

# Tacoma Power

## Energy Risk Management/Power Supply Update – Q3'2020

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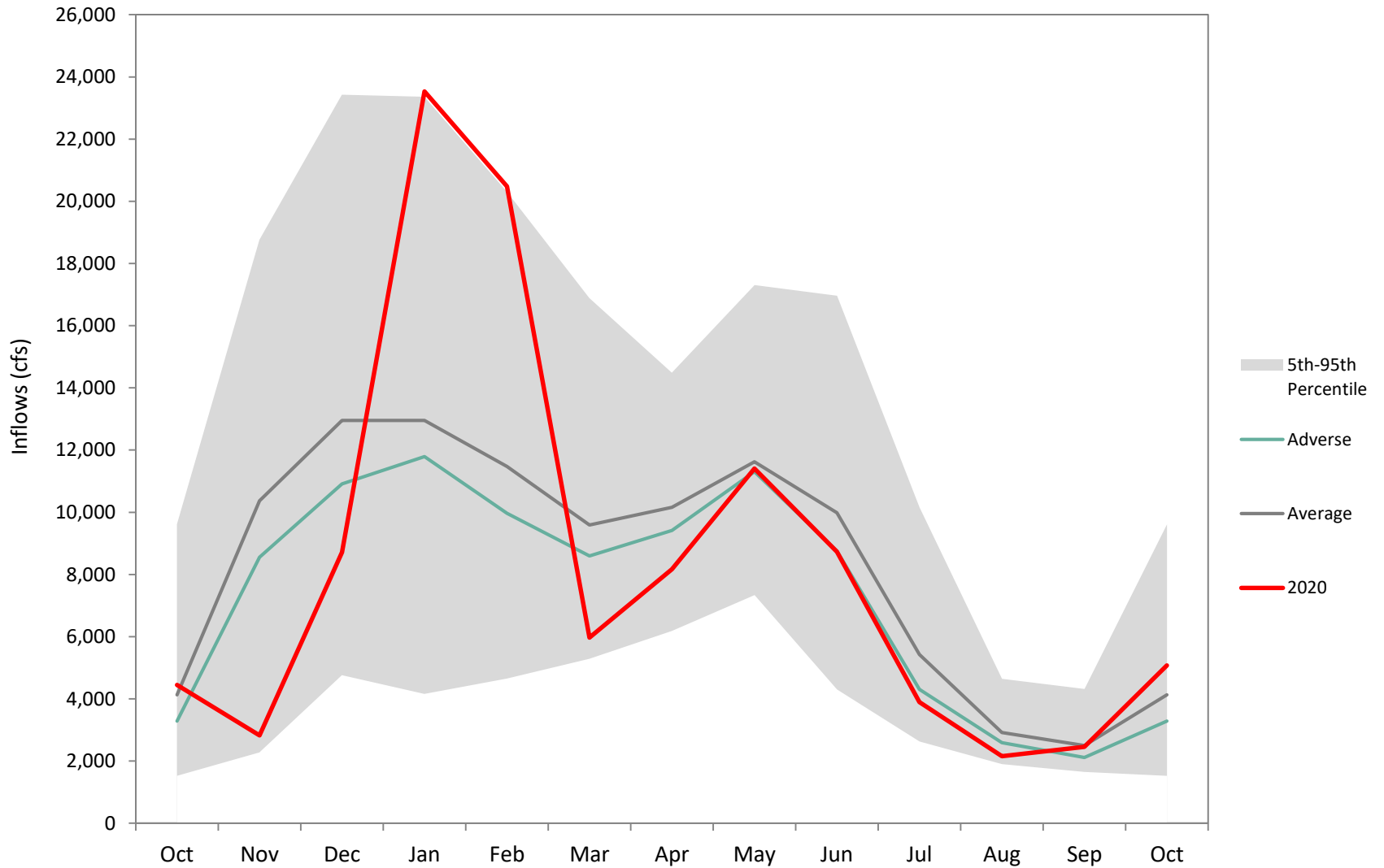
# Power Supply

**Section 1**

## Power Supply Update

# Graph 1: Tacoma System Inflows – Very Volatile Water Year

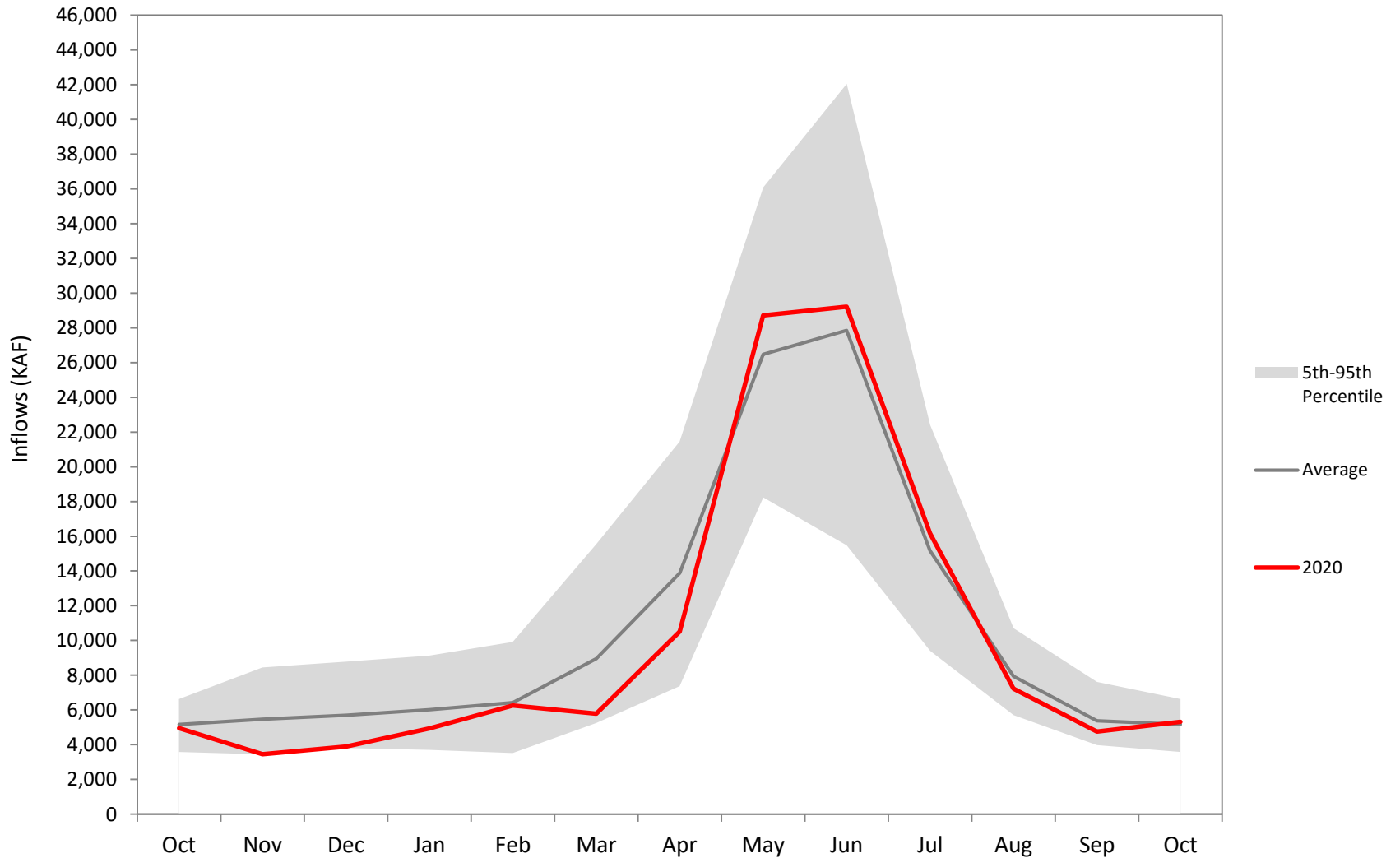
(Tacoma System Hydro Inflows, Water Year 1929 – 2020)



