



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Simpson, Brown, Helgeson, Manning and Mital  
FROM: Bert Dunn, Interim Manager of Power Operations  
DATE: February 09, 2016  
SUBJECT: Annual Power Market and Operations Update  
OBJECTIVE: Information Only

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## **Issue**

The purpose of this backgrounder is to provide an annual update of wholesale power markets and Power Operations activities.

## **Background**

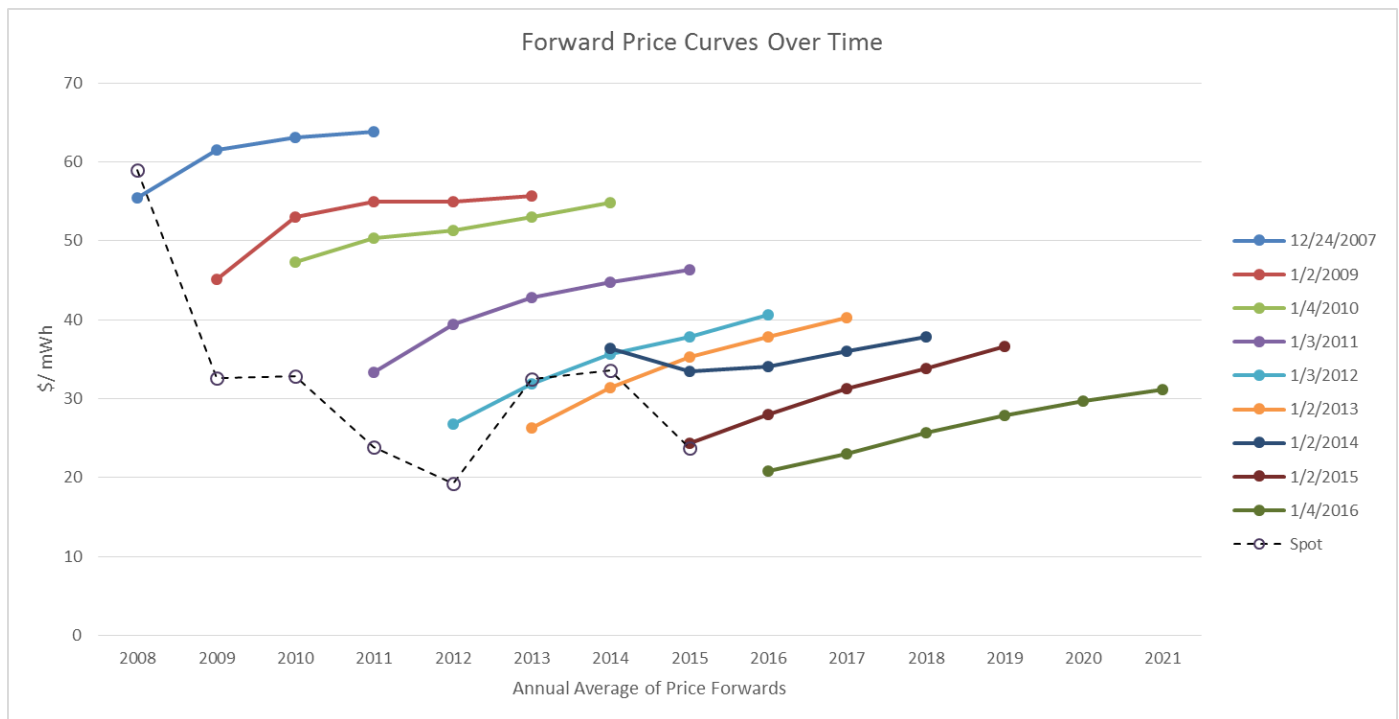
The Power Operations department manages EWEB power supply and wholesale market activities consistent with utility financial objectives and in accordance with Board Policy contained in SD8, and as further described in the EWEB Energy Risk Management Procedures.

## Discussion

### Market Price Update

Wholesale market prices have continued to fall given a mix of increasing supply<sup>1</sup> and arrested demand. Supply is being bolstered by continued renewable development<sup>2</sup> and low cost natural gas prices<sup>3</sup> due to unprecedented shale gas production<sup>4</sup>. In the northwest, continued precipitation has improved the hydro generation outlook for 2015, which has its own impact on wholesale markets.

In the chart below shows forward curves over time. A forward curve is a strip of prices for future periods where one could reasonably expect to be able to trade at a point in time. The first forward curve was taken at the end of 2007 and we've added an additional forward curve for each year after that.



