



# Alberta's Energy Only Market

Alberta Power Market Luncheon

BMO Capital Markets

Toronto, ON

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April 4, 2013



# MSA's Role

- The Market Surveillance Administrator is an independent enforcement agency that protects and promotes the fair, efficient and openly competitive operation of Alberta's wholesale electricity markets and its retail electricity and natural gas markets.



# State of the Market Report Conclusion

## Wholesale market **effectively competitive**

A level of competition (and related outcomes) that

- (i) achieves efficient investment with the lowest possible short-run inefficiencies,
- (ii) does so over a reasonable timeframe, and
- (iii) where open competition ensures neither collusion, abuse of market power, or anti-competitive practices.



# Energy Only Market

- Generator Revenue is from Energy market and / or ancillaries
- There are no “out of the back pocket” payments such as Global Adjustment in Ontario or Capacity payments in other markets
- “What you see is what you get” creates efficient response
- Similar markets include ERCOT and Australia
- Although ERCOT is discussing the addition of a capacity market as it has concerns over its Reliability margin
- Suppliers only build if they anticipate prices are high enough to recover costs and make a reasonable ROR.



# A comparison

## Typical Market with Capacity

Forward Reserve Market  
Reserve Market Real-time  
Demand Response Program  
Forward Capacity Market  
    Zonal FCM  
Day Ahead Energy Market  
Real-Time Energy market  
Generator Cost Guarantee (BPCG)  
    Day Ahead  
    Real-time  
Start Up Costs  
Import Cost Guarantees  
Revenue Sufficiency Guarantees  
Reactive and Voltage Control Revenue  
Outage cancellation costs  
Marginal Loss Revenue  
Financial Transmission Rights  
Automatic Mitigation of Offers  
Bid Mitigation of FCM

## Alberta Energy Only Market

Real Time Energy Market  
Day Ahead Ancillary Services

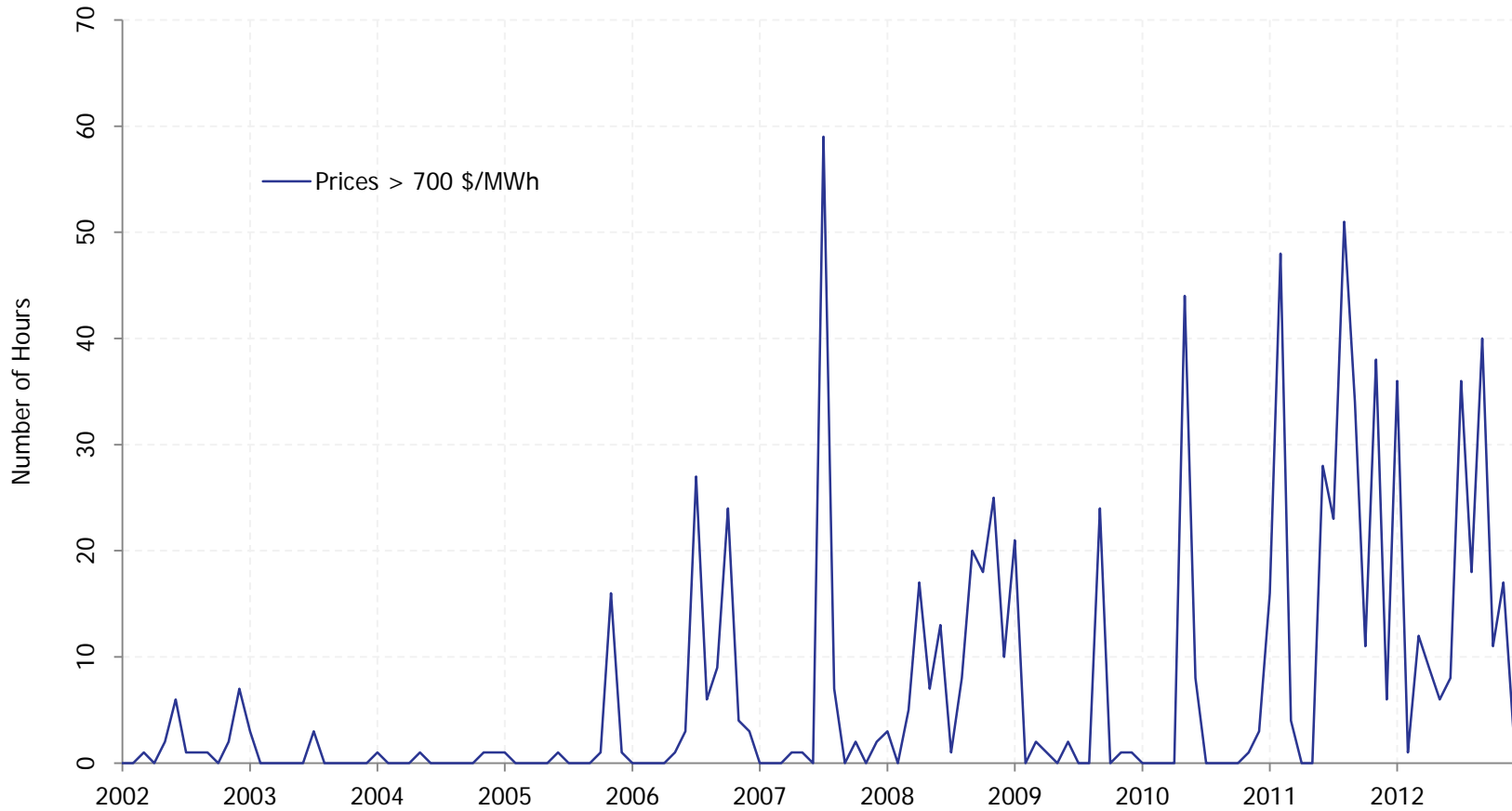
Both markets designed to incent Investment. Markets with Capacity have very little volatility but large chunks of money out of loads back pocket.

