

# Energy Resources Quarterly Board Update 2019 Q4

Feb. 18, 2020

# Why We're Here

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

# Key points

- The District's 2019 Net Wholesale Revenue and other energy-related revenues is \$120.7 million, which is \$7.7 million above budget.
- Retained surplus proceeds on long term hydro contract and real-time agreement revenues more than offset impacts from low stream flows and unit outages.

# Energy Resource Team is monitoring major changes in the western power market

- **Resource Adequacy**

Northwest Power Pool effort to design resource adequacy program has begun

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

Many utilities have joined CAISO Energy Imbalance Market (EIM) for within hour products (about 4% of trades)

CAISO is proposing to expand EIM to the day-ahead market (Extended Day-ahead Market or EDAM)

- **State carbon policies**

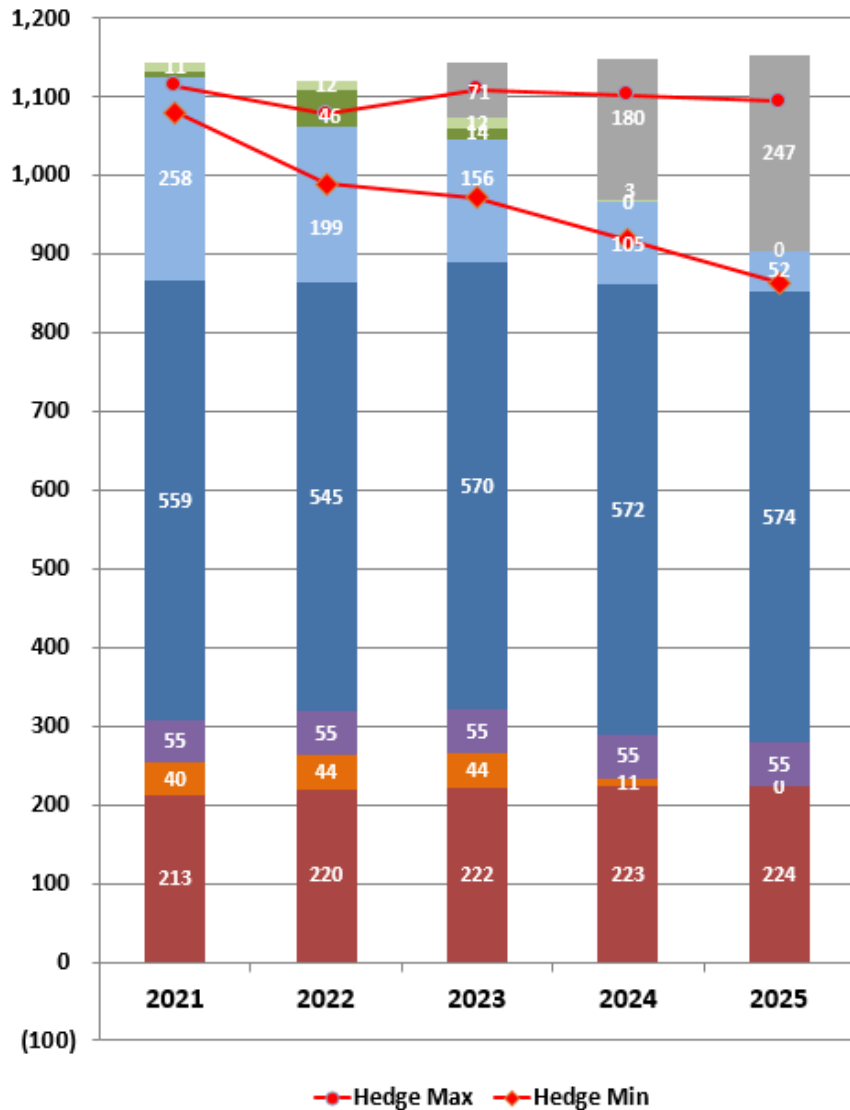
Rulemaking beginning on WA Clean Energy Transformation Act (CETA)