## Power Supply Update

### Graph 2: Federal System Inflows – Not as Volatile – Decent Runoff

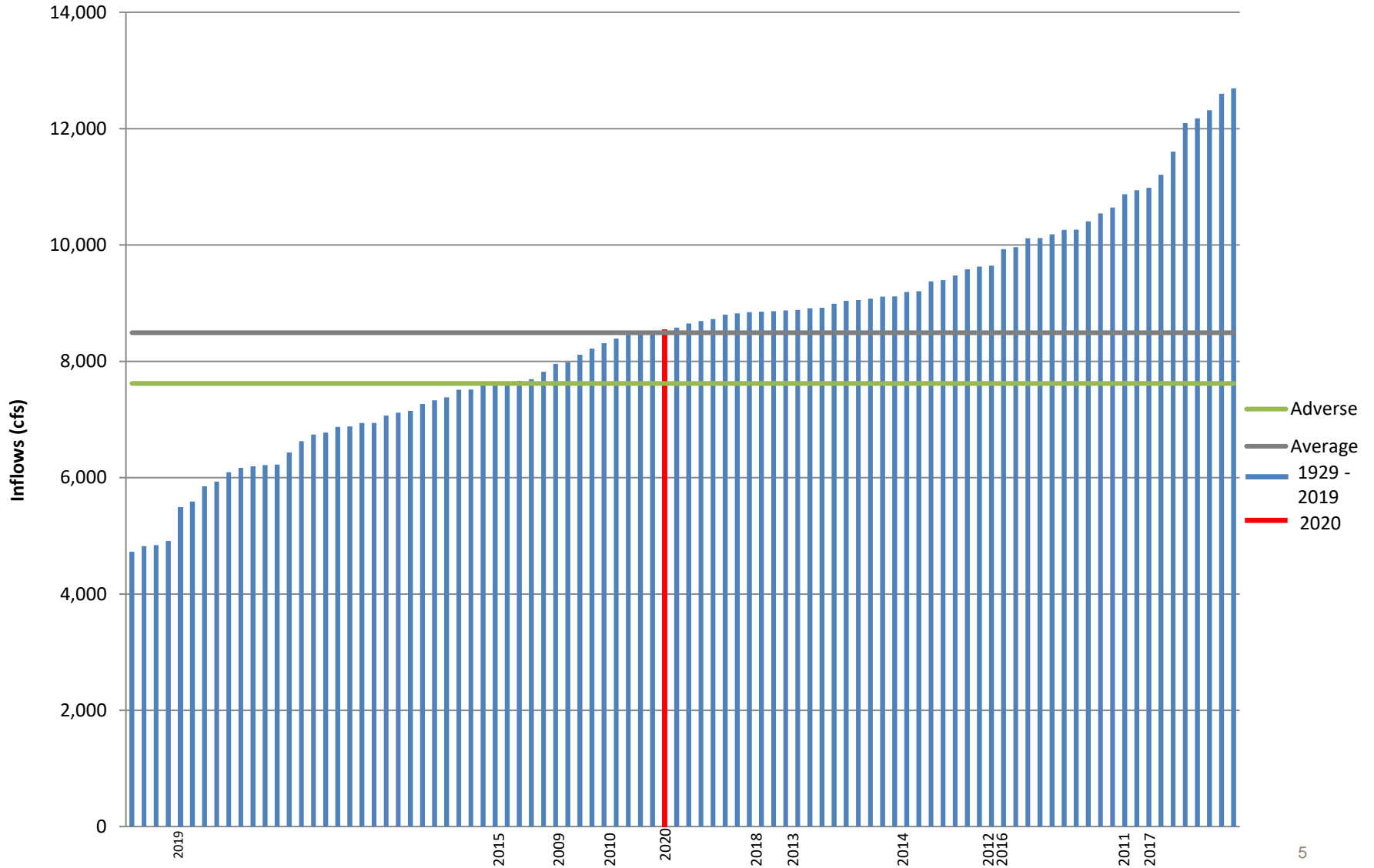
(Federal System Hydro Inflows, Water Year 1961 – 2020)



