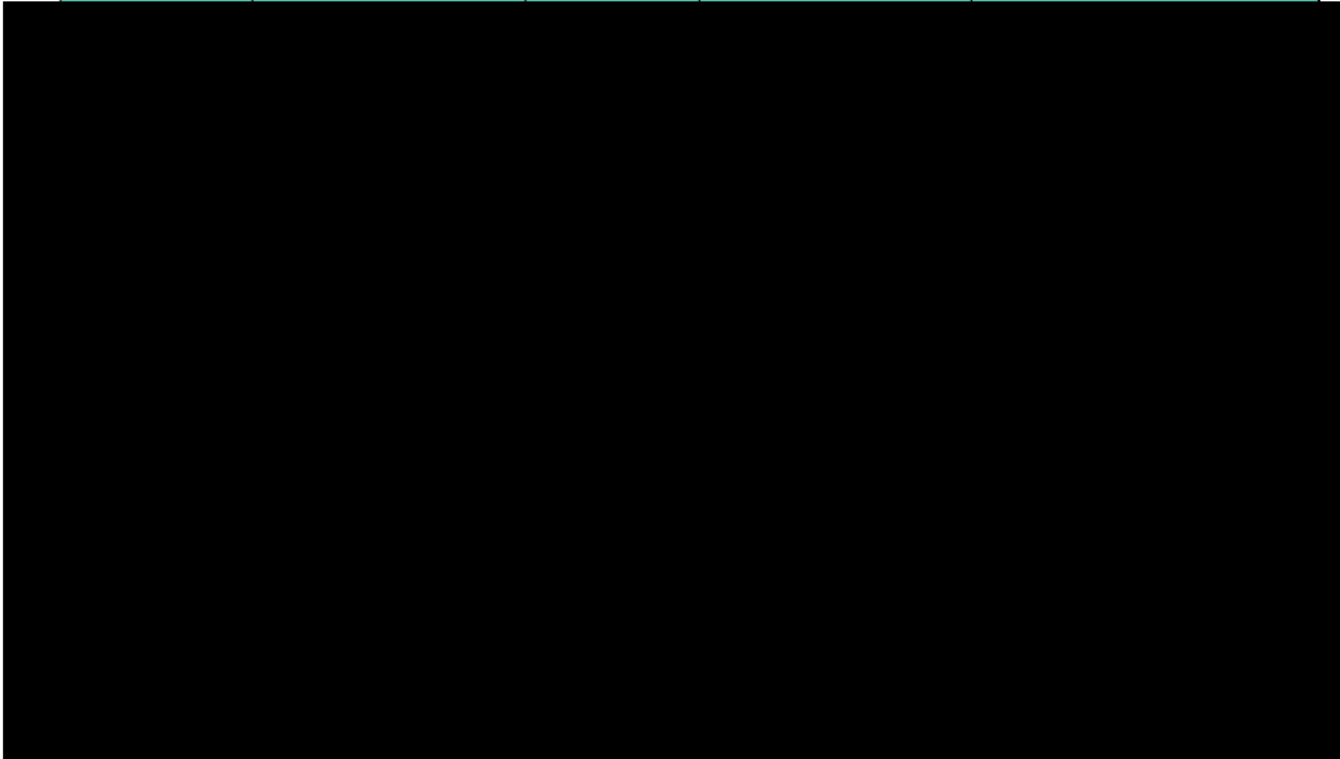
SCHEDULE D - OFFICERS AND DEPARTMENT OVERSIGHT (RELEVANT TO THE PROCEDURES)

<u>Officer</u>	<u>Department Oversight</u>
VP Energy Supply	Energy Supply Merchant
Executive VP & CFO	Energy Risk Control, Analytics, and Credit Energy and Derivative Accounting Resource Acquisitions

9. SCHEDULES

SCHEDULE A – POWER EXPOSURE LIMITS

Portfolio	Exposure Limits	Frequency	Report	Violation
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REDACTED VERSION

SCHEDULE F – GAS EXPOSURE LIMITS

In the execution of EMC-Approved commercial strategy,

Portfolio	Exposure Limits ¹	Frequency	Report	Violation

SCHEDULE G – EXECUTION OF APPROVED COMMERCIAL STRATEGIES

In the execution of EMC-Approved commercial strategy, in the event the executed hedges and resource acquisitions deviate from the parameters of an approved commercial strategy (inclusive of any EMC-approved updates or amendments made to those hedges), the following schedule advises the levels of authority for exceptions.

