Chelan PUD

Hedging Program Overview

July 8, 2013

(Power Markets Symposium)

P.U.D.
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What is hedging?

a) A row of closely planted shrubs or low-growing trees forming a fence or boundary.
b) A line of people or objects forming a barrier: a hedge of spectators along the sidewalk.
c) A means of protection or defense, especially against financial loss: a hedge against inflation.
d) An intentionally noncommittal or ambiguous statement.
e) A word or phrase, such as possibly or I think, that mitigates or weakens the certainty of a statement.
f) All of the above.

Glossary

- Real-time market – price for today's transactions
- Spot market – price for the next operating day transactions
- Forward market – price for delivery at a specified time in the future (month, quarter, year, etc.)
  - The forward price is not a forecast. The forward price is the price today for a commodity to be provided at a later date.
- Mark-to-market – Comparing transactions that have not yet been delivered with the current value (price received) to the forward market price.
- Hedging – an economic activity in which parties try to protect against adverse price fluctuations in the market
  - The price of hedged transactions will differ from the spot market because of differences in forward and short term volatility
  - Comparing a hedged transaction to a single day in the spot market sheds little information on the relative value of a hedge

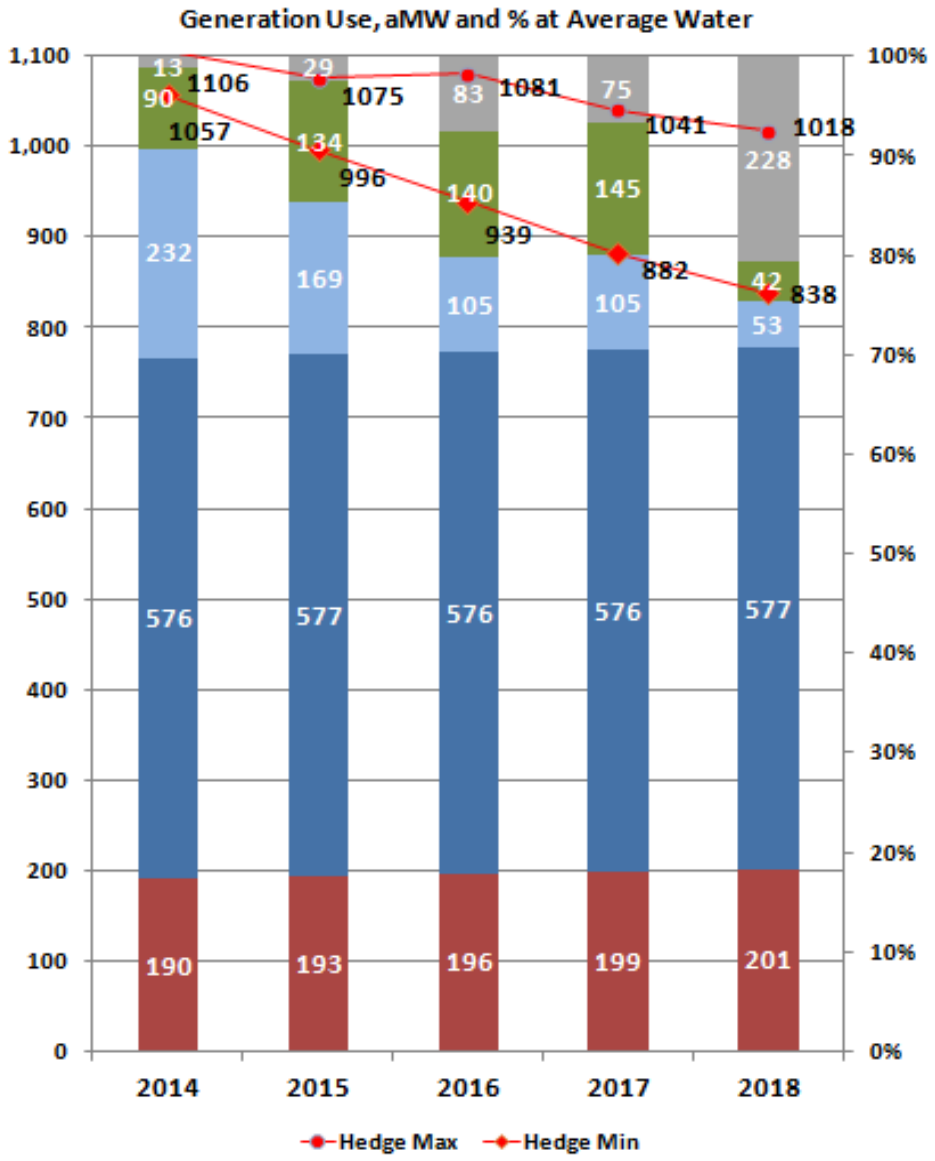
Objectives of Hedging

- **Reduce** exposure to energy market **volatility**
  - (reduces both upside and downside scenarios)
- **Provide stable revenues** over time (e.g. not to outperform the market)
  - (protect our customers from downside scenarios recognizing that we may not capture full upside value)

Why do we want stable revenues?

- Provides more predictable and stable electric rates for our customers (confirmed by last customer survey)
- Reduces customer exposure to electric rate spikes (some of our customers can't afford to pay more)
- Provides financial stability and helps manage downside scenarios (e.g. we like to pay our bills)

How Do We Hedge?