# Power Supply Update

## Graph 3: WY 2020 Tacoma System Inflows – Average Water Year

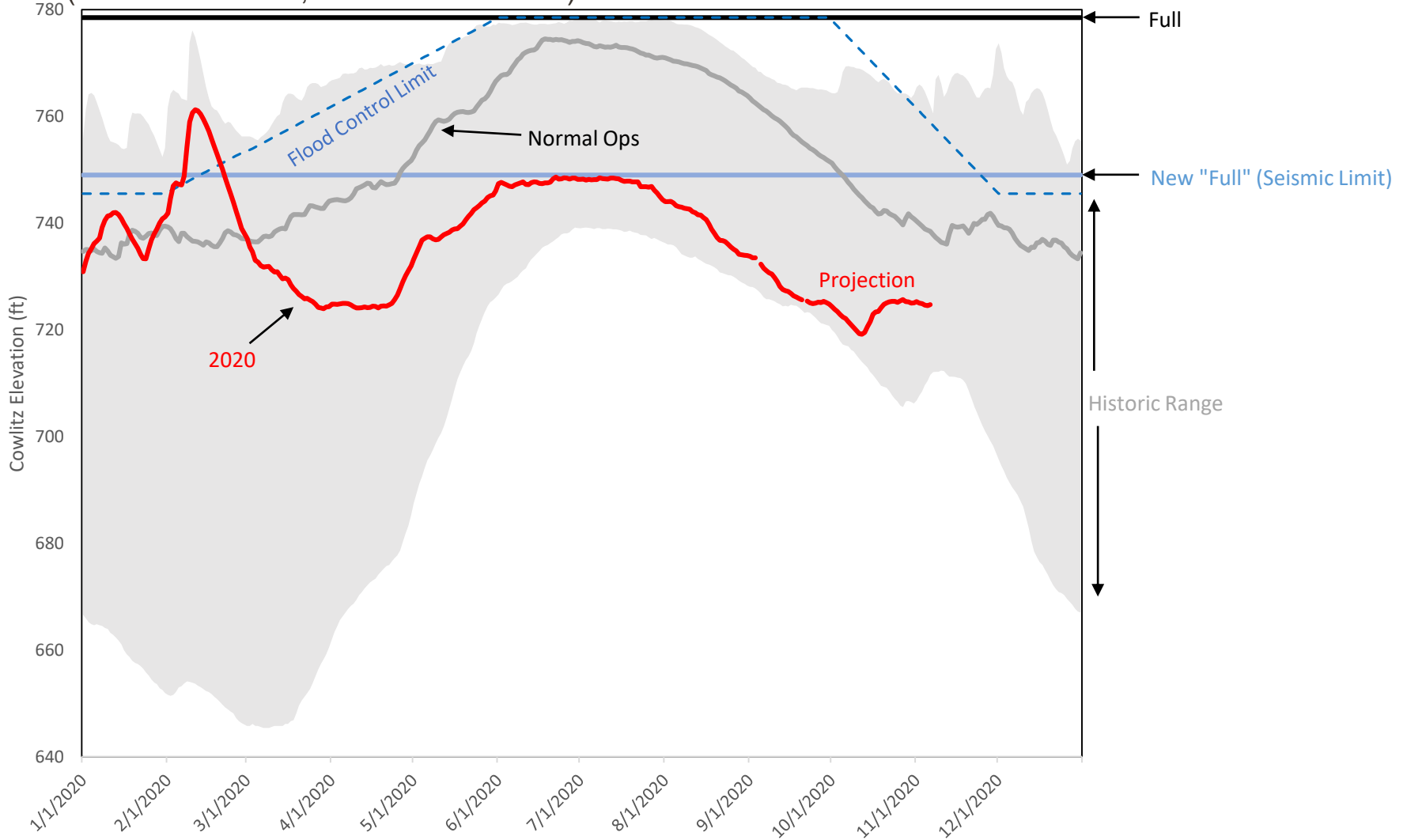
(Tacoma System Inflows Annual Avg., Water Year 1929 – 2020)



## Power Supply Update

### Graph 4: Cowlitz Project's Elevation – On Track to Meet Winter Targets

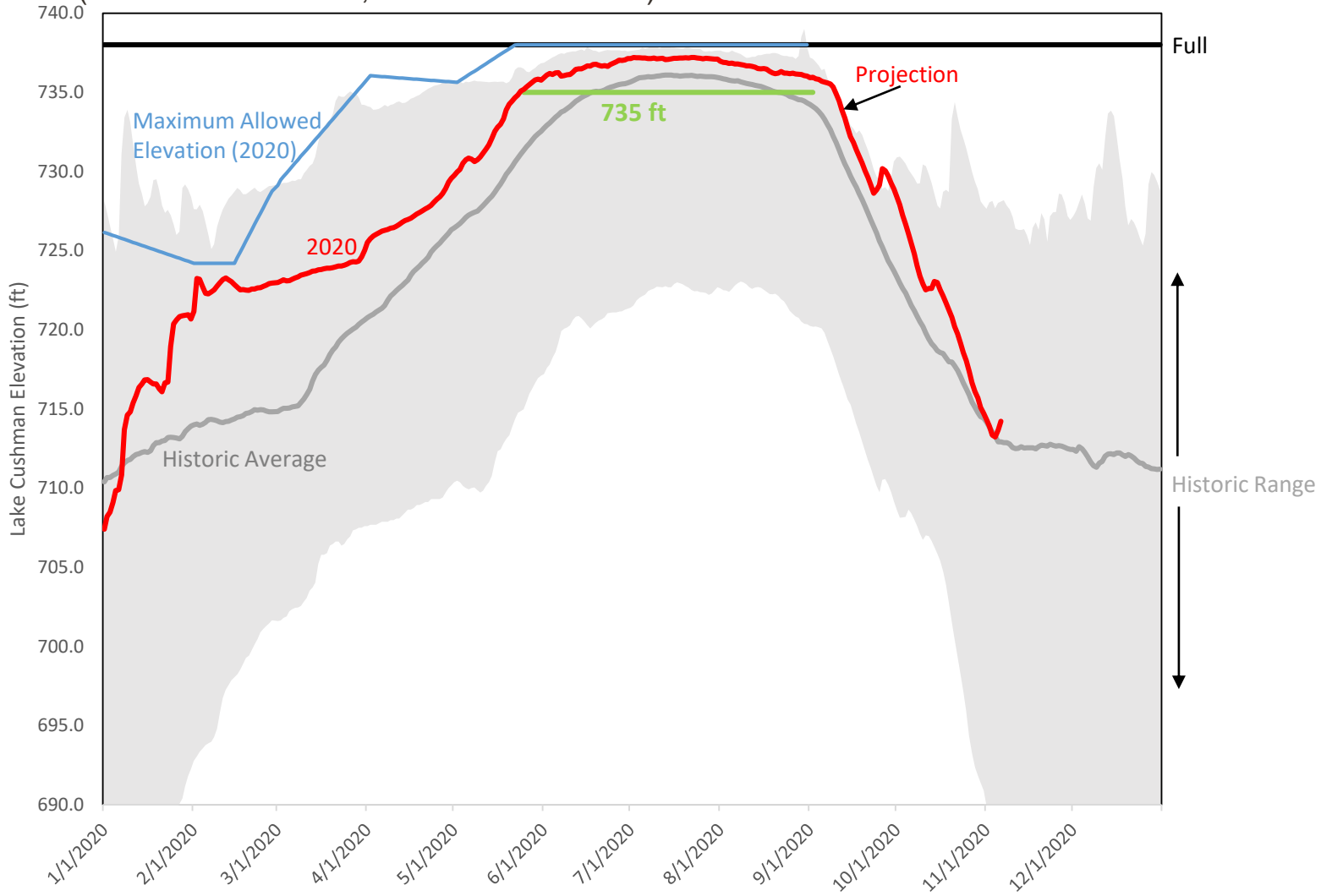
(Cowlitz Elevation, Current vs. Historic)