- **New products and services**

# Major transactions

- No new major transactions

# District's energy commitments (average MW)

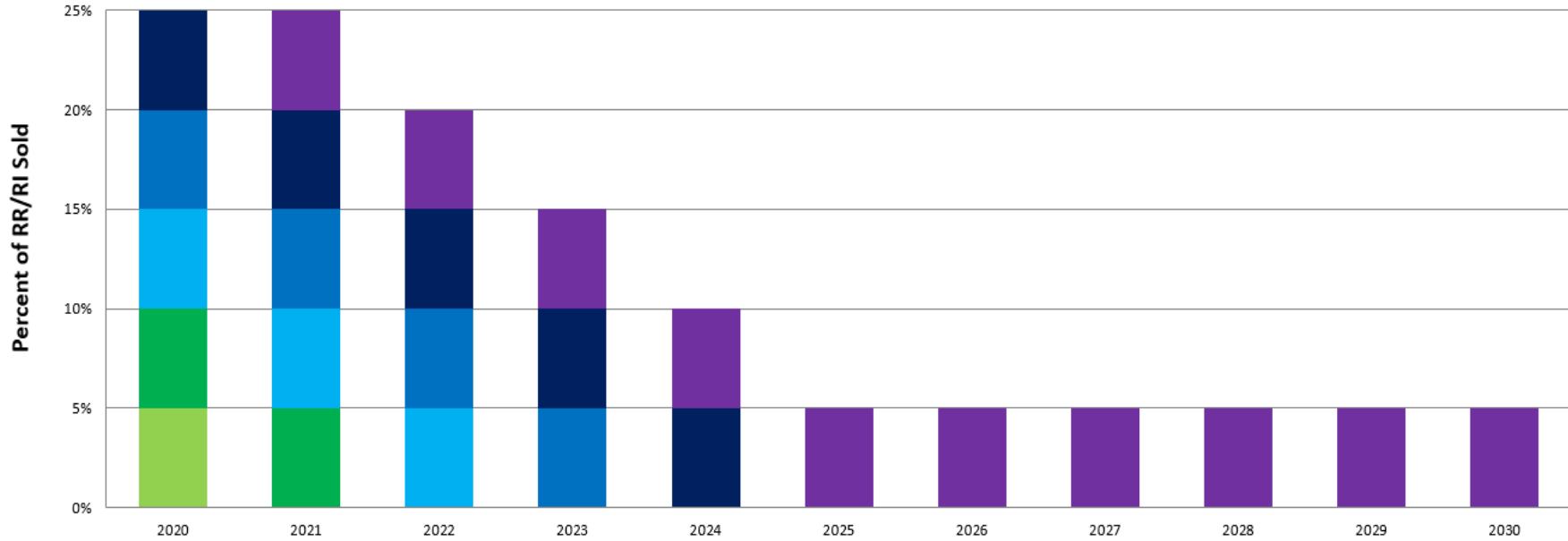


Note: The Power Risk Management Committee (PRMC) approved an exception to policy for commitments in years 2020 through 2022 because index priced sales do not introduce price risk.

Note 2: Staff is working on a new look for this reporting. The new look will better reflect the District's positions and risks given the changing market and carbon-free products.