Energy Only markets have price volatility which politically could be unpalatable in some jurisdictions.

Price Volatility also leads to Uncertainty which can increase the return investors require before entry



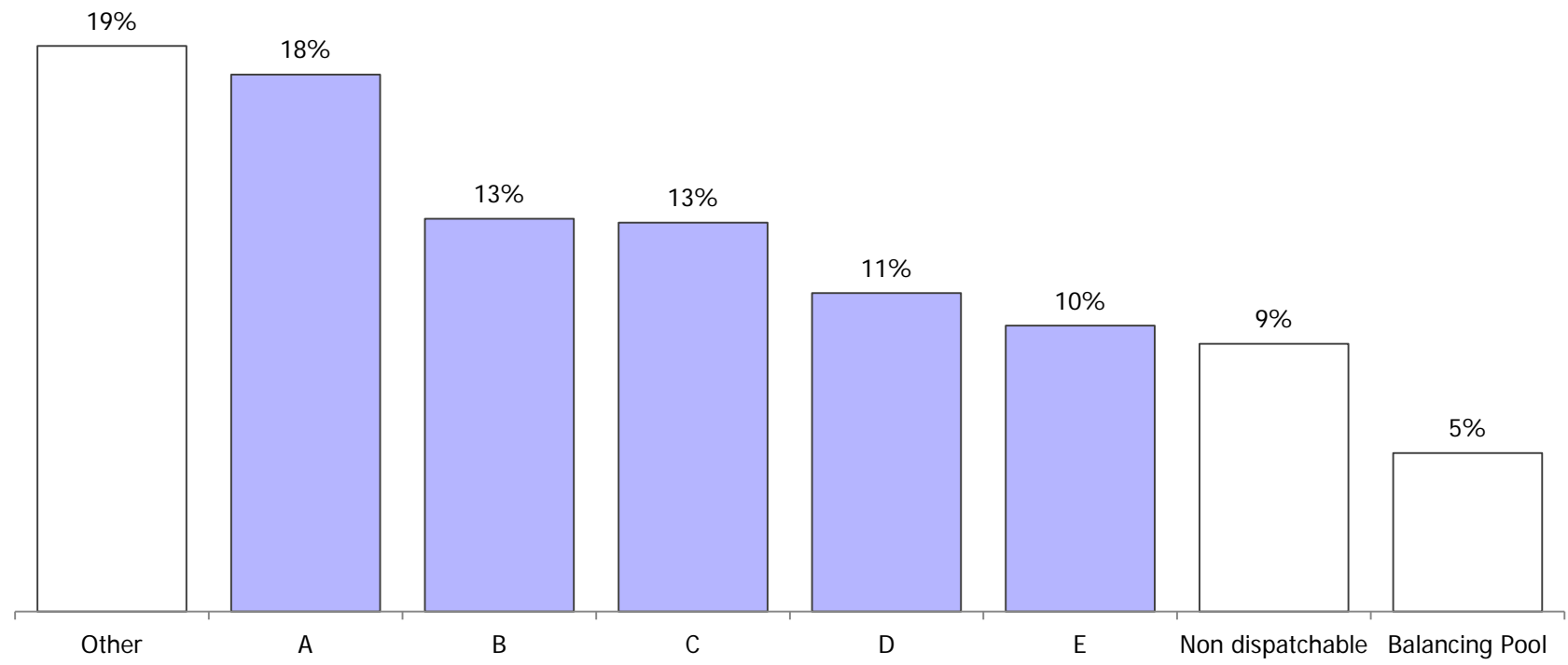
# Prices and Volatility





# Participants

## Offer Control





# Exercise of Market Power

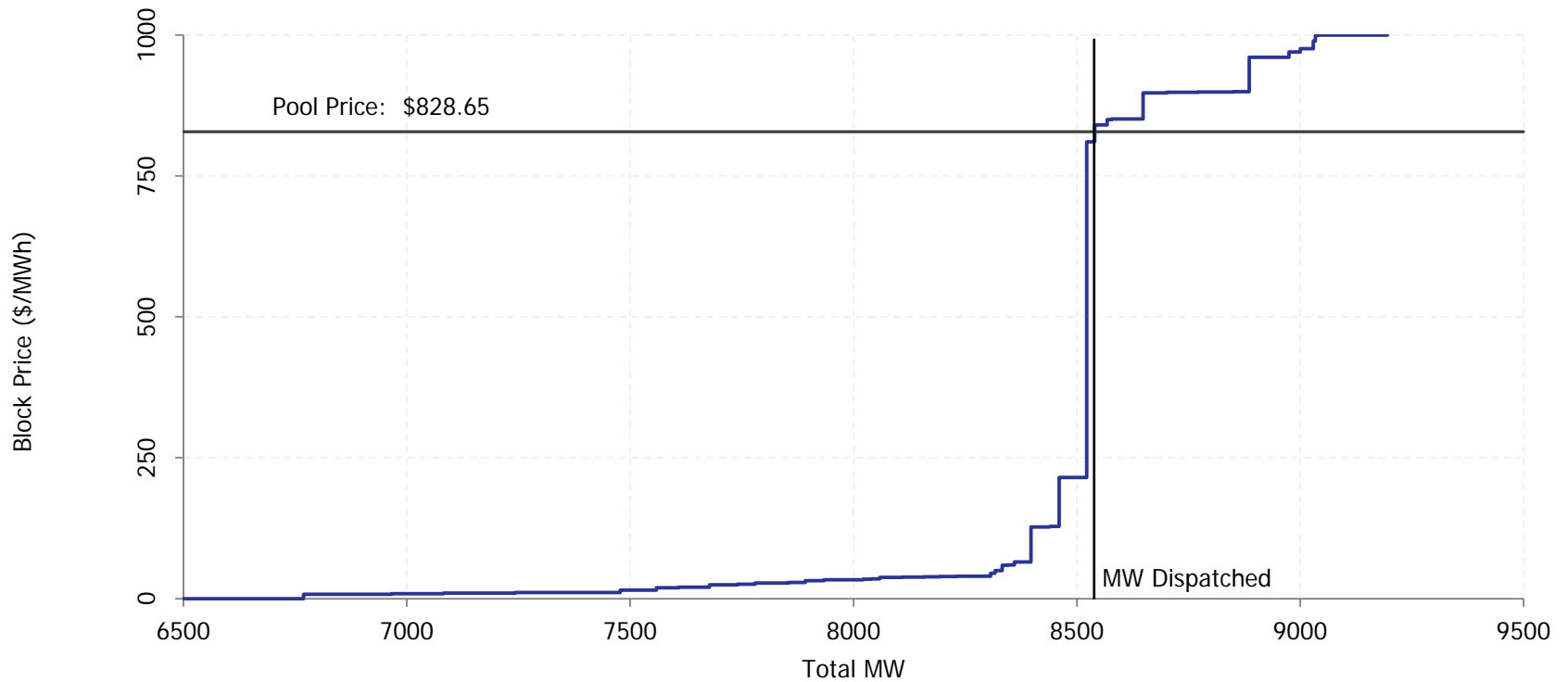
- The design of the Alberta Energy market has been interpreted by the MSA as allowing exercises of market Power
- In January 2011 the MSA published its Offer and Bid Guidelines
- A generator cannot physically withhold its generation from the market but can financially withhold it.
- Unlike most US Electricity markets that Mitigate offers