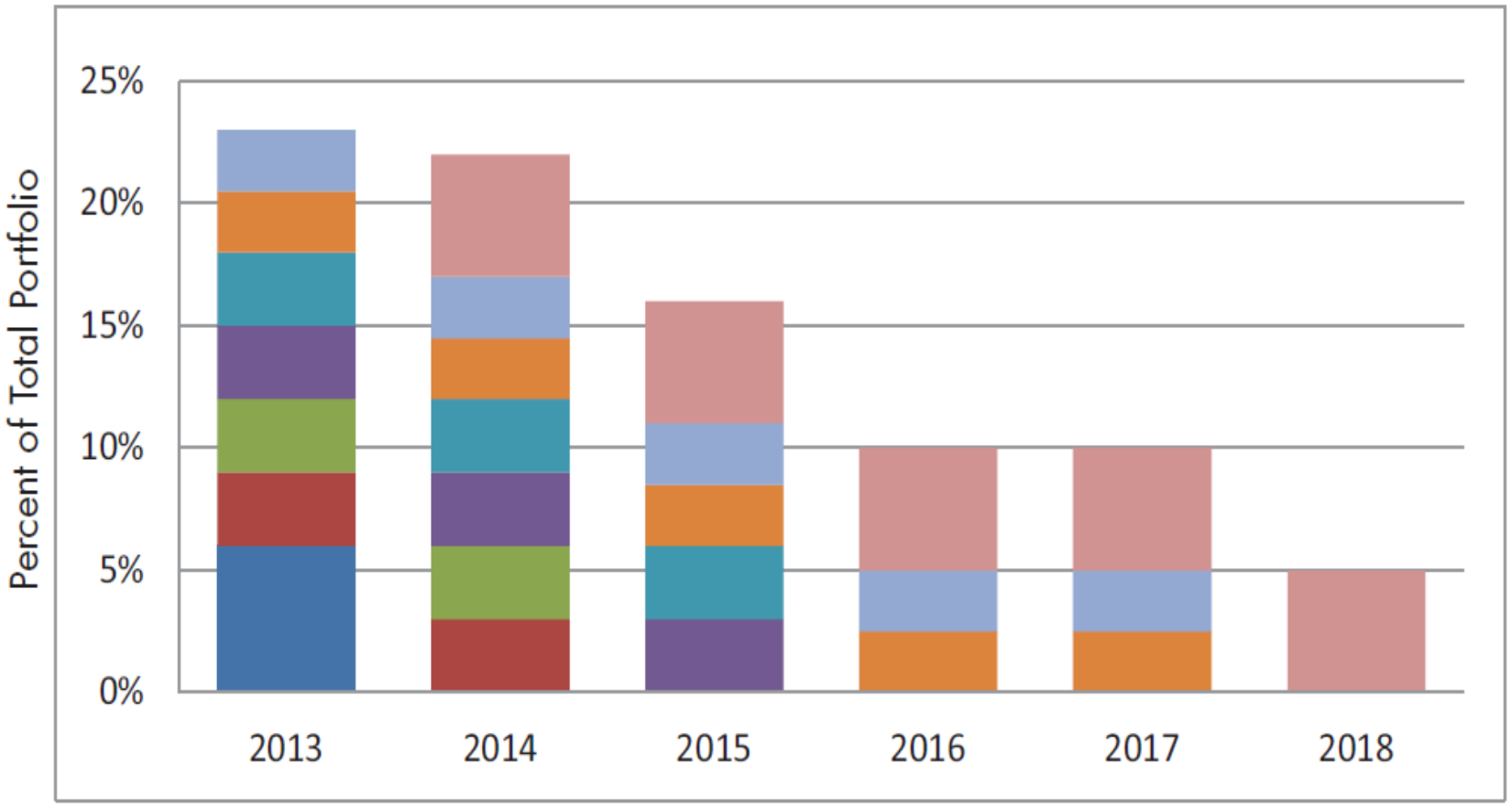


- Multi-layered approach

  (1,100 aMW of energy output annually)

  - **Local Load**
  - **Long-Term Cost-plus Slice Contracts**