Percent Aggregate Volume or Dollar Variance from Approved Hedge Strategy (tolerance)

EMC up to 10% variance

10. APPENDIX

APPENDIX I – CREDIT RISK MANAGEMENT POLICY

1.0 Overview

1.1 Definition

To transact business, it is necessary to accept Credit Risk. However, the amount of Credit Risk in a wholesale energy portfolio can be measured, monitored, and mitigated to maintain a level of Credit Risk acceptable to the Company. Because of this, ERC is an integral part of the risk management process.

The role of ERC is to maintain the optimal amount of Credit Risk in the portfolio, to maximize hedging and optimization opportunities for the Company, while protecting the Company from unacceptable Credit Risk.

ERC conducts control and oversight activity. It must remain independent from ESM but work closely with them to ensure that credit policies are implemented and maintained.

1.2 Credit Risk Management within PSE

This Credit Risk Management Policy (CRMP) outlines the critical credit risk management policies and procedures to be followed by PSE employees involved in energy supply and hedging transactions. All PSE employees entering into wholesale energy contracts must observe the CRMP. Non-adherence to the CRMP, or any related limits or practices enacted as a result of the CRMP, may be considered cause for termination of employment.

2.0 Credit Risk Management Organizational Structure

2.1 Policy Creation and Oversight

The EMC adopts and polices the implementation of the credit risk management policies and procedures contained in this document.

2.2 Role of the Energy Risk Control, Analytics, and Credit Manager

The ERC Manager approves and enforces all aspects of credit, as outlined in Section 3.0 and reports directly to the Director of Enterprise Risk Management. The ERC Manager is responsible for developing processes for the measurement of Credit Risk, using the ETRM Systems selected by the Company.

3.0 Credit Management Responsibilities of Energy Risk Control

3.1 Counterparty Analysis

The creditworthiness of each counterparty must be determined through an analysis of the counterparty's financial and operational condition. Based on this analysis, each counterparty is assigned an internal risk rating corresponding to the Credit Risk inherent to this counterparty. A credit limit is established as a result of this rating in accordance with section 3.0 of the CRMP.

3.1.1 Developing Counterparty Information Files

ERC will maintain files of all counterparties, which may include, but are not limited to, financial statements, rating agency reports, and documentation of conversations with credit and risk personnel.

3.1.2 Counterparty Risk Analysis

Generally counterparty creditworthiness is analyzed by focusing on a number of qualitative and quantitative factors including, but not limited to, capital structure, cash flows, profitability, competitive position, and liquidity and financial flexibility. A counterparty's financial profile can be compared with that of peer group companies, using benchmarks published by ratings agencies or developed through internal research.

3.1.3 Risk Rating

Each counterparty is assigned a PSE Risk Rating, based on Standard & Poor's ("S&P") published ratings. If S&P published rating is not available, Moody's published rating can be considered in its place. If both the published ratings are not available, a probability of default based analysis will be performed to derive the PSE internal rating. The PSE Risk Rating corresponds to a widely recognized system using rating standards similar to those of Standard & Poor's, which range between AAA and CCC.

PSE risk ratings that exceed published ratings agency ratings must be approved by the EMC. The EMC may review PSE Risk Ratings and override the decision of ERC.

Exchanges where transactions occur such as NGX or ICE are exempted from the regular PSE Risk Rating assignment and the annual review. Instead a credit limit is based on the evaluation and monitoring of the robustness of the Exchange's risk/credit mitigation policies.

3.1.4 Credit Limit

A credit limit represents the maximum acceptable credit exposure, expressed in dollars, approved for a counterparty. Each counterparty has an overall credit limit, which is generally allocated into limits for each contract type.

3.1.5 Credit Limit Authority Levels

The credit limit for each counterparty is based on the PSE risk rating and other supporting documentation resulting from the analysis of that counterparty. The chart of credit limit authorities is in Appendix II. Appendix II contains the credit limit authorities for transactions with terms of 3 years or less. ERC must assign credit limits consistent with Appendix II. The EMC must approve any Credit Limits that exceed those established in Appendix II.

Concentration Limit: The EMC must approve any credit limits that are both a) greater than \$100,000,000 US Dollars, and b) equal to or larger than 7.5% of PSE's total counterparty portfolio exposure.

Percent of Equity: The credit limit of a utility company may not exceed 3% or 4% of its equity if it has a quick ratio of less than 1 or a quick ratio of greater than 1, respectively. The credit limit of a non-utility company may not exceed 2% or 3% of its equity if it has a quick ratio of less than 2 or a quick ratio of greater than 2, respectively.

The EMC must approve the credit terms for all transactions with terms greater than 3 years.

3.1.6 Periodic Review

All active counterparties with MTM are reviewed at least annually to ensure that risk ratings and credit limits are appropriate. Annual reviews of each counterparty are completed as soon as reasonably practicable once financial statements are available. Additional ad-hoc reviews are performed when counterparty credit status or credit support has changes. ERC review updates will use the most recent financial statements available. ERC review updates succinctly refresh annual reviews and need not be as comprehensive as annual reviews. Between periodic reviews, ERC will monitor all counterparties in real time, as industry trends and events could impact the credit worthiness of PSE's counterparties.

