

Energy Resources Quarterly Board Update 2020 Q3

November 16, 2020

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Trading

Why We're Here

- Portfolio Overview
- Operations and Planning
 - » Pricing update
 - » Net Wholesale Revenue Forecast update
- Market Update

Key points

- The District's 2020 Net Wholesale Revenue forecast and other energy-related revenues is \$85.5 million, which is \$0.8 million above budget.

Major changes in the western power market

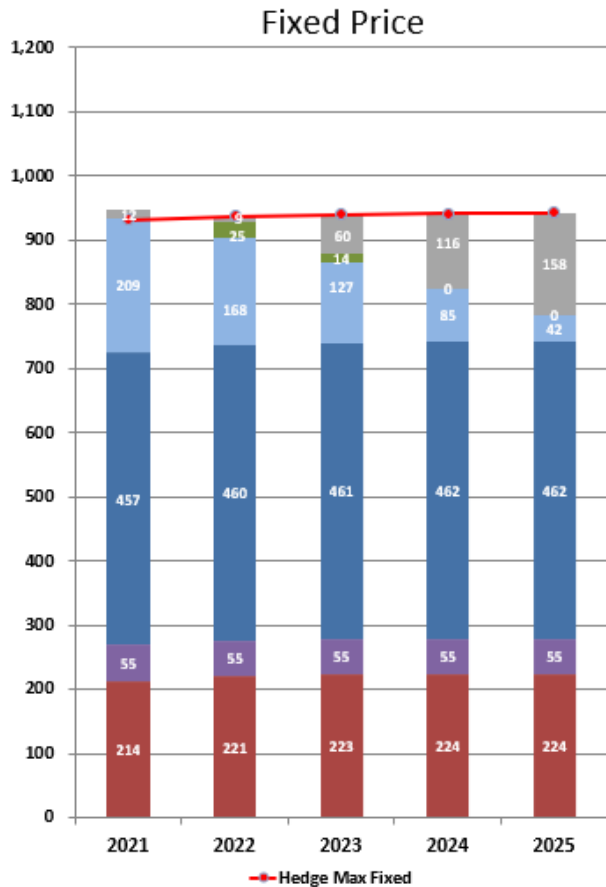
Resource Adequacy

- Northwest Power Pool has hired Southwest Power Pool as a program developer to lead the detailed design development (scheduled for early 2021 completion)
- Working on Interim Resource Adequacy solution for this winter (similar to past summer)

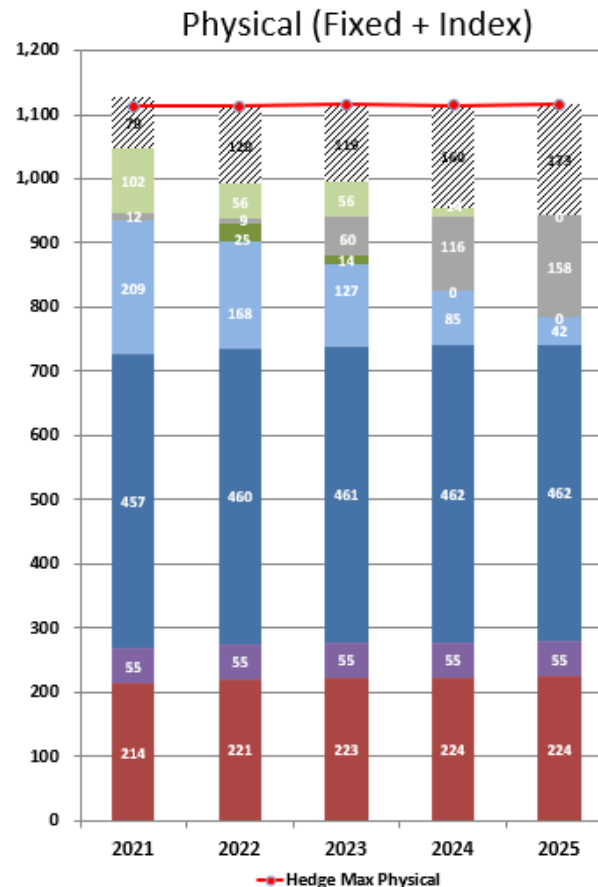
Short term markets (within hour → real-time → day ahead)

- Participation in CAISO's Energy Imbalance Market (EIM) continues to grow: footprint expected to include ~77% of Western Interconnection load by 2022
- CAISO is proposing to offer organized day-ahead market trading to the EIM footprint by 2023. We are closely watching governance proposals.
- Southwest Power Pool plans to also offer energy imbalance market services to a few Western Interconnection utilities in 2021
- **State carbon policies**
 - CETA rulemaking efforts are ongoing—some draft rules to be finalized by year end, but some of the rules on key issues have been deferred to 2021.
- **New products and services**