  - **Market-based Slice Contracts**
  - **Market-based Block Contracts**
  - **Remaining Surplus**

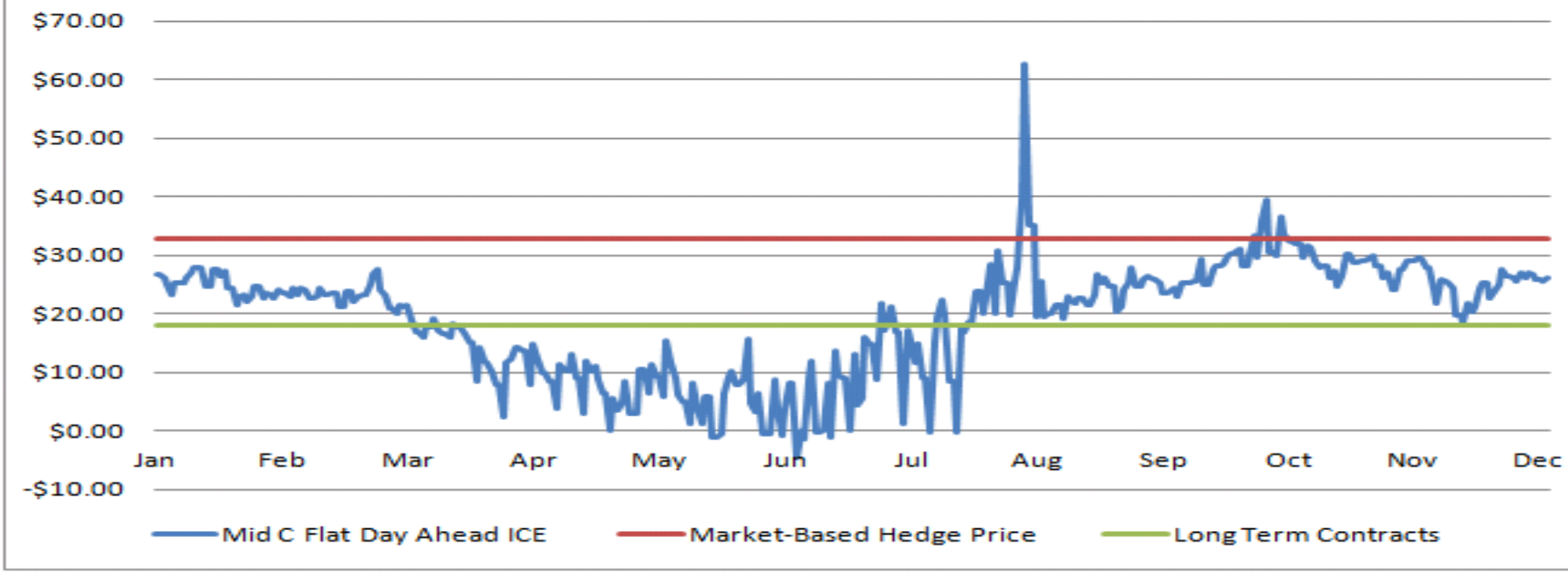
Current Market Position - Slice Products