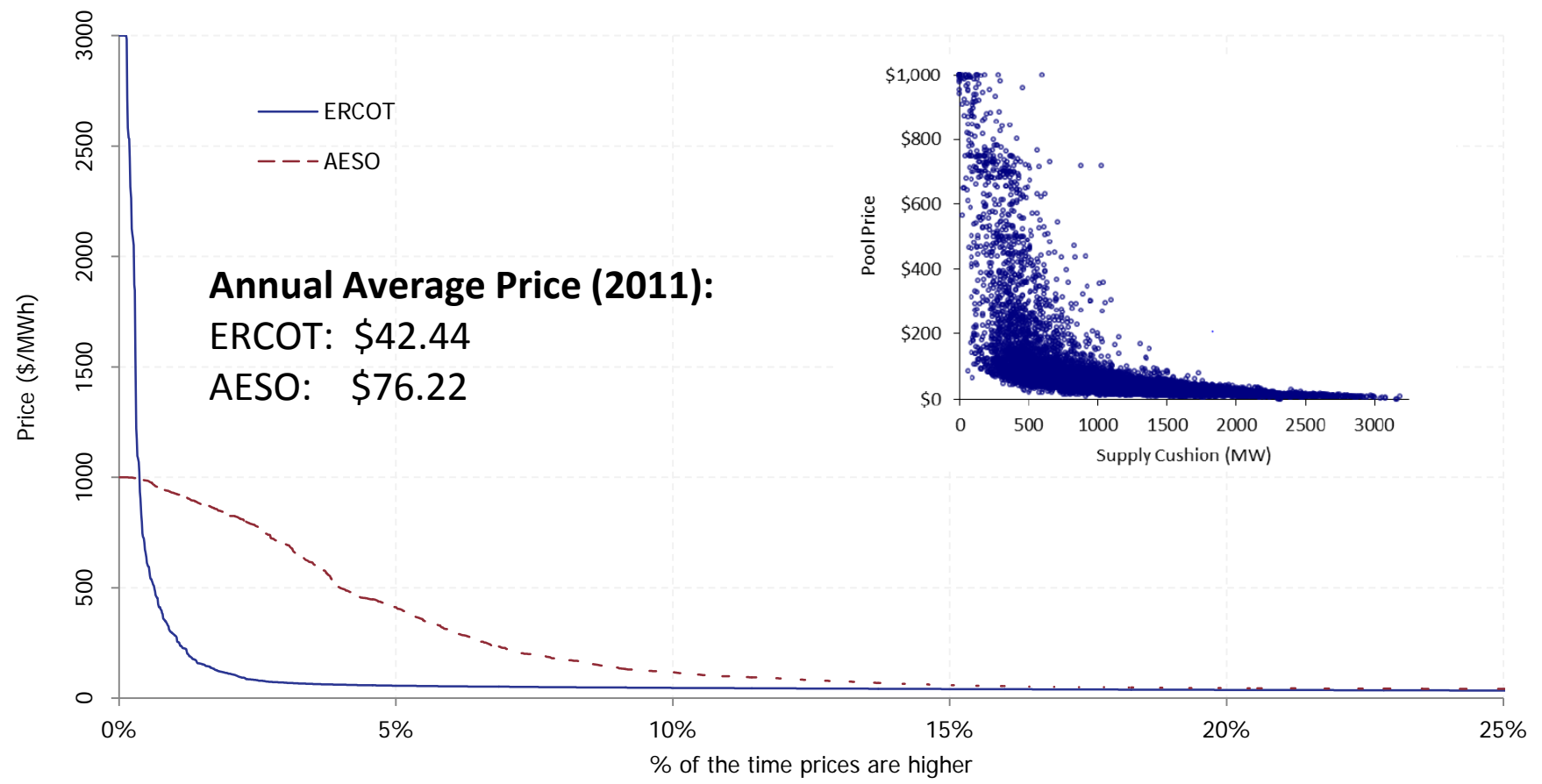
# Energy Merit Order & Withholding

Offer Curve: March 26<sup>th</sup> HE 10





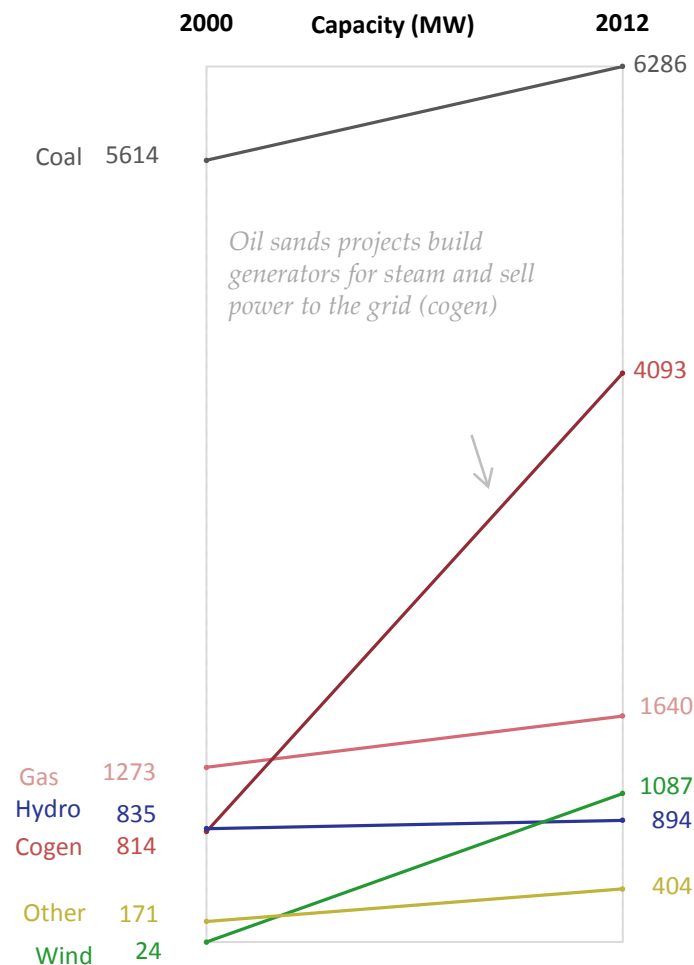
# Energy only vs Energy Only (ERCOT vs AESO)





# A sign of Health - Capacity Growth

- o Since deregulation in 2000 over 6,800 MW of new capacity has been developed and 1,400 MW of inefficient capacity has been retired - this in a market with a peak demand in the order of 10,000 MW
- o Addition of over 1000 MW of wind





# Expected Additions

- Sundance A Returns
- Shepard Energy centre

Year	Biomass	Coal	Gas	Total
2013	4	576	140	720
2014	41		270	311
2015			800	800
<b>Total</b>	<b>45</b>	<b>576</b>	<b>1210</b>	<b>1831</b>