3.1.7 Approved Counterparties

ERC provides Authorized Traders with a listing of approved counterparties. The listing includes the commodities for which PSE may transact with each counterparty. The listing clearly defines the credit limit for each counterparty and any limitations imposed by ERC. ERC publishes daily credit report to advise ESM of the status of counterparties with whom PSE's credit exposure is approaching or exceeding the established limits.

3.2 Credit Exposure Measurement & Reporting

3.2.1 Daily Monitoring of Credit Exposures

Credit exposure is monitored daily for all transactions, meaning that reports for transactions on one day are reviewed by ERC during the following day. This monitoring consists of reports that calculate, summarize and display the credit exposure for each counterparty and each enabling agreement. These exposures are compared to approved credit limits to determine if exposures exceed approved limits.

3.2.2 Mitigating Credit Line Exceptions

In the event that a credit exposure exceeds a credit limit, ERC will take appropriate action which may include, but is not limited to, a request to the counterparty to mitigate the exposure by providing collateral acceptable to PSE. ERC may request collateral in the form of a prepayment, Letter of Credit ("LOC"), or additional guaranty amount (to be determined at the discretion of the ERC Manager). If a counterparty fails to comply with the request promptly, ERC will review the applicable contracts with internal legal counsel. Appropriate action will be taken as established in the contract(s), up to and including early termination of the contract(s).

Additionally, if PSE has a netting agreement with a counterparty, ERC may advise commercial personnel of the credit exposure with the counterparty and together, ERC and commercial personnel may determine that an off-setting purchase or sale is an acceptable means of mitigating credit exposure for PSE.

In the event that a credit exposure materially exceeds a credit limit for three business days, ERC will immediately prepare and distribute a report to the Senior VP & CFO. The status of this exception will be communicated to the Senior VP & CFO until the counterparty's exposure no longer exceeds its credit limit.

3.3 Financial Reporting Notification

If at any time, after considering the impact of any credit mitigation documents described in Section 4.0 of the CRMP, the likelihood that a counterparty will default is highly probable, the ERC Manager will promptly notify the Manager, Energy & Derivatives Accounting.

4.0 Credit Mitigation Document

Contractual documents may be used to mitigate credit exposure or enhance the credit worthiness of a counterparty. Prior to execution, these documents are to be reviewed and approved by ERC and, if required, legal counsel. Guaranties, letters of credit and surety bonds are kept in the possession of ERC. All other documents are administered by ESM, RA and NGR and are stored in PSE's regular contract document collections.

4.1 Contract Language

Creditworthiness language may grant PSE and its counterparty the right to require collateral if there is reasonable concern about the financial stability of either company. The inability to produce collateral when requested may be an event of default under the contract, which may lead to an early termination and liquidation of the contracts.

4.2 Netting Agreement

PSE recommends netting agreements with all counterparties. This agreement lowers credit risk in two ways. First, it reduces the risk of settlement default, because only one net payment is made. Second, it improves PSE's position in a bankruptcy scenario by establishing a consistent procedure for offsetting exposures between PSE and the counterparty. Based on the merits of netting agreements, ERC will attempt to execute netting agreements with all counterparties.

A netting agreement can generally be established in two forms: embedded in a standard contract or in a stand-alone document. Netting language is standard in all of PSE's physical contracts and is the preferred form. However, some counterparties prefer to execute stand-alone netting agreements that establish the netting relationship in more detail. PSE will accept a stand-alone netting agreement that passes legal review.

4.3 Guaranty

A guaranty is a contractual obligation on the part of the guarantor to pay the beneficiary in the event that the debtor fails to pay as agreed. A guaranty improves the Credit Risk position of the beneficiary and may improve the risk rating for a counterparty.

Guaranties may limit the amount of liability, the term of agreement, and the products covered. It is the responsibility of ERC to ensure that the limitations in each guaranty are observed when setting transaction limits.

4.4 Letter of Credit

ERC must analyze, risk rate, and assign a credit limit to any bank issued LOC. The aggregate exposure of all LOC drawn on each bank must be monitored and mitigated, as with any other counterparty. It is the responsibility of ERC to ensure that the limitations in each LOC are observed when setting transaction limits and monitoring exposures.

4.5 Deposit or Cash Margin Agreements

Cash may be used as a prepayment deposit or margin to mitigate credit exposure. It is the responsibility of ERC to maintain the correct amount of cash margin and to coordinate cash management with Treasury.