## Power Supply Update

### Graph 5: Cushman Project Elevation – On Track to Meet Winter Targets

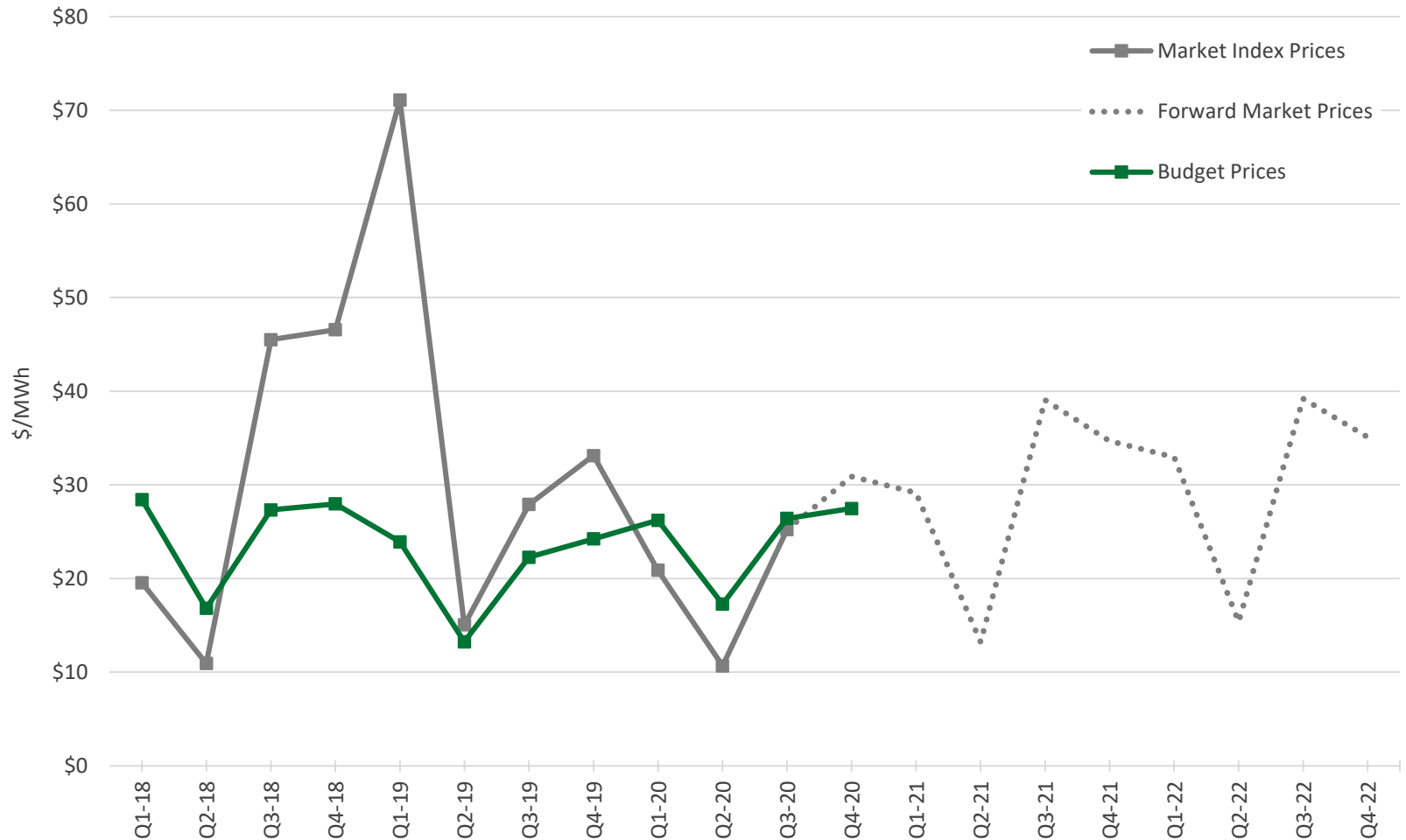
(Cushman Elevation, Current vs. Historic)