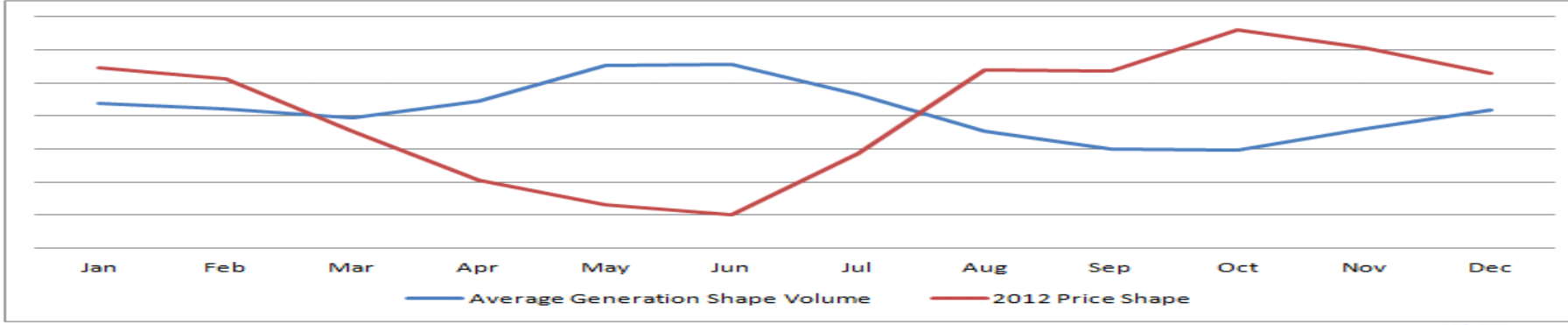


Focus on Market-Based Contracts

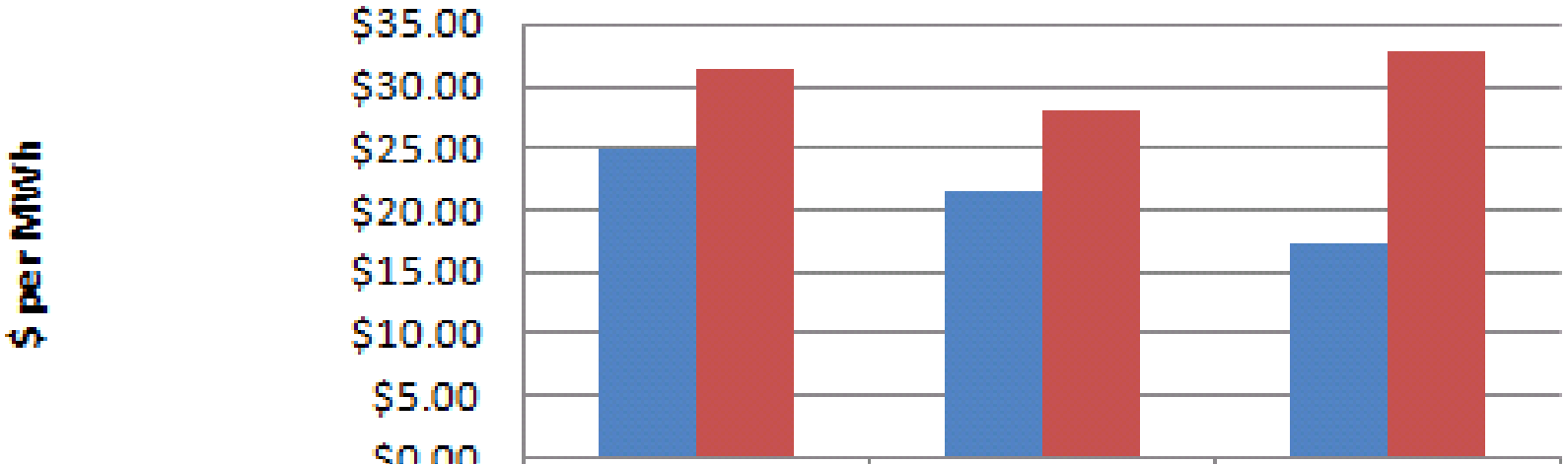
- Market-based Block Contracts (fixed amount of MW) mitigate price risk
- Market-based Slice Contracts (% of project output) mitigate price, outage and streamflow risks
  - Risks are transferred to counterparties
  - However, the Chelan PUD's credit risks increase