4.6 Margining Agreement

A margining agreement or margining language within the base contract can assist in mitigating credit exposure by establishing a formal process for the exchange of collateral, should either party exceed their contractual limit. In general, PSE does not encourage adequate assurance or credit support type of negotiations to protect PSE customers from undue costs. From time to time PSE will agree to stand-alone margining agreements or margining agreements embedded in contracts under special circumstances (such as exchanges or slice auctions etc.). These limits are negotiated in advance and explicitly stated in the agreement.

4.7 Performance Assurance

There are instances in which PSE must provide performance assurance to support credit limits with counterparties. If performance assurance must be provided, it will be in the form of a limited guarantee issued by a parent company of PSE, a LOC issued by a bank, a cash deposit, or a prepay. PSE will monitor all performance assurances provided to counterparties. PSE may receive performance assurance from a counterparty to secure its obligations under its agreement with PSE. The amount of performance assurance and the remaining contractual obligations of the counterparty under its agreements will be monitored by ERC.

5.0 Credit Approvals before Transacting with Counterparties

There will be no transactions agreed to with counterparties until ERC has authorized a counterparty.

5.1 Responsibilities of Authorized Traders

Authorized Traders are responsible for complying with the limitations published in the Counterparty List. Transacting with counterparties which are not approved, or transacting beyond limitations stated on the Counterparty list are a violation of the CRMP. ERC will notify the Senior VP & CFO of any material violations by PSE personnel.

Additionally, ESM, RA and NGR personnel will report to ERC any company-specific or industry-related information that might be important for managing PSE's credit exposure with its counterparties.

Table 1 – Credit Limit Authority



APPENDIX II - TRANSACTIONS INVOLVING RENEWABLE ENERGY CREDITS (RECS)

DEFINITION:

A REC represents the environmental attributes of 1 MWh renewable energy generation in the form of a marketable commodity. Resources that qualify as "renewable" under Washington's Renewable Portfolio Standard (RPS) include, for example, wind, solar, biomass, geothermal and incremental hydro. For purposes of this appendix, RECs are assumed to consist only of the environmental attributes of renewable energy generation and do not include the underlying energy (MWh) value.

AUTHORIZATION TO TRANSACT:

All purchase and sale transactions involving RECs must be executed by a REC Authorized Trader and in accordance with any EMC-approved strategy.¹ Transactions will be documented by the executing trader and communicated to the WREGIS Administrator by the close of business on the day of deal execution.

FOR SALES INVOLVING RECS PREVIOUSLY GENERATED:

- REC sales will not exceed the aggregate volume of actual RECs generated for the specific time period. RECs generated in a period includes both earned RECs through PSE business activities and net purchases from counterparties.
- Transactions will be for "firm" sales of RECs.
- EDA shall notify ESM and the WREGIS Administrator promptly upon receipt of payment for RECs sold. Once the transactions are executed with approved completed contracts and relevant contractual terms are met, RECs can be transferred to third-parties via the Western Renewable Energy Generation Information System (WREGIS) and/or via attestation. Unless specifically approved by the EMC, the WREGIS Administrator shall transfer RECs to the buying party only upon receipt of full payment.

FOR SALES INVOLVING RECS YET TO BE GENERATED:

- Sales of RECs yet to be generated should follow the same standards as stated for previously generated RECs and are not to exceed the anticipated generation volumes

¹ RECs purchased for PSE's retail customer "Green Power Program" are not governed by the *Procedures*.

REDACTED VERSION

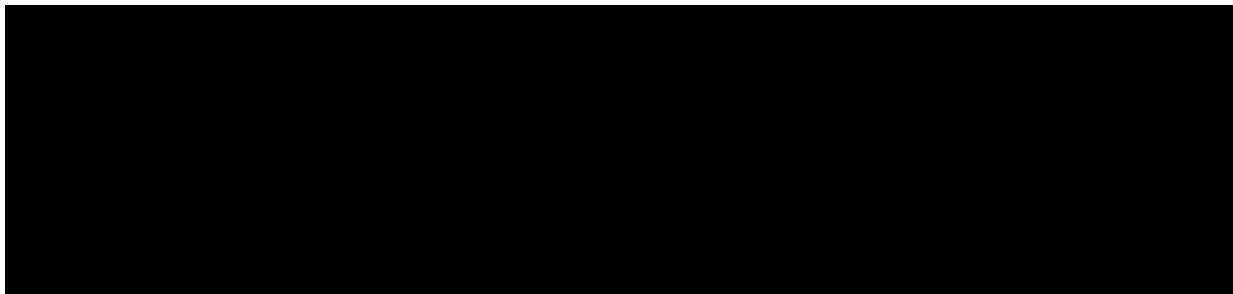
approved by the EMC.

