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May 26, 2010

## MEMORANDUM

**TO:** Power Committee

**FROM:** Terry Morlan

**SUBJECT:** Update of Energy Prices

Staff regularly tracks and maintains data on key assumptions affecting the Council's power plan. This agenda item will be a brief update on energy prices. We will look at the most recent data on natural gas, oil, coal, and wholesale electricity prices compared to the power plan assumptions and to more recent forecasts by others.

It is early for such an assessment, but staff tracks these on a regular basis and we thought we would share what we have seen so far. A PowerPoint presentation is attached.

Attachment

# Energy Price Update

Power Committee

Missoula, MT

June 8, 2010



## Energy Price Assumptions and Forecasts for Plan

- Wholesale Electricity
- Natural gas
- Crude Oil
- Powder River Basin Coal

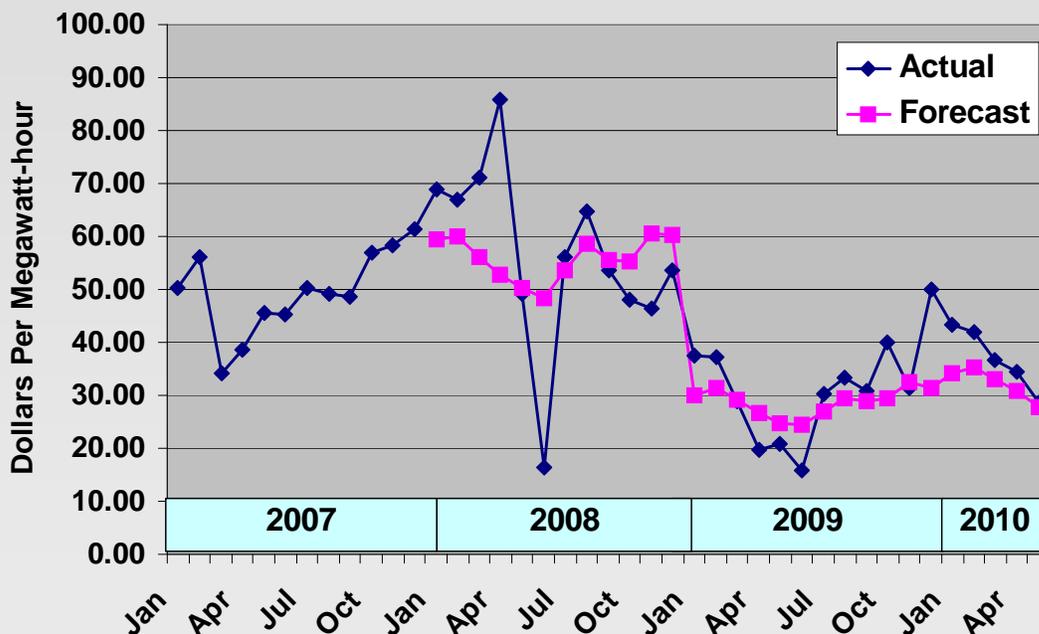


# Wholesale Electricity

- Actual January 2008 through May 2010  
Mid-Columbia prices = \$42.83
- Forecast January 2008 through May 2010  
prices in base case for the plan = \$40.56
- Actual prices are more volatile than  
forecast due to hydro conditions and other  
events not modeled



## Recent Mid-Columbia Prices



# Wellhead Natural Gas

- 2009 Forecast (2006\$)