2012 Spot Prices vs Hedge Results





Impact of Hedging Activity on Net Wholesale Revenue

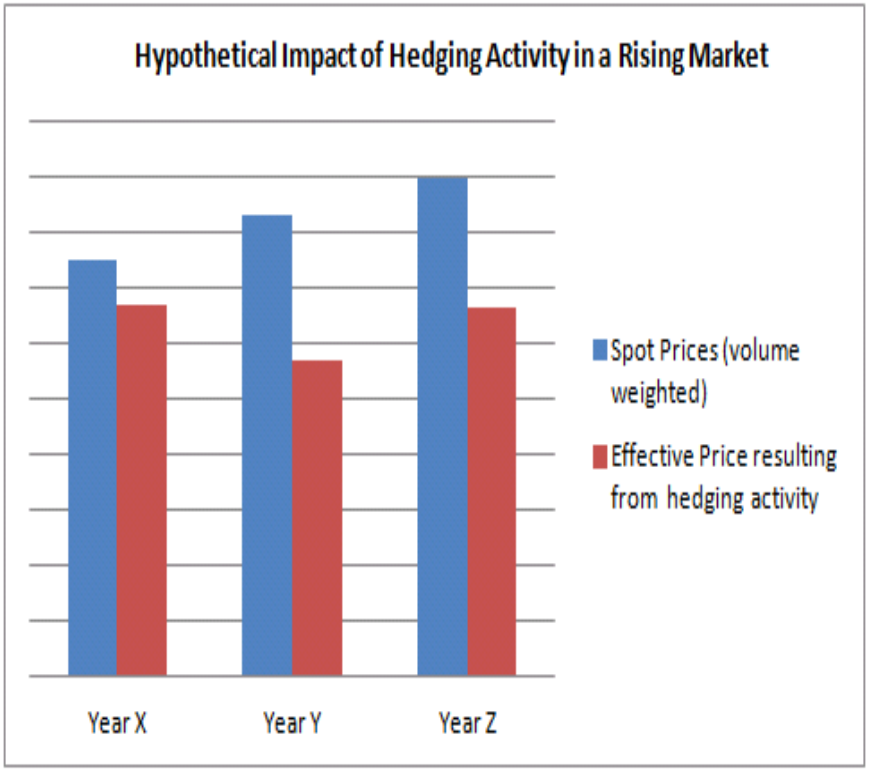


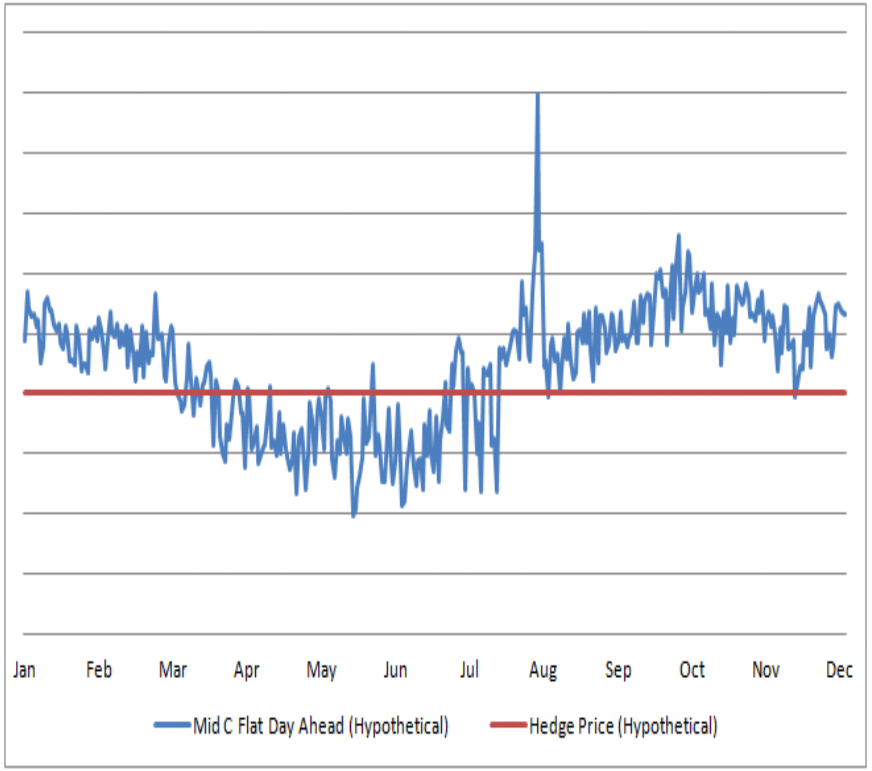
	2010	2011	2012
Spot Prices (volume weighted)	$25.07	$21.53	$17.24
Effective Price resulting from market-based hedging activity	$31.35	$27.91	$32.85

Note: Spot prices are Dow Jones Mid C

- Net Wholesale Revenue includes market-based transactions only
- Estimated cumulative three year comparison: $80 million
  (used to pay bills, reduce debt, save for rainy day, etc.)

What if Market Prices Increase?