FOR PURCHASES OF RECS:

- Purchases REC volumes must be consistent with EMC-approved strategies.
- Transactions will be for Washington RPS-eligible Washington CETA-eligible or Green-e-eligible RECs.
- The purchase of RECs can be executed with bilateral counterparties either directly or via a voice broker.

Once the transactions are executed with approved completed contracts and payment (if applicable), REC delivery and Title transfer will be verified via an approved external tracking system such as WREGIS and M-RETS by the WREGIS Administrator.

REC COUNTERPARTY CREDIT STANDARD:



TRACKING AND REPORTING:

- ERC will maintain a current report of RECs generated and sold.
- ESM and ERC will assist Regulatory and Compliance as needed to file reports with the Department of Commerce, Department of Ecology and other governmental entities regarding:
 - Its progress in meeting RPS targets for the current year;
 - Finalization of RPS compliance and subsequent retirements for the relevant preceding year; and
 - CETA compliance (as determined by Regulatory and Compliance at a later date.)
- ESM and ERC will maintain records that document each specific REC transaction including volume, price, counterparty and any other relevant transaction features.
- EDA will prepare and forward invoices and/or vouchers to the counterparties for REC transactions, with copies to ERC.

FOR SURRENDER AND RETIREMENT OF RECS:

- RECs will be retired periodically to satisfy the company's annual RPS obligation and future CETA obligations.

The WREGIS Administrator will transfer and retire RECs to the Company's WREGIS Annual Compliance Sub-Account per directions from Regulatory and Compliance.

APPENDIX III - TRANSACTIONS INVOLVING CALIFORNIA CARBON ALLOWANCES (CCA)

DEFINITION:

A California Carbon Allowance (CCA) is a limited tradable authorization to emit up to one metric ton of carbon dioxide equivalent (MtCO_{2e}) during the generation of power sold into the state of California. Following the passage of the Global Warming Solutions Act of 2006, the California Air Resources Board (CARB) adopted a variety of programs focused on reducing greenhouse gas (GHG) emissions, including the Cap-and-Trade program which places an economy/statewide limit on the major sources of emissions.

CARB is **responsible** for the oversight and compliance of the Cap-and-Trade program and Mandatory Greenhouse Gas Emission Reporting Regulations (MRR).

AUTHORIZATION TO TRANSACT:

All transactions involving CCAs must be executed by a CCA Authorized Trader and in accordance with any EMC-approved strategy.

FOR SALES OF CCAS:

- Sales of CCAs must be approved and documented by ERC and the DESM and executed for the purpose of credit and/or risk mitigation.
- Transactions will be documented in the approved system of record by the executing authorized trader no later than the close of business the date of deal execution.
- Once the transactions are executed with approved completed contracts, transfer confirmations will be entered into approved tracking systems such as CITSS and PCI.

FOR PURCHASES OF CCAS:

- CCAs will be purchased for the purpose of offsetting the Company's CARB GHG obligations.
- The purchase of CCAs can be executed bilaterally or through ICE cleared transactions in accordance with EMC approved limits.
- Participation and purchase of CCAs via the CARB auction is not permitted without EMC approval.
- Transactions will be documented in the approved system of record by the executing authorized trader no later than the close of business the date of deal execution.
- Once the transactions are executed with approved completed contracts, transfer confirmations will be entered into approved tracking systems such as CITSS and PCI.

REDACTED VERSION

- CCAs will be retired periodically in accordance with CARB requirements to satisfy the company's annual GHG obligation.

CCA POSITION LIMITS:

- 

FOR SURRENDER AND RETIREMENT OF CCAS:

- A (CITSS) Primary or Alternate Account representative will transfer CCAs to the Company's CITSS Compliance Account prior to October 30th of each year that the Company has a reporting obligation for the previous year.

Note: CCA retirement takes place at 5pm PST on Nov 1st each calendar year.

APPENDIX III - ESCALATION POLICY

It is the responsibility of the individuals covered by these Procedures to report suspected or observed non-compliance of the Policy or Procedures. Reports of non-compliance should be raised upon discovery to a supervisor, the manager of Energy Risk Control, and/or the Trade Floor Compliance team for further disposition.

In any instance where Policy, Procedure, trade authorization or credit limits are breached and not mitigated within three business days, the incident is reported to the EMC.

Under some circumstances, disciplinary action in the event of a violation of the Policy or Procedures may be necessary. Depending on the nature and the extent of the violation, different forms of disciplinary action may be administered, up to and including terminations.

- Once a breach of Policy or Procedures has been reported, a full investigation of the breach may be ordered by the EMC, or the Board of Directors.
- The EMC may utilize any personnel that are deemed best suited for the investigation and, as such, has the authority to utilize both internal personnel and/or external consultants.
- The investigating team will report back to the EMC.
- The EMC will determine any appropriate sanctions to apply in the disposition of the matter of non-compliance.

