#### PACIFICORP BALANCING AND HEDGING PRODUCTS

## BALANCING PACIFICORP'S PHYSICAL POSITION

# **Physical Purchases**

The Company purchases physical natural gas to burn in its natural gas generating plants. The Company purchases physical electricity to serve its retail customers when it has insufficient economic generating capacity to serve its retail customers. These physical electricity purchases occur when it is more economical to purchase power to serve load than to operate certain of the Company's available resources. These physical electricity purchases also occur when the Company does not have sufficient available resources to serve load.

# **Physical Sales**

In addition, the Company reduces net power costs by selling physical electricity from power plants that are economical to run and the output is surplus to its needs for serving its retail customers. The Company also sells physical natural gas from time to time if it was purchased in anticipation of burning in a natural gas generating facility but subsequently the plant was no longer economic to run or unexpectedly unavailable due to reduced available generation capacity.

Over 95 percent of all transactions made by the Company are for balancing its physical position.

# **Available Balancing Products**

## **Index Price Physical**

When the Company purchases an index price physical product it agrees, at the time the transaction is consummated, to pay the price of a specified market price index and to receive physical product at a specified point of delivery at some future time of delivery. The specific price of the index is established at or near the time of delivery and is not known at the time the transaction is consummated. Payment is made after the product is delivered. For example, the Company purchases physical natural gas delivered at a point of delivery in Utah intended to burn in one of its natural gas plants, and the Company pays the published first of month index at Opal for the month in which the gas is actually delivered.

## Fixed Price Physical

When the Company purchases a fixed price physical product it agrees to pay a fixed price established at the time the transaction is consummated and receives physical electricity or natural gas at a specified point of delivery at some future time of delivery. Payment is made after the product is delivered. A fixed price physical product is used to both balance the Company's physical position and hedge the Company's market price risk.

### **Physical Option**

When the Company purchases a physical option, it has the right but not the obligation to receive a predetermined amount of commodity at the time of delivery at a predetermined price. The commodity amount and price are established at the time the transaction is consummated. In addition, the Company pays a premium at the time the transaction is consummated for this right.

#### HEDGING PACIFICOPR'S MARKET PRICE RISK

Hedging market price risk refers to the act of executing transactions that will have financial impact that offsets the impact of changing market prices to an existing market price exposure. This existing market price exposure manifests itself as (1) a risk to rising natural gas prices as this would increase fuel costs to the Company's natural gas fired generators, (2) a risk to rising electricity prices when generation output is deficient to demand and (3) a risk to falling electricity prices when generation is surplus to demand. The Company sells products to hedge its surplus, or long, forward positions and purchases products to hedge its deficit, or short, forward positions. Less than 5 percent of the transactions are for hedging its market price risk.

## **Available Hedging Products**

## Fixed for Floating Swap

When the Company purchases a fixed for floating swap it agrees to pay a fixed price for the product established at the time the transaction is consummated, and it agrees to receive an index price of a specified market price index established at the time of settlement. There is no physical delivery of electricity or natural gas. Net payment of the difference in the fixed price and floating price is made at the time the product is settled. For example, the Company purchases electricity fixed for floating swap settled at the Mid-Columbia market hub for the fourth quarter of the following year. The Company pays the fixed price established at the time the transaction is consummated, and it receives the published daily Mid-Columbia index established during the fourth quarter of the following year.

## Floating for Floating Locational Basis Swap

When the Company purchases a floating for floating locational basis swap it agrees to pay the index price at one location and is paid the index price at another location, both established at the time of settlement. A common locational basis swap will use as one of the indexes the expiration settlement for the New York Mercantile Exchange Henry Hub futures contracts for the relevant month plus or minus a negotiated differential. This product is used when combining a fixed for floating Henry Hub swap with a locational basis swap is more economic than a fixed for floating swap. For example, the Company purchases a fixed for floating swap at Henry Hub where

liquidity is deep, then purchases a floating for floating swap from Henry Hub to Opal. This is equivalent to purchasing a fixed for floating swap settled at Opal.

# Financial Option

A financial call option places a cap on the option buyer's realization of a future index price. A financial put option places a floor on the option buyer's realization of a future index price. When the option buyer purchases a financial option, it is protected against index prices settling higher (in the case of a call option) or lower (in the case of a put option) than the negotiated strike price. The strike price is the option buyer's cap in the case of a call option or a floor in the case of a put option. The option buyer pays a negotiated premium for this protection, traditionally at the time the transaction is consummated. The option buyer then receives the positive difference of the index price minus the cap price (in the case of a call option) or the positive difference of the floor price minus the index price (in the case of a put option). The cap or floor serve to protect the option buyer who may have a future need to purchase or sell index priced electricity or natural gas.

### Fixed Price Physical

When the Company purchases a fixed price physical product it agrees to pay a fixed price established at the time the transaction is consummated and receives physical electricity or natural gas at a specified point of delivery at some future time of delivery. Payment is made after the product is delivered. A fixed price physical product is used to both balance the Company's physical position and hedge the Company's market price risk.

## **Availability of Hedging Products in the Market**

The vast majority of hedging market price risk for natural gas is done with fixed for floating and floating for floating basis swaps. Some years ago, fixed price physical products were used to hedge natural gas. However, in more recent years, as the natural gas commodity market has matured, the use of fixed price physical products has greatly diminished.

The electricity commodity market is not as developed as the natural gas market. Both fixed price physical and fixed for floating swaps are used to hedge market price risk in the electricity market.

Natural gas options at liquid locations such as Henry Hub are readily available. Natural gas options at locations where the Company has market price risk such as Utah are less readily available. Electricity options are less readily available at locations where the Company has market price risk.