## Power Supply Update

### Graph 6: Q3 Market Prices were Near Budget, Forward Prices are Above Budget

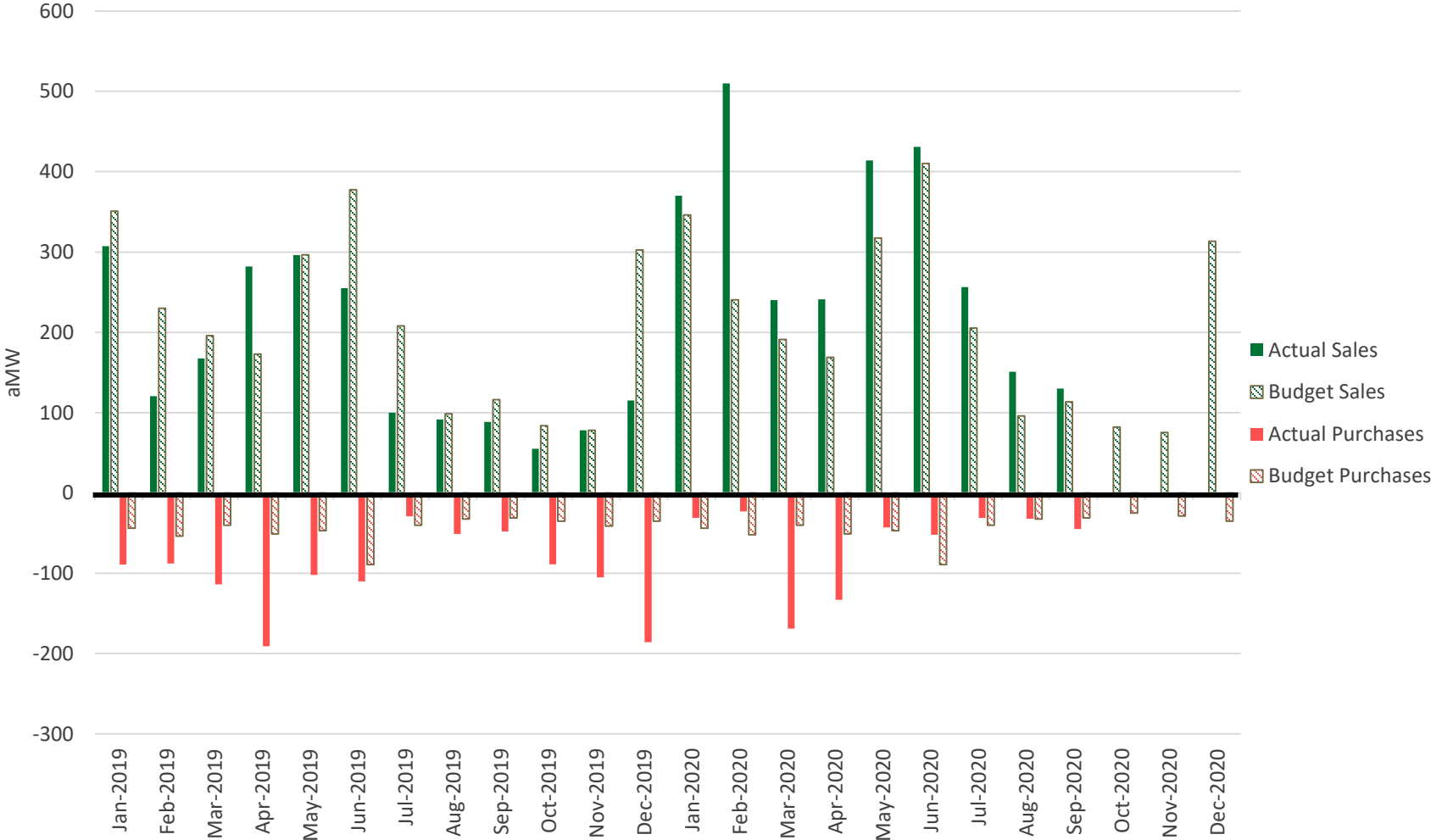
(Market vs. Budget Prices, 2018 – 2022)