District's energy commitments (average MW)



- Available to Sell at Fixed Price
- Fixed Price Block Contracts
- Market Based Slice
- Long-term Cost Plus Slice
- Canadian Entitlement
- Local Load



- Available to Sell at Index Price
- Available to Sell at Fixed Price
- Index Price Block Contracts (Includes Off-System End-Use)
- Fixed Price Block Contracts
- Market Based Slice
- Long-term Cost Plus Slice
- Canadian Entitlement
- Local Load

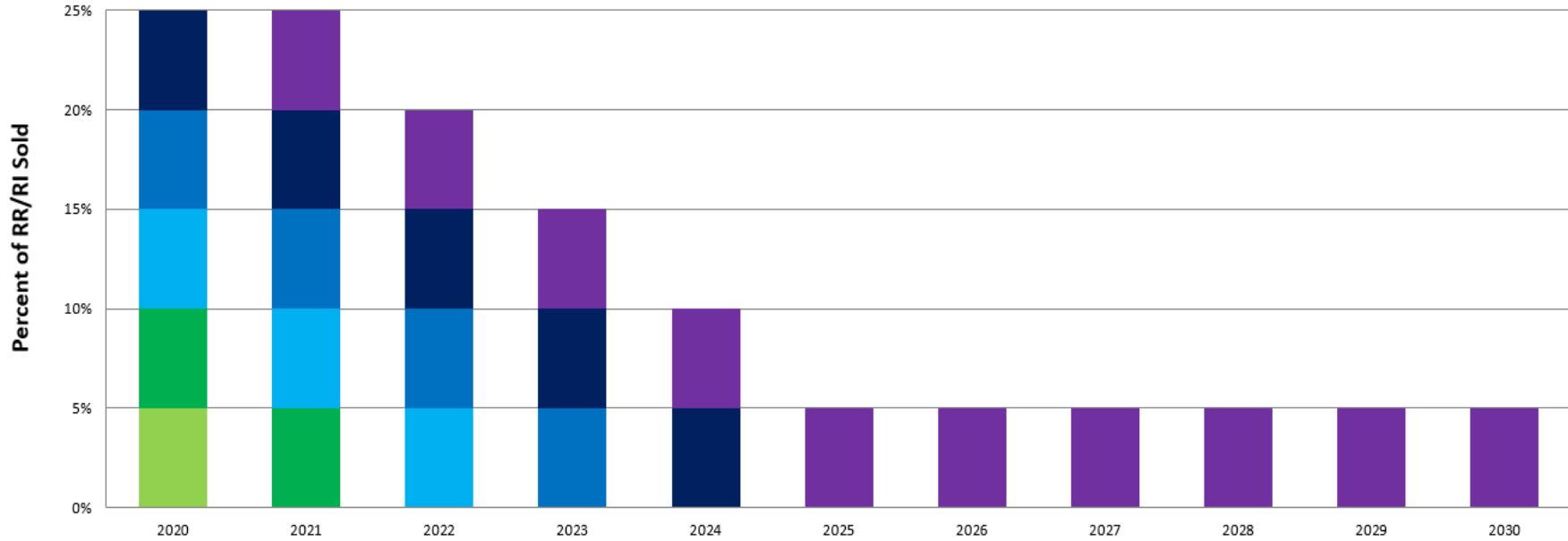
Note: The graphs represent the new limits contained in resolution 20-14439 approved by the Board on March 23, 2020.

*Hedge Max Fixed = stress water generation

**Hedge Max Physical = stress water generation + 175 aMW

Market-based slice contracts

Current Market Position - Market Based Slice Products



	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Long Term Slice - Avista		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Slice Product 34 - Powerex	5.0%	5.0%	5.0%	5.0%	5.0%						
Slice Product 30 - Avangrid	5.0%	5.0%	5.0%	5.0%							
Slice Product 29 - Morgan	5.0%	5.0%	5.0%								
Slice Product 26 - Morgan	5.0%	5.0%									
Slice Product 22 - Avista	5.0%										

