



Policy Number: 7

Original Adoption Date:
October 27, 2016

Revised: February 23, 2017

Subject: Risk Management Procedures and Controls for Transactions in the Independent System Operator Markets

Table of Contents

1	Overview	3
2	Roles and Responsibilities.....	3
3	Risk Exposure and Controls	4
3.1	Credit Risk	4
3.2	Liquidity Risk.....	4
3.3	Market Risk.....	4
4	Monitoring and Reporting	5
4.1	Monitoring.....	5
4.2	Reporting.....	5
5	Training	6

1 Overview

This Risk Management Procedures and Controls for Transactions in the California Independent System Operator Markets (Risk Management Policy or RMP) establishes criteria and processes for transacting in the CAISO markets. The CAISO markets in which Peninsula Clean Energy (PCE) participates and to which these policies apply include the following:

- Congestion Revenue Rights

The Risk Management policy consists of the following components:

1. Roles and Responsibilities
2. Risk Exposure and Controls
3. Training
4. Monitoring and Reporting

2 Roles and Responsibilities

PCE's Risk Management Policy ensures appropriate segregation of responsibility for policy approval, valuation and reporting, and trading.

The PCE Governing Board is responsible for approving the Risk Management policy and procedures.

The Enterprise Risk Management (ERM) Oversight Committee is responsible for overseeing modifications to and implementation of PCE's CRR policy and processes.

The Trading Group (Front Office) is responsible for executing CRR transactions, consistent with this CRR policy. In addition, the Front Office is tasked with complying with all controls, limits and procedures and immediately reporting to the Middle Office discrepancies or deviations from accepted practices, policies or procedures, including breaches of established trading and risk limits, unauthorized trading activities and failure of controls.

The Risk Group (Middle Office) is responsible for valuing and monitoring PCE's CRR positions. The Middle Office is also responsible for providing CRR reports to the ERM Oversight Committee and, within 24 hours of discovery, notifying the ERM Oversight Committee of transactions that are inconsistent with this CRR policy.

The Settlement Group (Back Office) is responsible for verifying that trades executed by the Front Office are executed in compliance with this CRR policy. The Back Office is also responsible for immediately reporting to the Middle Office discrepancies or deviations from accepted practices, policies or procedures, including breaches of established trading and risk limits, unauthorized trading activities and failure of controls.

3 Risk Exposure and Controls

PCE uses CRRs for the purpose of hedging congestions costs associated with serving its retail load. PCE participates in the CAISO CRR allocation process to obtain CRRs that protect against and minimize congestion costs. CRR positions are limited to the Seasonal Eligible Quantity and Monthly Eligible Quantity caps as provided by the CAISO with all allocated CRRs sinking to PG&E DLAP or one of PG&E’s corresponding SLAPs. All CRR transactions are executed and managed by PCE’s Scheduling Coordinator, and confirmation of such transactions are provided to PCE personnel who are independent from the CRR trading function.

The table below lists authorized trading limits for personnel authorized to transact on behalf of PCE. The limits are expressed in terms of Value at Risk at the 95% confidence interval.

			Purchases	Sales		
Product	Transaction Horizon	Transaction Length	\$ Limit (Authorized Personnel)	MW Limit (Authorized Personnel)	\$ Limit (Authorized Personnel)	MW Limit (Authorized Personnel)
CAISO CRRs	Month	1 Month	\$1.0M	1,000MW	N/A	N/A
	Quarter	3 Months	\$3.0M	1,000MW		
	Year	1 Year	\$12.0M	1,000MW		
	Long Term	Up to 10 Years	Approval Required by PCE Board	Approval Required by PCE Board		

PCE’s CRR policy addresses relevant risks as follows:

3.1 Credit Risk

Credit risk refers to the potential for non-payment or default by the counterparty to a transaction. PCE’s CRRs are financially settled with the CAISO through PCE’s Scheduling Coordinator. CRR credit risk is mitigated due to the credit policies and procedures in place at the CAISO and the credit provisions governing PCE’s agreement with its Scheduling Coordinator.

3.2 Liquidity Risk

Liquidity risk refers to the potential inability of a party to close out a position at prevailing market prices due to a lack of buyers or sellers for the specific product being liquidated. PCE can liquidate its CRR positions by selling into the CAISO monthly and annual CRR auction markets. PCE’s CRR position limits are small in relation to the overall market, and liquidation is unlikely to adversely impact market prices.