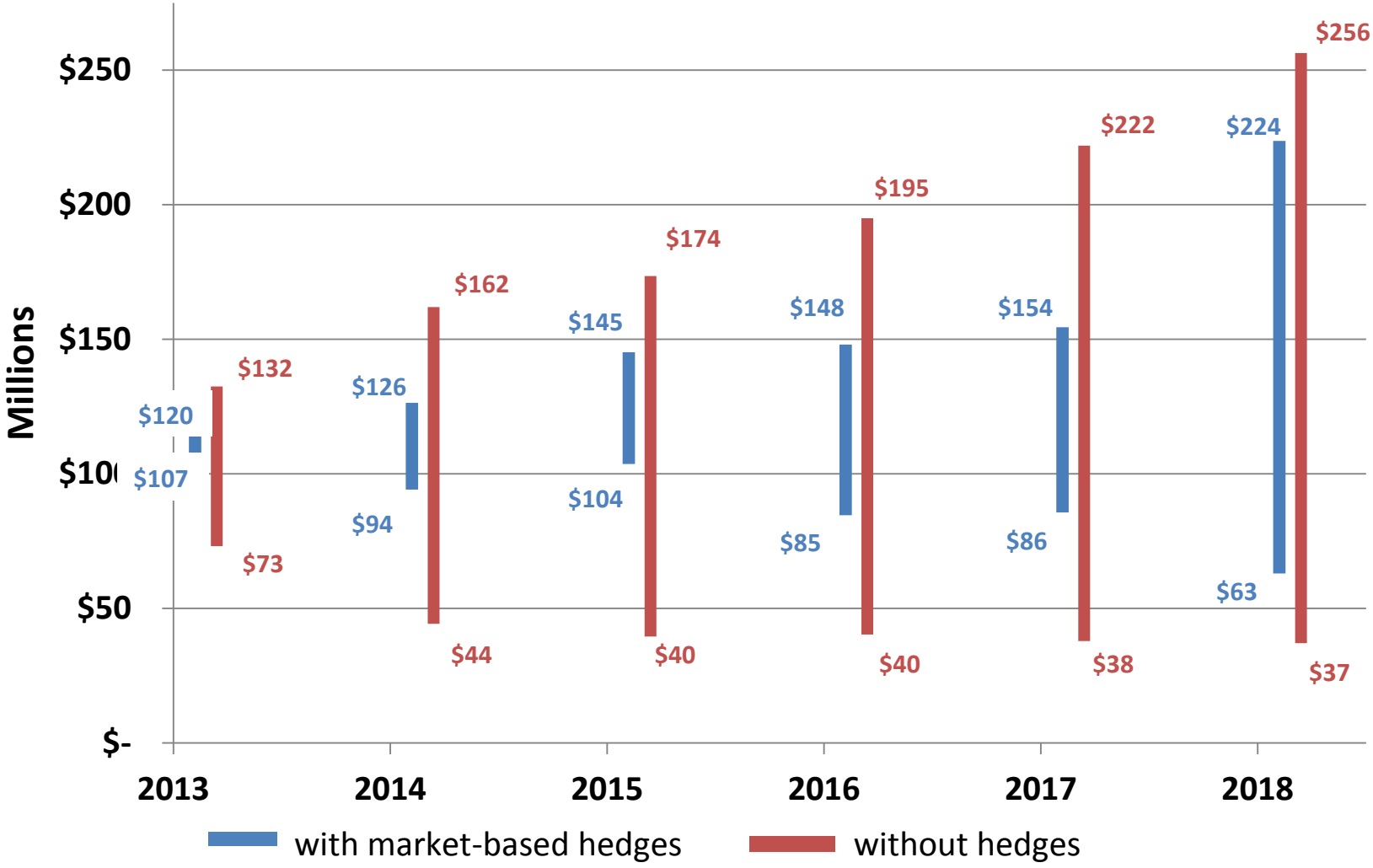




- A time will come when market prices exceed our market-based hedge prices
- Market-based hedging program will still be effective (e.g. provided stable revenue)
- With our laddered approach, one slice would expire and be replaced by a new slice at the current, higher price