<sup>1</sup> <https://www.eia.gov/todayinenergy/detail.cfm?id=24492>

<sup>2</sup> <https://www.eia.gov/todayinenergy/detail.cfm?id=24792>

<sup>3</sup> <https://www.eia.gov/dnav/ng/hist/rngwhhdM.htm>

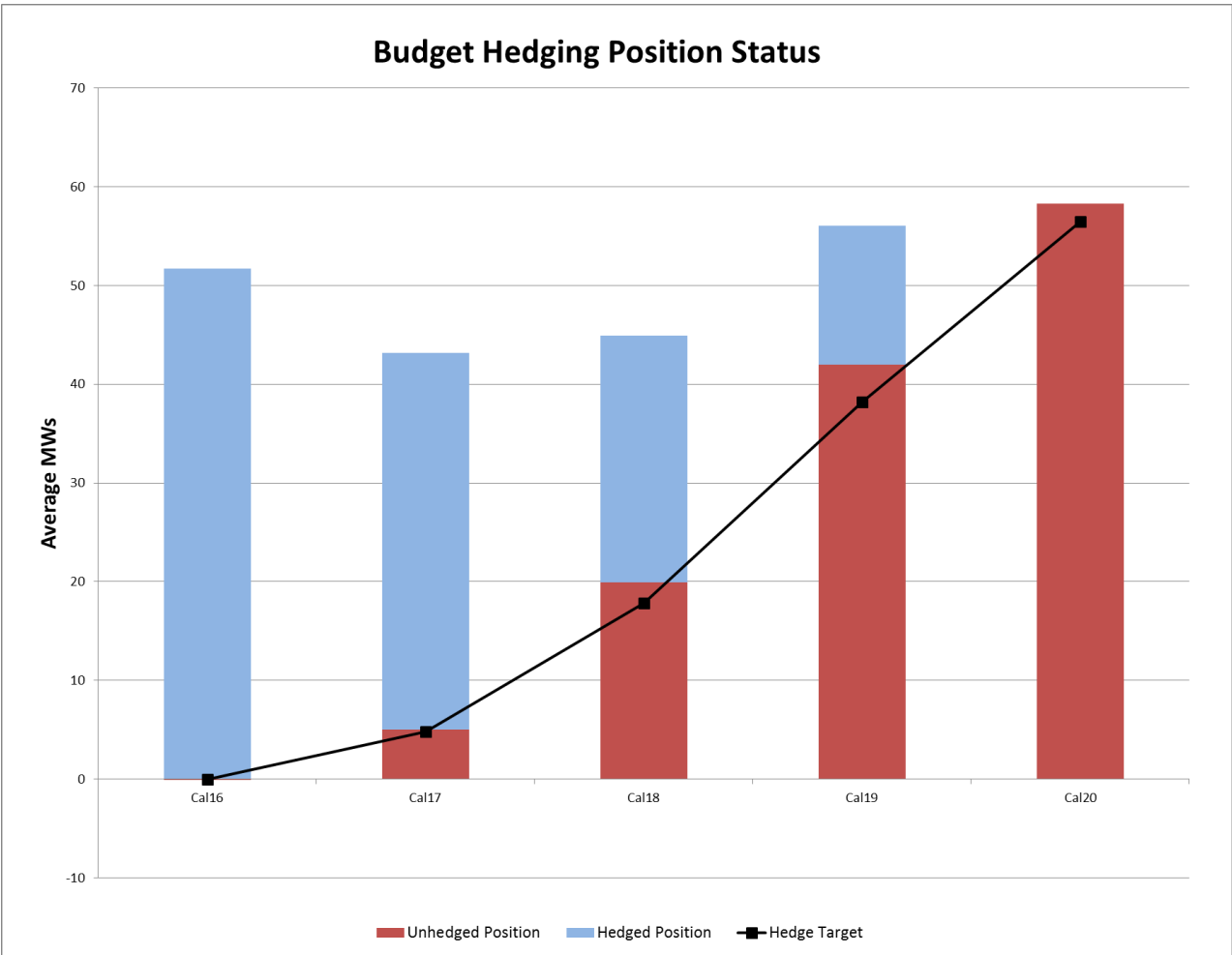
<sup>4</sup> [https://www.eia.gov/dnav/ng/ng\\_prod\\_shalegas\\_sl\\_a.htm](https://www.eia.gov/dnav/ng/ng_prod_shalegas_sl_a.htm)

**Surplus Position Hedging Update**

The chart below shows EWEB’s surplus market position for 2016-2020 based on 90% hydro planning. The top of the chart indicates EWEB’s original surplus market position. The red band represents unhedged energy surplus. The black line reflects a desired volume of hedging RMC would like to achieve over time.

Power Operations sells a portion of EWEB’s surplus position up to five years in advance. This provides two benefits: 1) it reduces financial exposure related to market prices; and 2) it results in sales executed at various times which diversifies the sales price by “dollar cost averaging” through time. This strategy results in near term years being fully hedged while year five is the least hedged, with interim years somewhere in between. Beyond five years Power Operations does not hedge any surplus energy.

The value of all current executed hedges for forward periods is approximately \$20M of forward value when compared to today’s market. Said another way, EWEB has benefited by an estimated \$20M compared to not hedging for the period from today through 2019.



### ***Power Operations Update***

Power Operations core function is to efficiently shape EWEB's resource portfolio to our retail customer load. Because of the resource/load mix there are often opportunities for staff to create additional value from wholesale market activities outside of the hedging activities described above. These activities are summarized below for 2016.

- Trade Performance: This work relies of price spreads between day ahead and realtime markets. In 2014, this spread was close to \$5, this year the spread has collapsed to \$1. This will make this work more challenging than in years past.
- Hydro Optimization: We are shaping the storage capability of the Carmen and Slice resources in anticipation of changing market conditions. This work benefits from price spreads between Peak and Offpeak products. Unfortunately, with prices as low as they are, the spreads between the two products have collapsed. However, volatile factors like El Nino weather, and uncertain river regulation could leave some opportunities to expand value.
- Transmission Savings: We are developing new ways of dispatching remote resources. One of the benefits of this work is the reduction in the amount of transmission and ancillary services required to support them.
- Client Services: This year, in addition to providing existing scheduling services, Power Operations is adding consulting services for an existing partner utility looking to expand their portfolio.
- REC Revenues: Capturing the value of RECs generated by renewable facilities in our portfolio. Responding to new RPS legislation. Evaluating opportunities in emerging carbon markets. Reviewing the structure of our Green Power Program.
- Structured Trading: Expanding on work conducted in 2014 with Stateline and in 2015 with Foote Creek, staff is reviewing contracts for opportunities to renegotiate or restructure the disposition of the resource. Opportunities include natural gas and wind resource management

For perspective the value of these activities for 2015, as measured by our performance metrics, was about \$4.7 Million. Looking ahead for 2016 we expected somewhat less value due to changes in market conditions.

**Requested Board Action - None**