# Power Supply Update

## Graph 7: Q3 Sales Higher than Budget, Purchases Near Budget

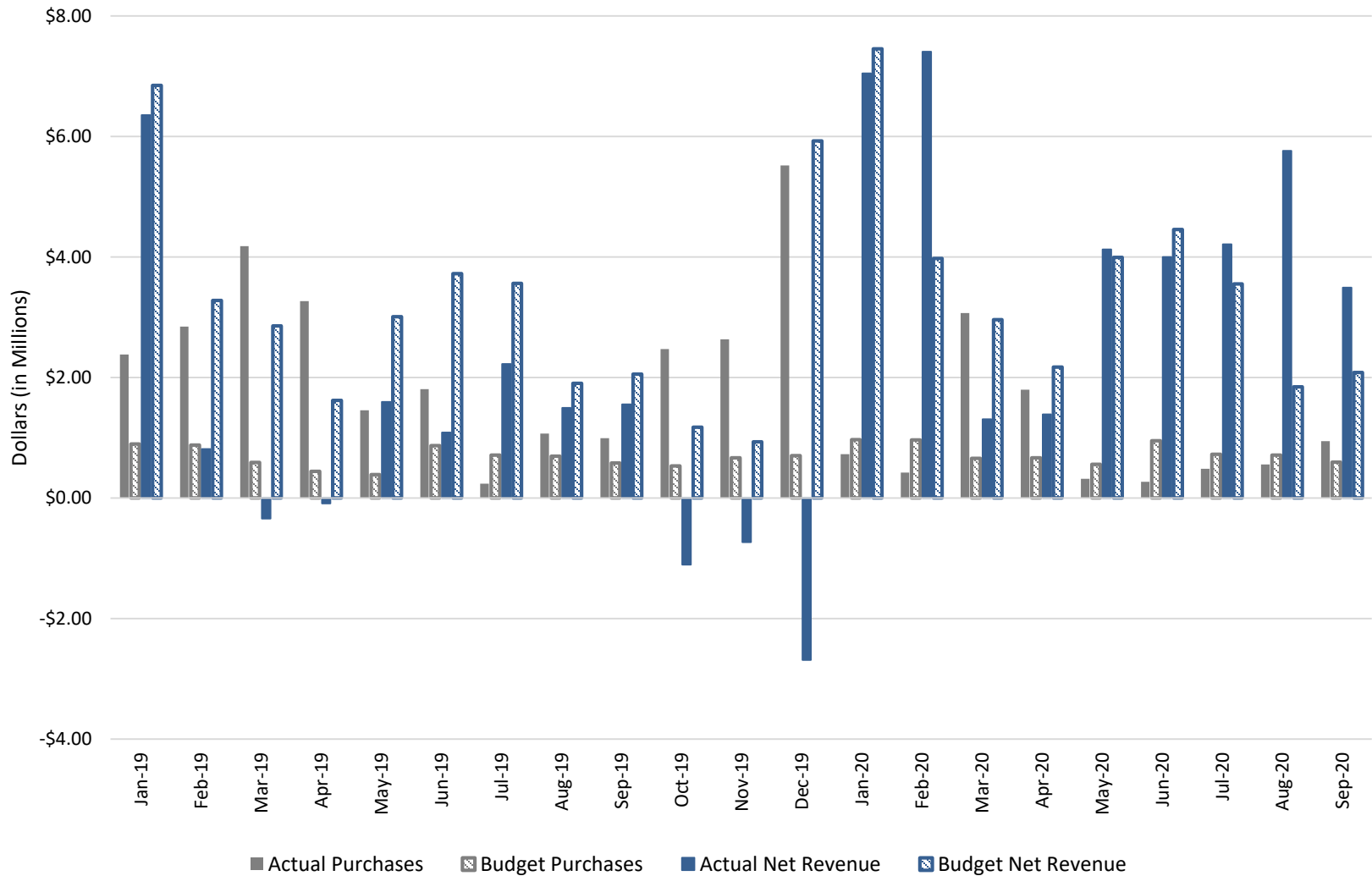


# Wholesale Net Revenues

Section 2

## Wholesale Net Revenues

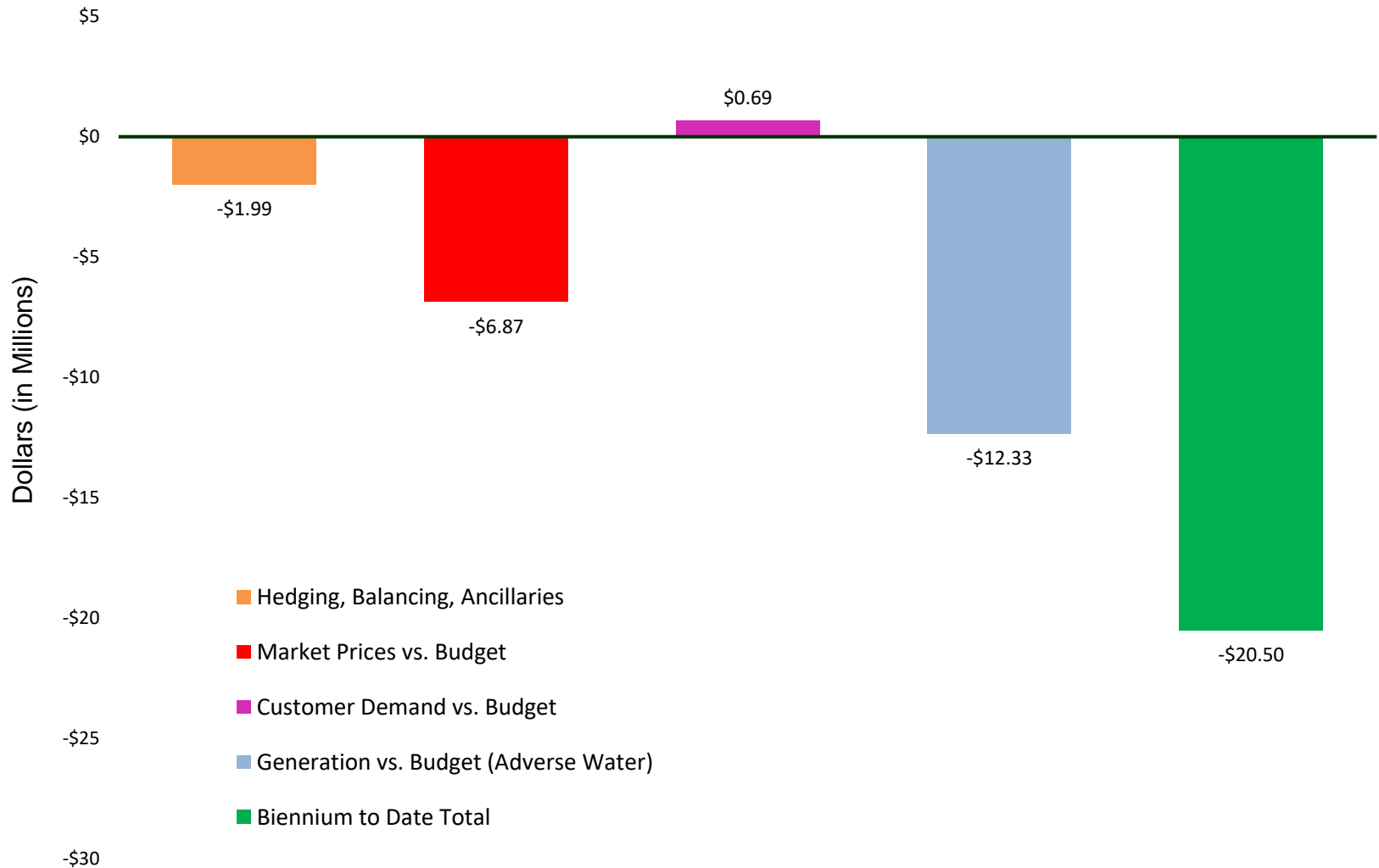
Graph 8: Actual Net Revenue is \$20M Below Budget Biennium-To-Date  
(Monthly Actual vs. Budget Wholesale Purchases and Net Revenues)