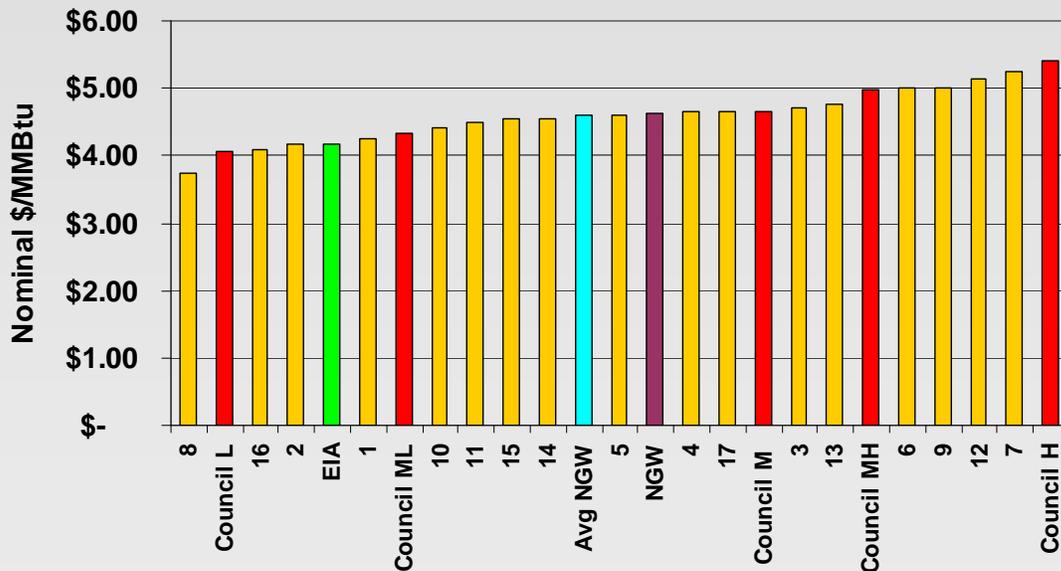
- Low \$3.30
- Medium Low \$3.50
- Medium \$3.70
- Medium High \$3.80
- High \$4.00

Actual 2009 \$3.55



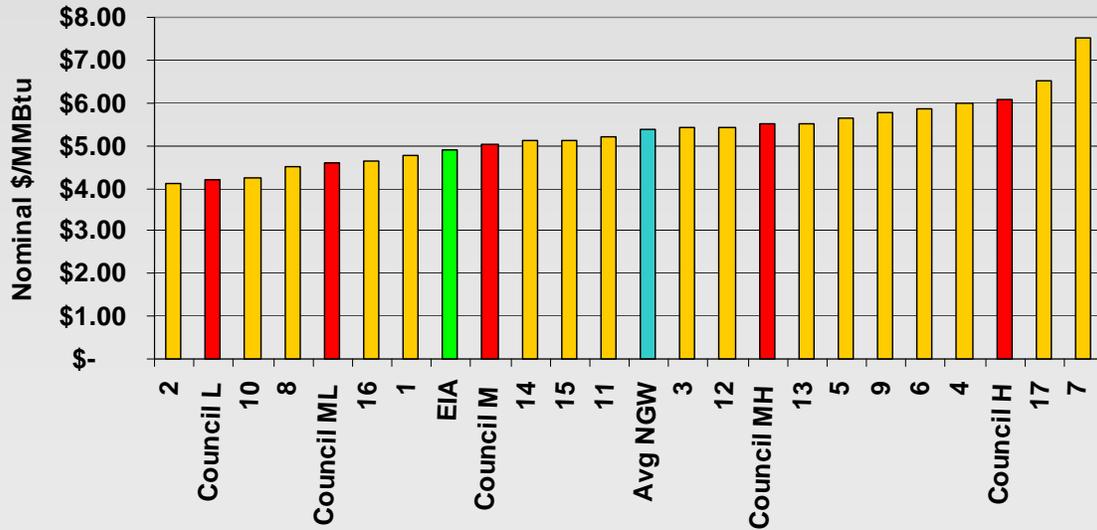
# Natural Gas Compared to Short-Term 2010 Forecasts

Draft Plan FC 2010 Comparison  
(04/26/2010)