3.3 Market Risk

Market risk refers to potential cost exposure resulting from changes in market prices for the underlying commodity. CRRs have positive value when congestion exists between

the source and the sink associated with the CRR path such that locational marginal prices are lower at the sources than at the sink. CRRs have negative value when the opposite is true. PCE uses CRRs to hedge against congestion costs, which are negatively correlated with CRR values, such that the potential adverse financial impacts of changes in CRR values and congestion costs are mitigated. PCE intends to obtain Congestion Revenue Rights (CRRs) through the CRR allocation process with the initial objective of attaining an allocation of CRRs that have consistently cleared with positive value in both the day-ahead market and in the auctions.

4 Monitoring and Reporting

4.1 Monitoring

CRR values shall be monitored at regular intervals, with such intervals selected in consideration of the risk characteristics of PCE's CRR holdings, but no less frequently than monthly. CRR's shall be valued using prevailing industry practices including historical congestion analyses, forward pricing and volatility assessments, and auction clearing prices. PCE's Scheduling Coordinator will use its internal valuation systems to assess potential congestion and make recommendations to the Front Office for requesting CRRs in the monthly and annual allocation process. The Front Office shall enter all CRR transactions into a trade capture system, and the Back Office shall ensure that trade details recorded in the trade capture system are accurately reflected in the settlement system and shall report any discrepancies to the Middle Office and if necessary, the ERM Oversight Committee.

The value of PCE's CRR portfolio will be monitored by PCE Middle Office personnel using internal mark-to-market valuation models, run on a monthly basis. Value at Risk, or the amount that the value of the CRR can be expected to vary within a confidence interval) will be reported at the 95% Confidence interval. Changes in market value and Value at Risk shall be reported as set forth in 4.2. The Back Office will review and validate realized CRR value during the weekly settlement process, and include discrepancies relative to expected values, if any, in a weekly exception report.

PCE Middle Office personnel responsible for monitoring the value of PCE's CRR holdings shall be independent from those Front Office personnel engaged in transacting in the CAISO's CRR markets.

4.2 Reporting

CRR positions and market value shall be reported by the Middle Office on a monthly basis to the PCE Chief Executive Officer and Finance Director. Reports shall include current CRR positions, changes in CRR positions (volumes and dollar amounts) from the prior month, the realized value of PCE's CRR portfolio in the prior month, the estimated market value of PCE's CRR holdings, and Value at Risk. Any material change in such CRR values or risks, including credit, liquidity, and market risks, shall be identified and summarized in the aforementioned report.

On an interval appropriate to each specific CAISO market, but in no circumstance on less than a monthly basis, the Middle Office shall monitor all CAISO transactions for conformance to expected outcomes. To the extent the Middle Office identifies contingencies that are likely to result in an impact exceeding 5% of gross revenues, PCE shall report such contingencies and their proposed resolution to the ERM Oversight Committee. These contingencies shall include market value changes as well as consideration of credit risk and liquidity risk.

5 Training

PCE employees, contractors and agents transaction in CAISO markets shall meet all training requirements set forth in the CAISO Tariff, Business Practices, or applicable CAISO Operating Agreement. Further, all such personnel shall certify that they have read and understand this Risk Management policy and the delegations of authority before being authorized to transact on behalf of PCE.

Reviewed and Approved by:

Jan Pepper – Chief Executive Officer, Peninsula Clean Energy

Date

PCE Risk Management Policy Minimum Standards Documentation

The Market Participant's risk management framework is documented in a risk policy addressing market, credit, and liquidity risks that has been approved by the Market Participant's risk management governance function, which includes appropriate corporate persons or bodies that are independent of the Market Participant's trading functions, such as a risk management committee, a designated risk officer, a board or board committee, or a board or committee of the Market Participant's parent company;

- The Market Participant maintains an organizational structure with clearly defined roles and responsibilities that segregate front-, middle-, and back-office functions to as high a level as is practicable;

See RMP Section 2

- Delegations of authority specify the transactions in which traders are allowed to enter;

See RMP Section 3

- The Market Participant ensures that traders have adequate training and experience relative to their delegations of authority in systems and the markets in which they transact;

See RMP Section 5

- As appropriate, risk limits are in place to control risk exposures;

See RMP Section 3

- Reporting is in place to ensure risks are adequately communicated throughout the organization;

See RMP Section 4.2

- Processes are in place for independent confirmation of executed transactions; and

See RMP Section 2 (Back Office) and RMP Section 4.1

- As appropriate, there is periodic evaluation or mark-to-market of risk positions

See RMP Section 4.1