## Wholesale Net Revenues

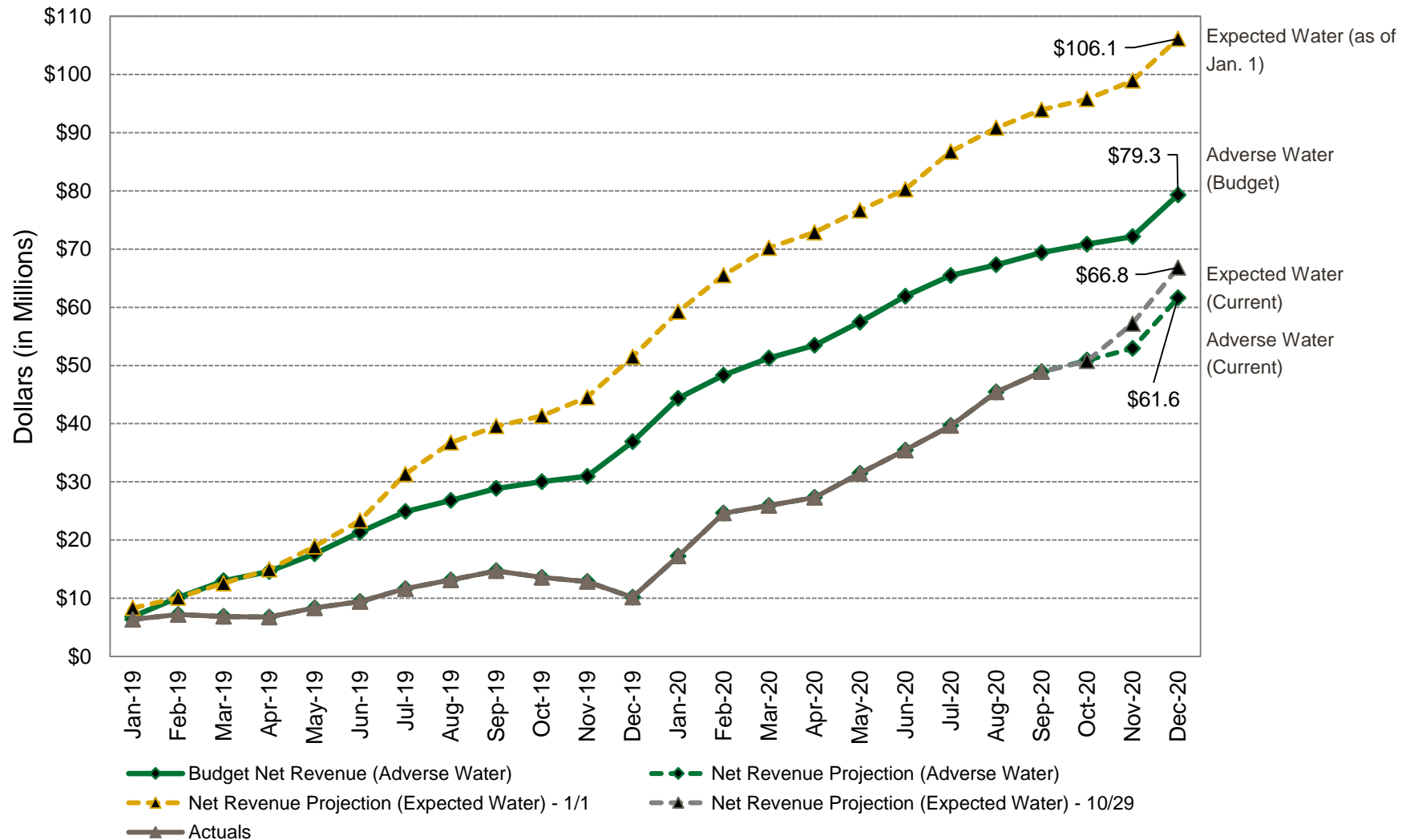
### Graph 9: Variance to Budget Improved from -\$26M to -\$20M

(Cumulative Wholesale Net Revenue Variance, Jan 2019 – Sep 2020)



## Wholesale Net Revenues

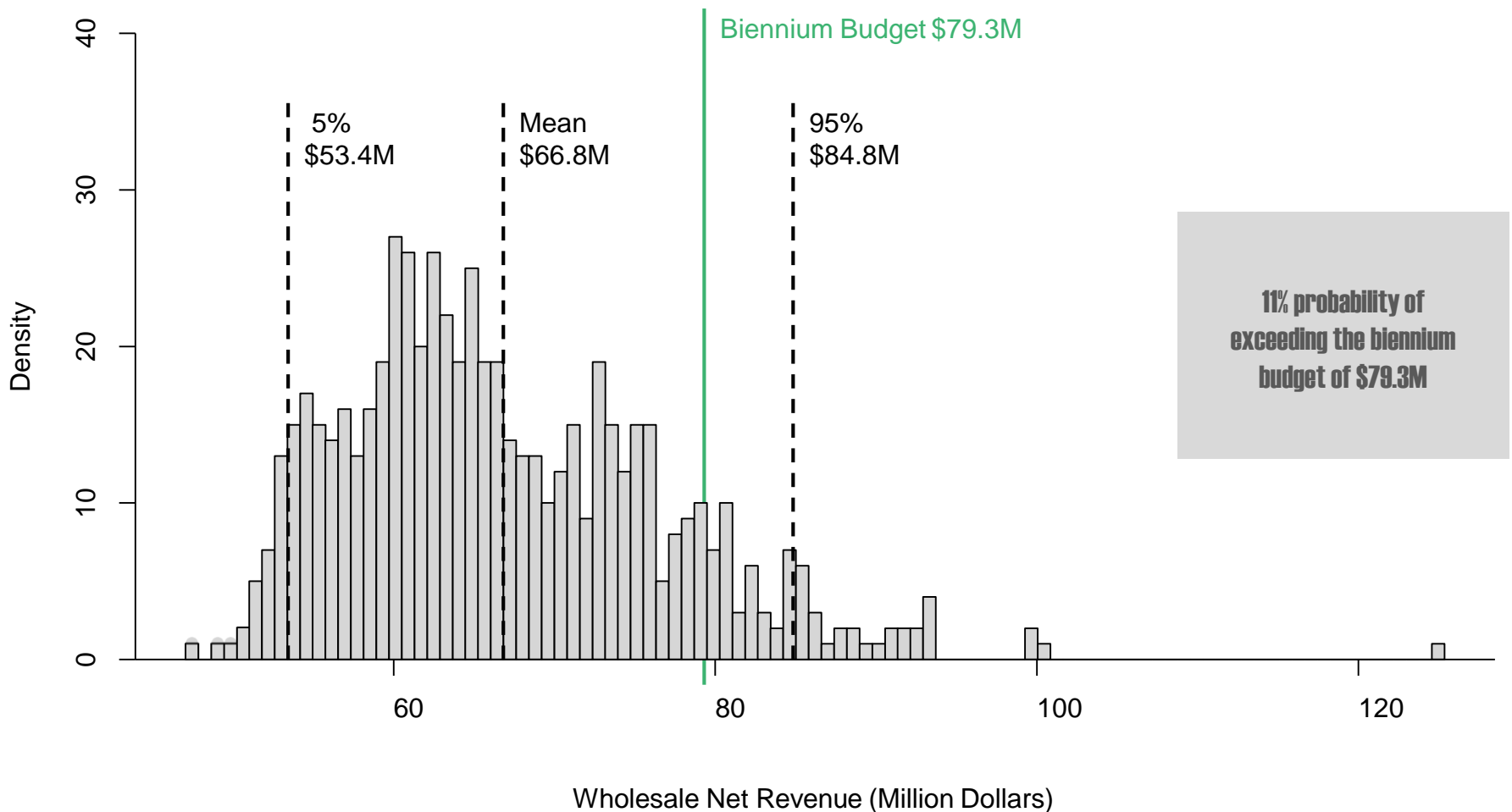
Graph 10: Despite High Q3 Revenues, Projections Remain Below Budget  
(Cumulative Actual vs. Budget Wholesale Net Revenues, 2019 – 2020)



## Wholesale Net Revenues

### Graph 11: Probability of Making Budget Has Increased to 11%

(Risk Model Simulation of Biennial Net Revenues, 2019 – 2020)



# Hedging Program & Credit Risk Management

Section 3

## Hedging Program

# Overview

### Hedging Program Objective

A hedging program is part of Tacoma Power's energy risk management policy.