Dec 2020 Henry Hub natural gas

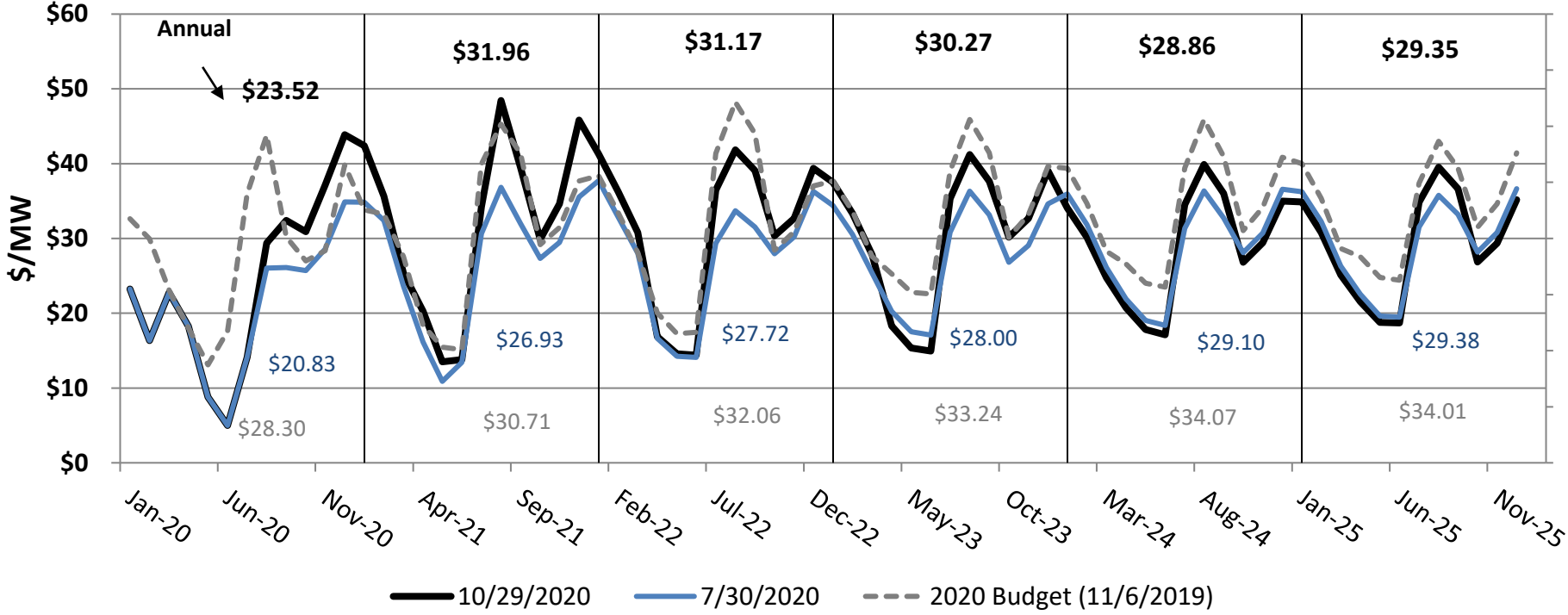


Dec 2020 Henry Hub natural gas contract (price history since 2002)



MIDC forward price curve

MIDC Flat Forward Price Curve
(ICE DA index prices for previous months)



2020 NWR and Other Energy-Related Revenue

(amounts in millions)

	Budget	Forecast [1]	Variance
Net Wholesale Revenue (NWR)			
Energy Sales/Purchases	\$ 65.1	\$ 65.4	\$ 0.3
Specified Source Premium	\$ 8.2	\$ 8.2	\$ 0.0
Renewables- Bundled	\$ 0.9	\$ 0.9	\$ (0.0)
NWR Sub-total [2]	\$ 74.1	\$ 74.4	\$ 0.3
Other Energy-Related Revenue			
LT Power Contract- Retained Surplus	\$ -	\$ -	\$ -
LT Power Contract- Admin Fees	\$ 2.2	\$ 2.2	\$ -
Frequency Response & Load Shedding	\$ 0.9	\$ 0.9	\$ -
Other [3]	\$ 0.3	\$ 0.3	\$ (0.0)
Renewables- Unbundled	\$ 0.1	\$ -	\$ (0.1)
Real-Time Revenue	\$ 7.0	\$ 7.6	\$ 0.6
Other Energy-Related Sub-total	\$ 10.5	\$ 11.0	\$ 0.5
NWR and Other Energy-Related Revenue	\$ 84.7	\$ 85.5	\$ 0.8