	PRIMARY ESCALATION		SECONDARY ESCALATION	
	WHO	WHEN	WHO	WHEN
POLICY OR PROCEDURE ROLE & RESPONSIBILITY VIOLATION	DIRECT AND SKIP LEVEL SUPERVISOR	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC (DISCRETIONARY ESCALATION)	UPON DISPOSITION OF VIOLATION AND CONDITIONAL TO ERC ASSESSMENT OF MATERIALITY
AUTHORIZED TRANSACTIONS VIOLATION - SCH B	DIRECT AND SKIP LEVEL SUPERVISOR	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC	WITHIN 3 BUSINESS DAYS OF IDENTIFICATION AND FOLLOWING THE DISPOSITION OF THE VIOLATION
APPROVED HEDGING STRATEGIES - SCH G	EMC	NO LATER THAN NEXT SCHEDULED EMC MEETING FOR VARIANCE OF +/- 10% AT ESM	EMC	WITHIN 3 BUSINESS DAYS FOR ANY VARIANCE GREATER THAN 10%

		DIRECTOR DISCRETION		
MARGIN AND COLLATERAL POSTING - SCH C	CFO AND VP OF ENERGY SUPPLY OPERATIONS	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC	WITHIN 3 BUSINESS DAYS OF IDENTIFICATION AND FOLLOWING THE DISPOSITION OF THE VIOLATION
POSITION AND MARKET EXPOSURE LIMITS - SCH A, E & F	DIRECT AND SKIP LEVEL SUPERVISOR	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC	WITHIN 3 BUSINESS DAYS OF IDENTIFICATION AND FOLLOWING THE DISPOSITION OF THE VIOLATION
UNAUTHORIZED COUNTERPARTY TRANSACTION	DIRECT AND SKIP LEVEL SUPERVISOR	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC (DISCRETIO NARY ESCALATIO N)	UPON DISPOSITION OF VIOLATION AND CONDITIONAL TO ERC ASSESSMENT OF MATERIALITY
CREDIT LIMIT VIOLATION	DIRECT AND SKIP LEVEL SUPERVISOR	WITHIN SAME BUSINESS DAY OF IDENTIFICATION	EMC	WITHIN 3 BUSINESS DAYS OF IDENTIFICATION AND FOLLOWING THE DISPOSITION OF THE VIOLATION
CREDIT LIMIT EXCEEDANCE (MARKET MOVE)	EMC	WITHIN SAME BUSINESS DAY FOR EXCEEDANCE LASTING LONGER THAN 3 BUSINESS DAYS	EMC	PERIODIC UPDATES BASED ON ERC ASSESSMENT OF MATERIALITY UNTIL DISPOSITION OF CREDIT LIMIT EXCEEDANCE

ANY VIOLATION OR EXCEEDANCE ASSESSED TO HAVE A NOTIONAL FINANCIAL IMPACT IN EXCESS OF \$25M MUST BE ESCALATED TO THE EMC AND BOD WITHIN 1 BUSINESS DAY OF IDENTIFICATION

APPENDIX IV - TRANSACTIONS INVOLVING WASHINGTON CARBON ALLOWANCES (WCA)

DEFINITION:

A Washington Carbon Allowance (WCA) is a limited tradable authorization to emit up to one metric ton of carbon dioxide equivalent (MtCO_{2e}) during the generation of power sold into the state of Washington. Following the passage of the Climate Commitment Act, Washington State legislated limits on greenhouse gasses emitted in the state. In order to meet these limits, the legislature adopted a program that caps and reduces emissions from large emissions.

AUTHORIZATION TO TRANSACT:

All transactions involving WCAs must be executed by a WCA Authorized Trader and in accordance with any EMC-approved strategy.

FOR SALES OF WCAS:

- Sales of WCAs must be approved by the EMC, documented by ERC and the DESM and executed for the purpose of compliance and/or risk mitigation.
- Transactions will be documented in the approved system of record by the executing authorized trader no later than the close of business the date of deal execution.
- Once the transactions are executed with approved completed contracts, transfer confirmations will be entered into the Compliance Instrument Tracking System Service (CITSS)

FOR PURCHASES OF WCAS:

- WCAs will be purchased for the purpose of offsetting the Company's Washington State GHG obligations.
- The purchase of WCAs can be executed bilaterally or through ICE cleared transactions in accordance with EMC approved limits.
- Participation and purchase of WCAs via the auction is not permitted without EMC approval.
- Transactions will be documented in the approved system of record by the executing authorized trader no later than the close of business the date of deal execution.
- Once the transactions are executed with approved completed contracts, transfer confirmations will be entered into the Compliance Instrument Tracking System Service (CITSS)
- WCAs will be retired periodically in accordance with state requirements to satisfy the company's annual GHG obligation.