# 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%										

# March 2020 Henry Hub natural gas





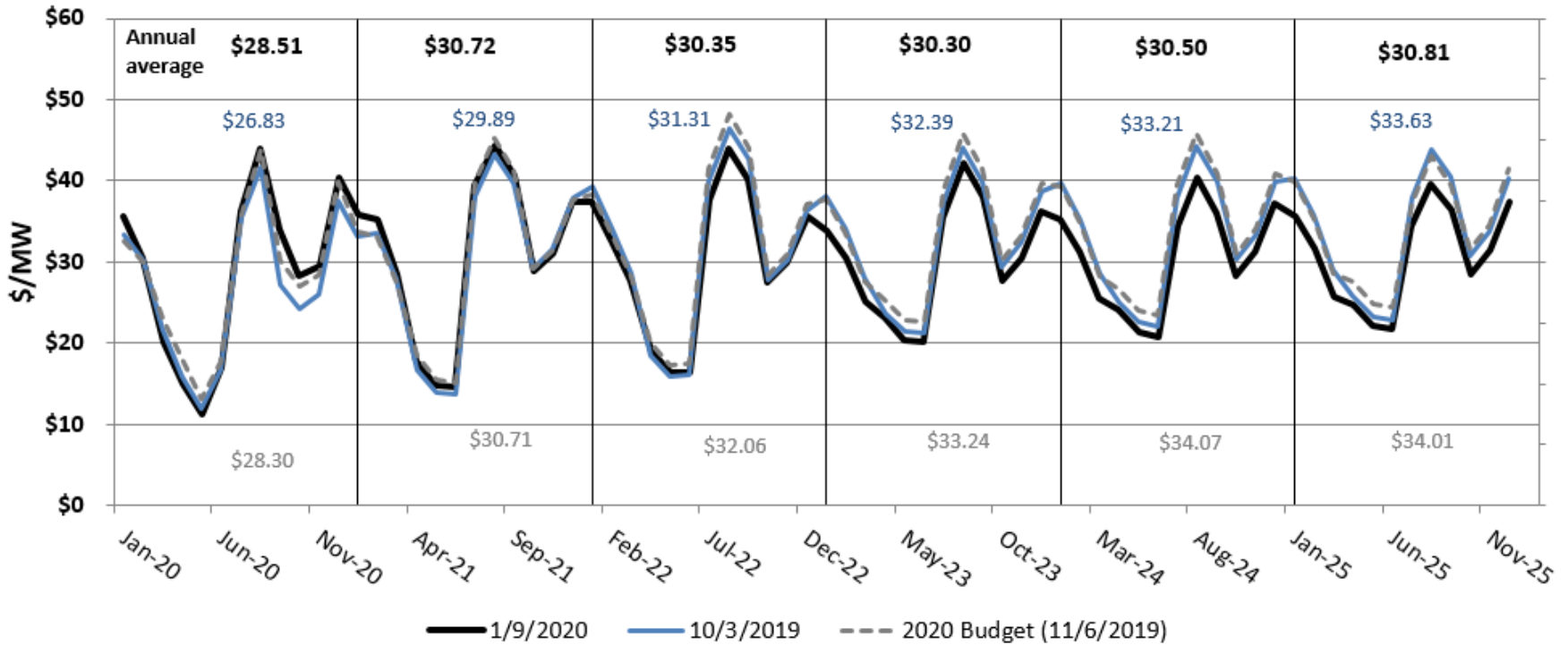
ENG ~ Monthly Wed Feb 5 2020 5:00:00 PM H:1.888 L:1.804 O:1.852 T:1.861 +0.020 +1.09%

### March 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)



## 2019 NWR and Other Energy-Related Revenue

(amounts in millions)

	Budget		Forecast [1]		Variance
<b>Net Wholesale Revenue (NWR)</b>					
Energy Sales	\$ 94.9		\$ 69.1		\$ (25.8)
Specified Source Premium	\$ 6.7		\$ 5.4		\$ (1.3)
Renewables- Bundled	\$ 0.8		\$ 0.7		\$ (0.1)
NWR Sub-total [2]	\$ 102.4		\$ 75.2		\$ (27.2)
<b>Off-System End-Use Revenue</b>					
Off-System End-Use Sales [3]	\$ -		\$ 11.1		\$ 11.1
Off-System End-Use Sub-total	\$ -		\$ 11.1		\$ 11.1
<b>Other Energy-Related Revenue</b>					
LT Power Contract- Retained Surplus	\$ -		\$ 20.0		\$ 20.0
LT Power Contract- Admin Fees	\$ 2.0		\$ 2.0		\$ -
Frequency Response & Load Shedding	\$ 1.1		\$ 1.1		\$ -
Other [4]	\$ 0.4		\$ 0.4		\$ 0.0
Renewables- Unbundled	\$ 0.1		\$ 0.1		\$ (0.0)
Real-Time Revenue	\$ 7.0		\$ 10.7		\$ 3.7
Other Energy-Related Sub-total	\$ 10.6		\$ 34.3		\$ 23.7
<b>NWR and Other Energy-Related Revenue</b>	<b>\$ 112.9</b>		<b>\$ 120.7</b>		<b>\$ 7.7</b>

[1] 2019 forecast based on preliminary Jan-Dec actuals.