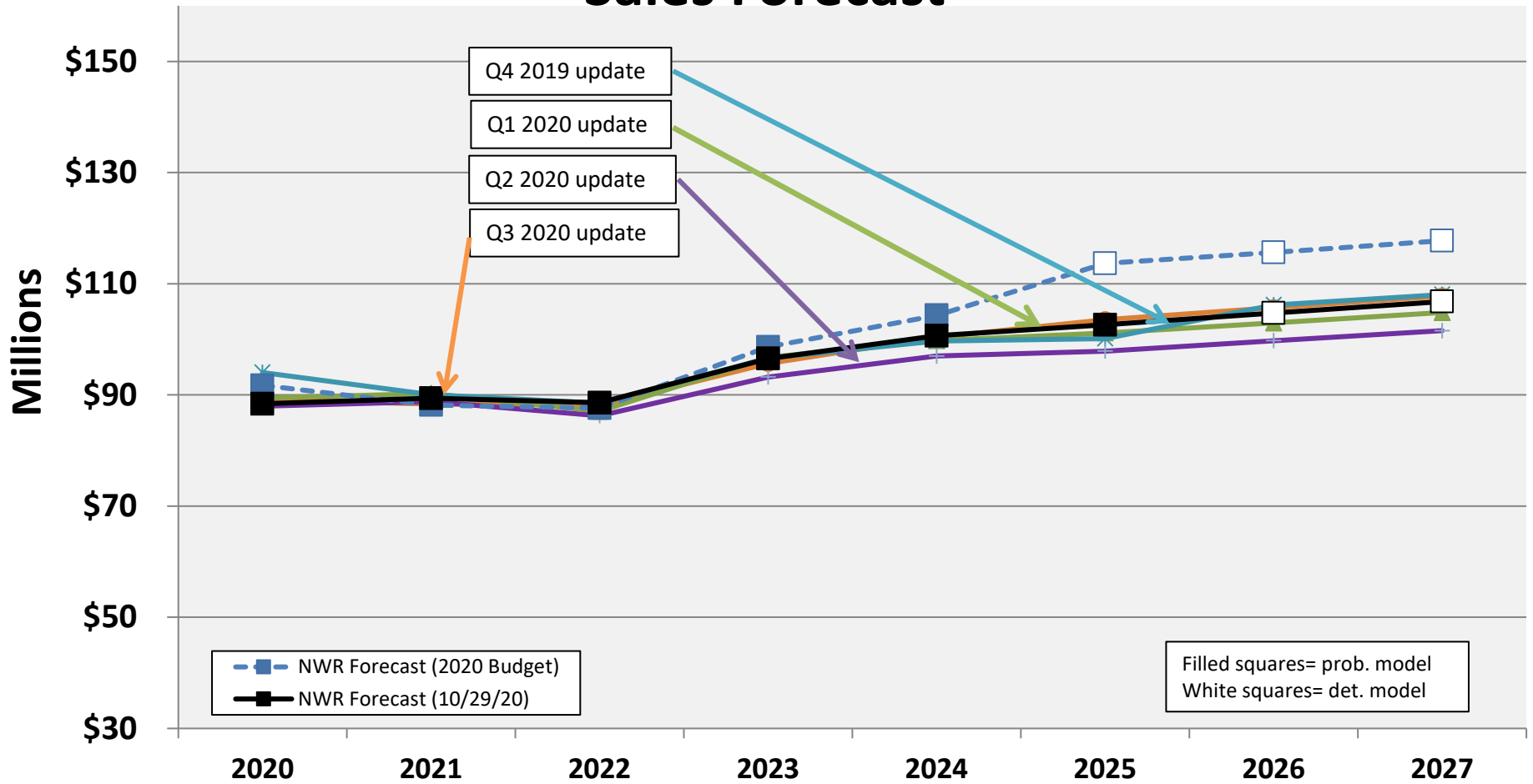
[1] 2020 forecast based on preliminary Jan-Sep unaudited actuals and Oct-Dec estimates (10/08/20 NWR forecast).

[2] NWR includes PWX specified source sale/full requirements purchase and transmission pass through costs.

[3] Other includes scheduling & admin fees and the sale of reserves.

NWR Sub-totals were also reported to BOC on 11-2-2020 during Financial update.

Net Wholesale Revenue + Off System End-Use Sales Forecast



Market info

NorthWestern Energy ends purchase of 92.5 MW from Colstrip Unit 4 in Montana

- Sale required approval from both the Montana Public Service Commission and the WUTC
- Both Commissions expressed concerns and were unsupportive of the transaction
- WUTC staff argues that the deal gave too much value to Montana at the expense of Puget's Washington customers.
- With this cancellation, Montana is left to find about 365 MW of capacity to serve peak demand

Iberdrola's Avangrid Expands in U.S. With \$4.3 Billion Deal

- Avangrid (U.S. arm of Iberdrola) agreed to buy PNM Resources of New Mexico for \$4.3 billion
- Iberdrola's eighth acquisition since the start of the coronavirus pandemic
- Under the agreement, PNM Resources must exit from all ownership interests in the Four Corners coal plant by the end of 2024
- New Mexico has enough potential wind and solar energy that, if fully developed, there would be a surplus, and the merger could allow this extra energy to be exported throughout the region, as AVANGRID has already done on a smaller scale in the state

Summary

- The District's 2020 Net Wholesale Revenue forecast and other energy-related revenues is \$85.5 million, which is \$0.8 million above budget.

Questions?