11. GLOSSARY

Aggregate Net Open Position - The aggregate net short and long positions for a given asset or portfolio (in aMW or MMBtu/day average) in a given time period. This is calculated using load, generation, purchases and sales.

Authorized Traders - Staff member(s) who are authorized to transact on behalf of the Company (defined by time-frame, commodity type, and any other distinguishing factors as determined by the applicable director or officer).

Authorized Transactions - Transactions which are listed and defined in Schedule A and B or are approved on an ad hoc basis by the EMC. Authorized Transactions may not have a Term which exceeds 36 months unless specified otherwise in Schedule A or approved by the EMC. Any changes to Schedule A require approval from the EMC.

Balance of the Month (BOM) - A type of Short-Term power or gas transaction that enables market participants to enter into a physical or financial trade for delivery or settlement on each day of the present month in which the transaction has taken place.

Bookout - An agreement entered into by PSE (usually by schedulers) and one or more counterparties whereby all parties, with respect to offsetting transactions, agree to perform only the net financial component of the associated transactions, obviating the reciprocal associated physical deliveries of the commodity.

Bring Your Own Device (BYOD) – PSE’s “bring your own device” program.

Congestion Revenue Rights (CRRs) – A financial instrument that reimburses the holder via a financial payment when the transmission grid is congested in the day-ahead market.

Creator – Authorized Trader assigned to enter a deal into the prevailing power trading system.

Credit Exposure - Includes, but may not be limited to, the net sum of accounts receivable, accrued receivables (delivered, but not invoiced) and the unrealized value of Forward Contracts (MTM). With proper documentation, PSE’s accounts payable and accrued payables (received, but not invoiced) are also considered in the calculation for credit exposure.

Credit Risk - In transactions and other commercial resource acquisition activities, refers to the potential loss due to counterparty’s non-performance under an agreement.

Credit Sleeve - A party acts as a “Credit Sleeve” (CS) when it agrees to become an intermediary between two other parties (A & B), one of which (A) has inadequate credit with the other (B) to enter into a proposed transaction between the two (A & B). Thus, if CS has sufficient credit with B to enter into the transaction with B directly, and is willing to become a “sleeve” for A, the transaction can be implemented. Sometimes the “sleeving” transaction might be structured as two buy-sells, one between A and CS; the next between CS and B. Sometimes the “sleeving” transaction might be structured as a three-party arrangement. Most often, a party acting as CS receives a fee or other compensation from A.

Most often, a party acting as CS will only act as such for specific transactions, for specific counterparties. Most often, the intended effect of the “sleeve” structure is for CS to become directly obligated to B, in addition to A being directly obligated to B. The structure thus is often similar to a guaranty, though not all legal rules or obligations are the same as would be the case in a guaranty. PSE is not allowed to do Credit sleeves.

Day-Ahead - A type of transaction that enables market participants to trade power or gas for physical delivery on the next power or gas day(s) (as defined in the WECC Preschedule Calendar for power and the next day or weekend standard trading for gas days). For power, also referred to as “Preschedule.”

Risk-Neutral – Refers to the sensitivity of changes in portfolio value to prices. A portfolio is price risk-neutral if small changes in price will not change the value of the portfolio.

Energy Portfolio - The Power and Gas Portfolios may be collectively referred to as the “Energy Portfolio.”

Energy Trade Risk Management (ETRM) Systems - The “end-to-end” trading and risk management systems used to capture and value transactions through settlement and reporting.

Executing Trader – Pertaining to Authorized Trader ascribed role in the deal entry field of trading and risk management systems, who transacts on behalf of the Trader **Expiration or Termination Date** - The last day a contract is valid to require or permit performance.

Exposure Reports - A report providing information regarding the Company’s counterparty or market risk exposure.

Forward - A type of transaction which enables market participants to enter into a physical or financial trade with a term, for power transaction greater than that BOM and for gas transactions, greater than that of Short-Term transactions.

Forward Contract - Refers to over-the-counter transactions/contracts for power and gas for delivery beyond the

Forward Price Curve - A data set of monthly market prices for future gas and power transactions listed by date.

Gas Portfolio - The Gas Portfolio is comprised of purchased gas supply, sales contracts, gas transportation agreements and gas storage capacity, along with hedges to manage volatility, intended to meet the needs of PSE’s retail natural gas customers. The Gas Portfolio is also referred to as PSEG.

Index Swap - A float-float index swap that references one daily or monthly index against another daily or monthly index.

Inter-book – A transaction between two of PSE’s trading books. The transaction should have two offsetting sides, a long position in one tradebook and a short position in another tradebook.