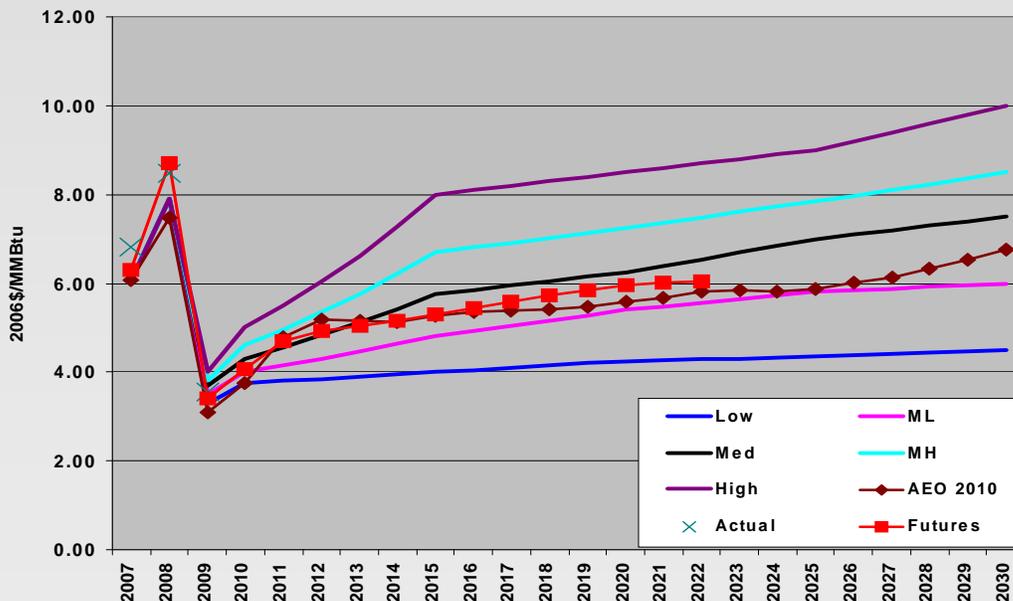
# Natural Gas Compared to Short-Term 2011 Forecasts

Draft Plan FC 2011 Comparison  
(04/26/2010)



# Natural Gas Compared to Long-Term Forecasts

Wellhead NG Price Forecast VS. AEO 2010 and NYMEX Futures



# Crude Oil

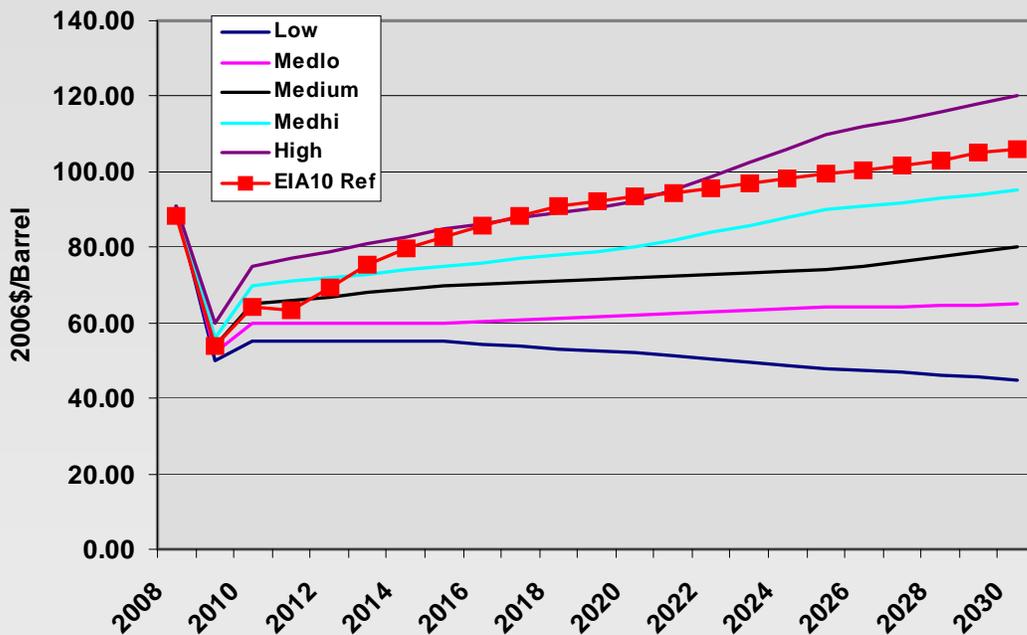
- 2009 Forecast (2006\$)