The objective of the hedging program is to:

- ✓ Stabilize net revenues from wholesale operations
- ✓ Protect against very low wholesale revenue outcomes

### Hedging Program Design

The hedging program enforces dollar cost averaging of surplus sales and prohibits holding deficit positions.

The program has a two year horizon, and utilizes physical forward contracts.

Allowable hedge ratio governed by "hedging bands" that:

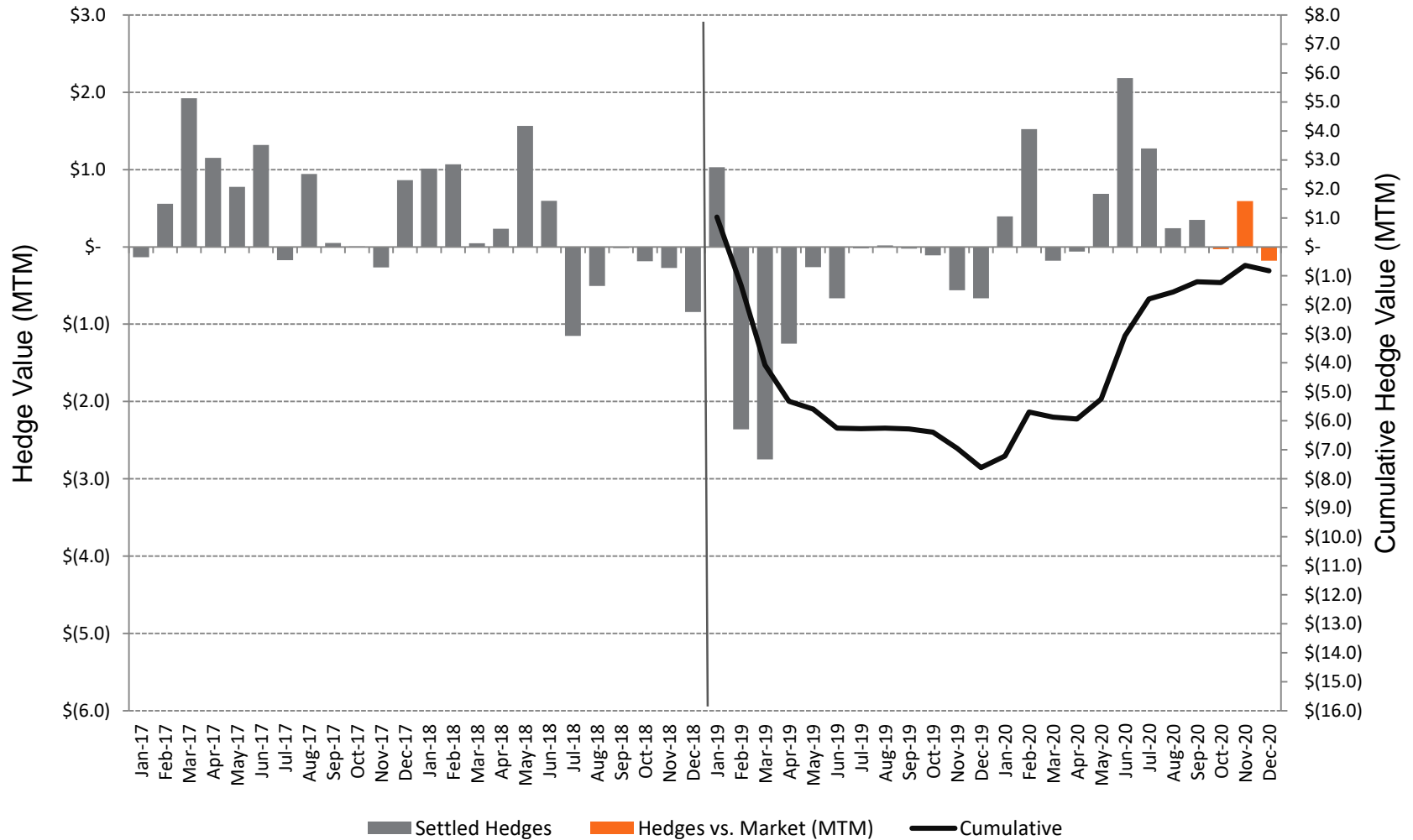
- ✓ Limit the maximum amount hedged far into the future
- ✓ Require progressively more surplus be hedged as time to delivery gets closer



## Hedging Program

### Graph 12: Hedging Program Values Have Increased

(Hedging Program, 2017 – 2020)



# Overview

### Background

- ✓ Tacoma Power frequently sells electricity to wholesale trading partners or “counterparties”
- ✓ Tacoma Power incurs credit exposure – money that the utility could lose in the event of a counterparty default

### Credit Risk Management Program

Tacoma Power manages credit risk by:

- ✓ Extending credit to investment grade counterparties only
- ✓ Setting exposure limits based on creditworthiness
- ✓ Daily monitoring of credit quality
- ✓ Daily monitoring of exposure
- ✓ Actions include stopping trading with a specific counterparty, requesting collateralization

## Wholesale Credit Exposures

Table 13: Current Credit Exposures Are at Typical Levels

(Top 10 Counterparty Credit Exposures)

Rank	Counterparty	Internal Model Rating	S&P Rating	Loss in Event of Default
1	Avangrid Renewables, LLC	BBB+	BBB+	\$675,975
2	California ISO	AA-	A+	\$635,460
3	Puget Sound Energy, Inc.	BBB	BBB	\$603,843
4	Macquarie Energy, LLC	A	A+	\$423,760
5	Shell Energy North America (US), L.P.	BBB	A+	\$145,242
6	Sacramento Municipal Utility District	A+	AA-	\$126,988
7	Eugene Water & Electric Board	A+	AA-	\$123,629
8	PacifiCorp	A-	A	\$90,025
9	Morgan Stanley Capital Group, Inc.	A-	BBB+	\$68,508
10	Powerex Corp.	A	AAA	\$67,800