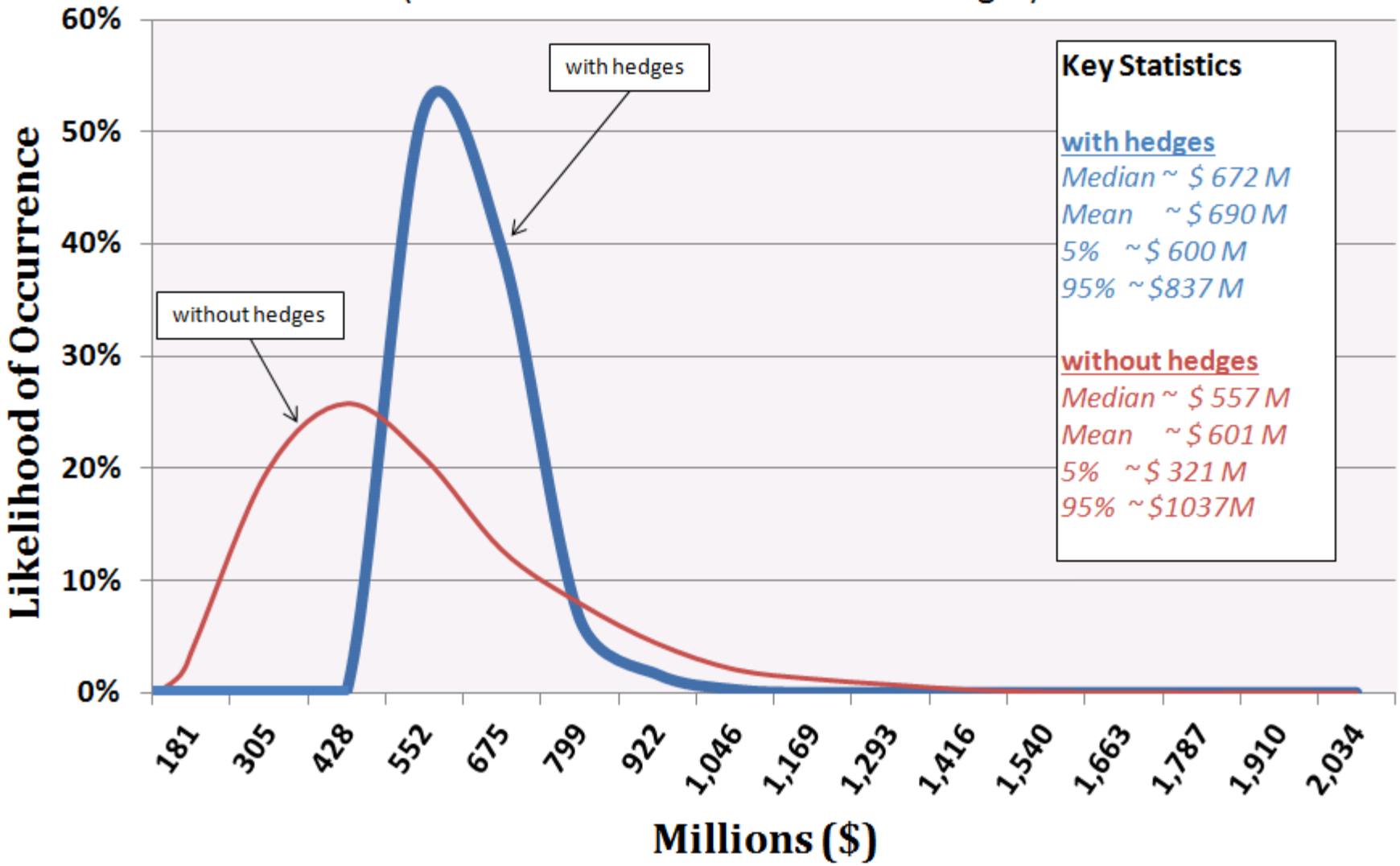
Net Wholesale Revenue Variability

(with and without market-based hedges)



2013-2018 Cumulative Net Wholesale Revenue Projections

(with and without market-based hedges)



Was the Market-based Hedging Program Effective?

- Were the objectives of the hedging program realized?
- Was hedging done consistent with hedging strategies?
- How did the results compare if no market-based hedging would have been done?

If market prices rise above the market-based hedged prices for a particular period, hedging is still a prudent business decision if it meets the objectives of reducing price volatility and providing stable revenues.

What if We Didn't Hedge?

Impact on our Financial Policies

2012	**Change in Net Position (Bottom Line)**	**Rate of Return**	**Debt Ratio**	**Combined Cover**	**Financial Liquidity**
Actual Results	**$77.9M**	**7.1%**	**65.5%**	**2.25**	**$313M**
Target		*4%-6%*	*< 60% by 2015*	*2.25*	*$196M*
What if we didn't have market-based hedging?	***$20M***	**1.8%**	**68.4%**	**1.49**	**$255M**
Target		*4%-6%*	*< 60% by 2015*	*2.25*	*$196M*

Results would have been below target – corrective action plan would have been required and some business decisions like the additional debt reduction may have been altered

Objectives of the District's Market-based Hedging Program

- **Reduce volatility of the wholesale market**
- **Help ensure lasting financial stability by providing stable revenues**
  - Goal is not to outperform the market
- **Respond to customers' priorities**
  - Predictable and stable electric rates
  - Pay down debt
  - Save for rainy day
  - Maintain reliability of our assets

Questions?

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