- Low \$50
- Medium Low \$52
- Medium \$54
- Medium High \$56
- High \$60

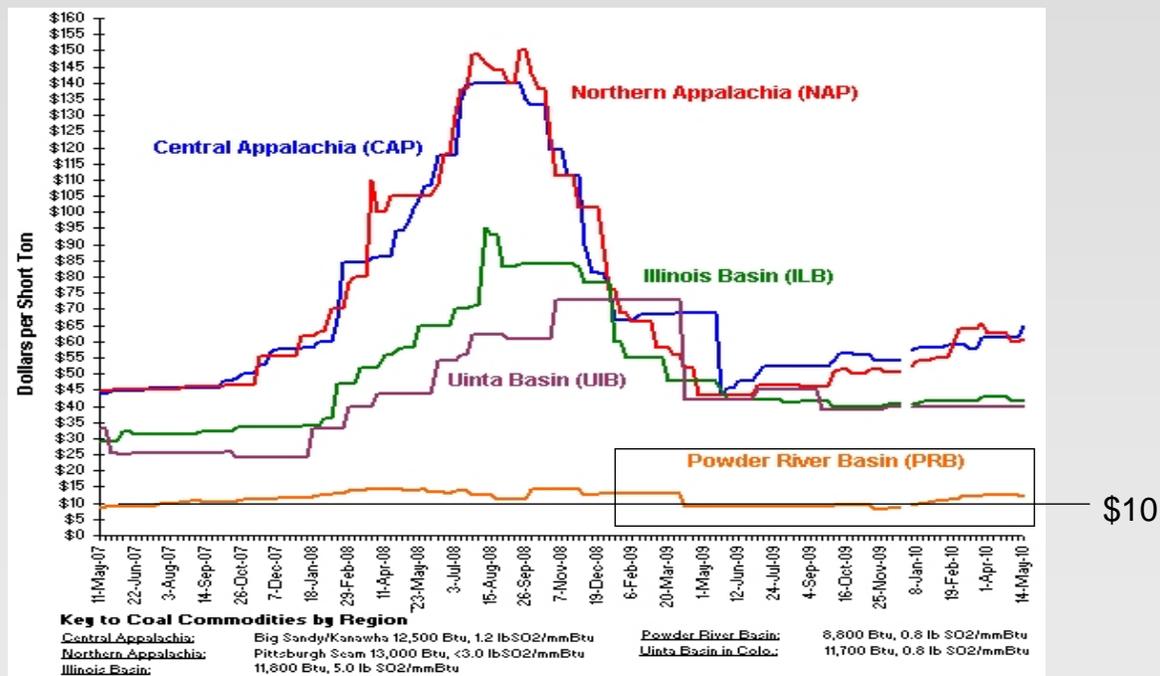
Actual 2009 \$57.45



## Oil Compared to Long-Term Forecasts



# Coal Spot Market Prices



## Power River Basin Coal

- 2009 Forecast (2006\$ per ton)
  - Low \$8.13
  - Medium Low \$9.03
  - Medium \$9.93 ← Actual 2009 \$9.81
  - Medium High \$10.80
  - High \$12.65
- April-May 2010 Actual = \$11.40
- 2010 Medium Forecast for year = \$9.81



# Summary

- The prices that matter most (i.e. electricity and natural gas) do not appear to be out of line with recent experience
- Wholesale electricity prices are generally consistent with recent experience
- Natural gas prices are consistent with actual prices, short-term forecasts and futures markets, and longer-term forecast from EIA
- Oil prices are near the MH forecast, EIA forecasts are in range of plan H and MH
- Coal prices are consistent with our forecasts