Letter of Credit (LOC) - A contractual obligation on the part of a bank to pay a “beneficiary” in the event that the debtor fails to pay as stipulated in the LOC. A LOC effectively transfers the creditworthiness of the issuing bank to the debtor. LOCs usually limit the amount of liability, the term of agreement, and the products covered.

Locational Exchanges - A physical transaction between PSE and a counterparty in which PSE buys power from a counterparty for a specified time period in exchange for selling power to the same counterparty during the same time period but at a different location.

Long-term - Refers to transactions/contracts for energy supply for delivery beyond 12 months following the transaction date.

Medium-term - Refers to transactions/contracts for energy supply for delivery within the period after the Transaction Date calendar month and a time period up to 12 months beyond the Transaction Date.

Netting Agreement - An agreement that specifically enables the netting of payments for transactions under a contract or collection of contracts.

Notional amount - Notional Amount is defined as:

- For fixed price transactions: total volume of the transaction multiplied by the price (market or contract) per unit.
- For indexed transactions: total volume multiplied by the index premium.

Gas Index Notional amount = MMBtu/d x number of days x absolute value (premium)

Power Index Notional amount = MW x total hours x absolute value (premium)

Position Report - Reports which illustrate volumetric amounts/values associated with a portfolio of native generation asset forecasts, internal, and external physical and financial transactions. Often the positions are segmented by particular business units, markets, instruments, or trading portfolios.

Prompt Month - Refers to the next month beyond the month of the current date.

Power Portfolio - The electric supply portfolio, composed of owned generating resources, short-term and long-term power purchase agreements, and is intended to meet the needs of PSE's retail electric customers. The fuel supply for the Power Portfolio is composed of natural gas, fuel oil and coal, along with hedges to manage volatility. The Power Portfolio is also referred to as PSEE.

Proposed Transactions - A proposed single transaction, multiple specified non- Authorized transactions or, the addition/modification of an Authorized Transaction to Schedule A, which has not been approved by the EMC, either as an addition to Schedule A or separately.

Proposed Transaction Business Case - Proposed Transaction Business Case presentations requesting transaction(s) authorization and/or amendments to Schedule A should include a (n):

- Recommendation for the transaction;
- Description of how the transaction is consistent with PSE's Integrated Resource Plan, 5-Year Plan, Clean Energy Transformation Act, corporate goals, and PSE's Energy Risk Policy;
- Quantitative analysis which illustrates the costs (including operational, internal processing and overhead costs) and benefits of the transaction;
- Alternatives analysis as applicable;
- Evaluation of additional operational requirements necessary to initiate as well as support the transaction through its specified terms;
- Documentation of the considerations and risks associated with the transaction and mitigation strategies.

PSEE - PSE Electric. See also **Power Portfolio**.

PSEG - PSE Gas. See also **Gas Portfolio**.

Real-time - Refers to transactions/contracts for same day energy supply, including hourly or sub-hourly markets.

Renewable Energy Credits (RECs) - Tradable units that represent the commodity formed by unbundling the environmental attributes of a unit of renewable energy from the underlying electricity.

Short-term (also Balance-of-Month) - Refers to transactions/contracts for next-day up to end of the calendar month energy supply.

Spot Market Exposure - An ERC approved modeled dollar summary measured by utilizing portfolio net open position and the Forward Price Curve. It represents the net dollar amount that the Company has not hedged during a given timeframe, given forecasted volumes and current market prices.

Swap - Most often, a fixed-for-floating gas or power transaction between two counterparties where one pays a fixed price and another pays a monthly floating or daily floating index price.

Tariff - Terms and conditions under which a provider or seller offers service to all counterparties. That is, tariffs normally only govern a party's sales, not purchases. Tariffs are often comprehensive and usually non-negotiable. For regulated parties (including PSE), tariffs must be filed with the applicable regulatory body before they are effective. For some parties that operate a market (e.g., the CAISO), tariffs adopted by the market operator govern both purchase and sales in that market.

Temporal Exchanges - Are physical transactions between PSE and a counterparty in which PSE buys power from a counterparty at a specified location in exchange for selling to the same counterparty power at the same location during a different time period. These transactions can be entered into to balance net position deficit and surpluses in different time periods or to optimize a flexible resource such as hydro or a contract with flexible-take provisions.

Term - For transactions refers to the length of time measured starting on the Transaction Date and ending on the delivery end date or contract end/termination date.

Trader – Pertaining to Authorized Trader ascribed the role in the deal entry field of trading and risk management systems, who operates as the principal deal maker who negotiated original contract terms and agreement, and is responsible for position management.

Transaction Date - The Transaction also referred to as ("**Trade Date**") is the date which a transaction or trade is executed.