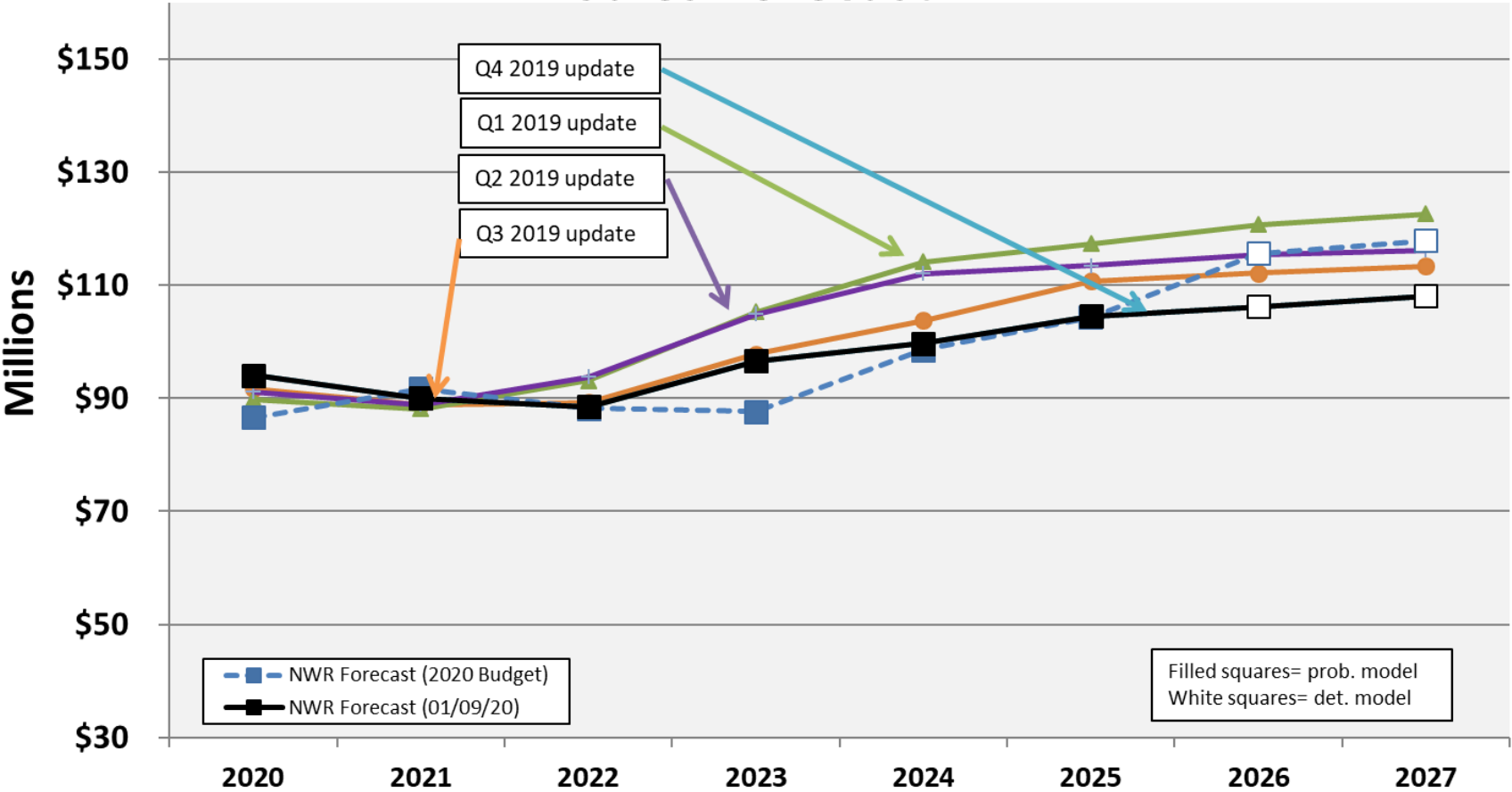
[2] NWR includes PWX specified source sale/full requirements purchase and transmission pass through costs.

[3] Off-system end-use sale includes transmission pass through costs, but not the transaction specific costs.

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

# Net Wholesale Revenue + Off-System End-Use sales forecast

## Net Wholesale Revenue + Off System End-Use Sales Forecast



# Market info

## Cheap natural gas main driver of US power price declines over the last decade

- From 2008 to 2017, declining gas prices cut power prices by \$7/MWh and renewables only reduced power prices by about \$1.30/MWh
- Flat electricity usage and the addition of new natural gas plants also weighed on power prices
- Increased solar generation had a “disproportionally large impact” on CAISO prices
- Evidence tying increasing amounts of variable energy to higher frequencies of negative real-time prices, which contributed to significant declines in annual average prices in some areas like California.
- In some areas of the Southwest Power Pool, negative real-time prices occurred in more than 20% of the hours in 2017

# Market info

## **SPP kicks off reliability coordination service in West**

- Southwest Power Pool (SPP) on December 3 began offering reliability coordination service in the Western US
- Competing with coordination service offered by the California ISO
- Dozens western entities signed up for service
- SPP first regional transmission organization to provide RC services in both the Eastern and Western interconnections
- Scheduled to start up in February 2021

# Summary

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Questions?