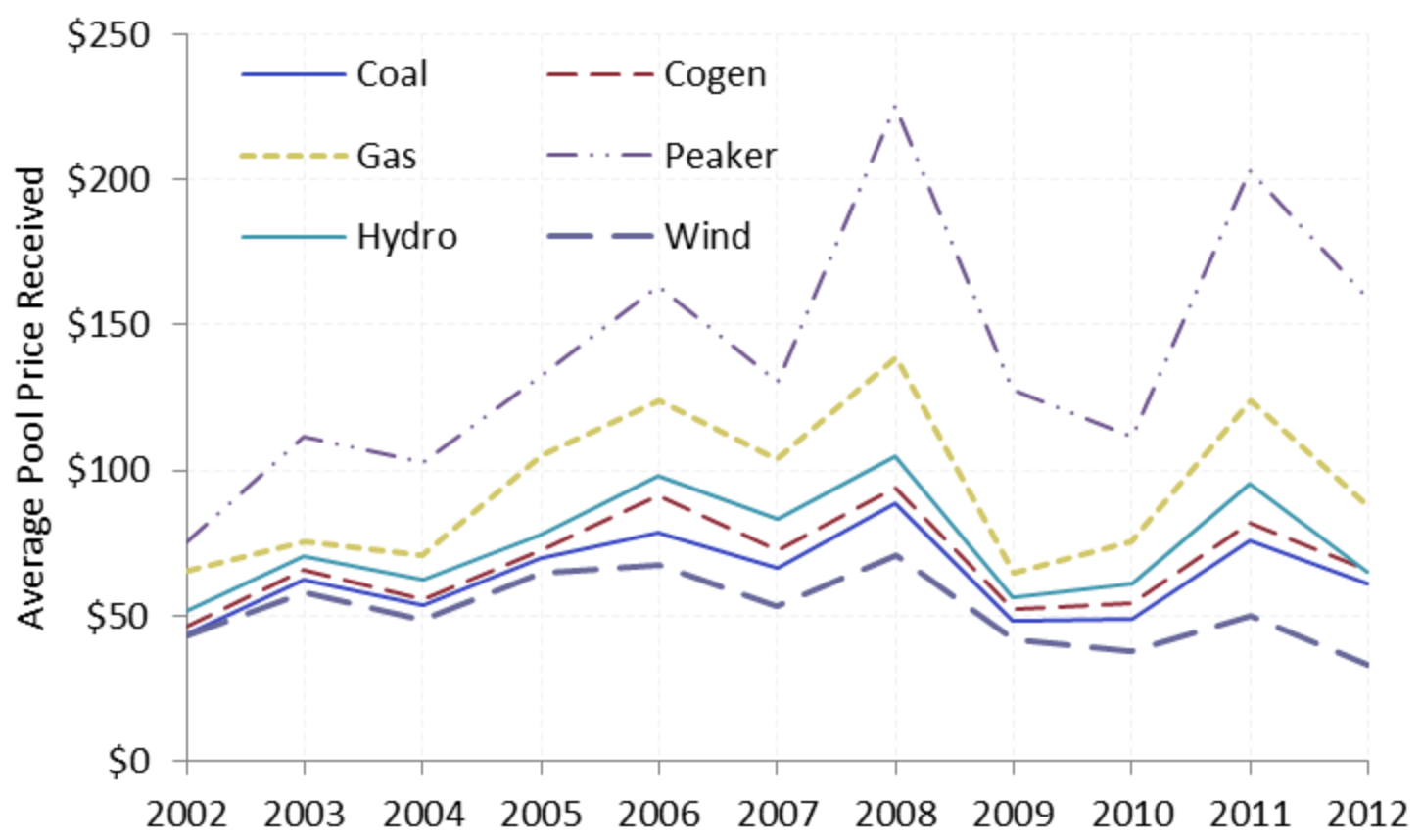


# Are market prices high enough to incent new investment

- Market price is signaling a need for peaking gas
- The recent Brattle report on the Alberta market reinforces the opinion that market conditions continue favorable investment conditions for natural-gas-fired power plants.



# Distribution of prices impacts technology choice





# Challenges / Opportunities for the Market

- Low Natural Gas prices put downward pressure on prices
- Increasing Wind penetration and externalities suppressing price
- Environmental regulations – eventual closing of aging coal plants and replacement by natural gas plants
- PPA retirement – close to 5000 MW of PPA's expire in 2020
- Recent surveys indicate that in the present investment climate the market structure is not suitable for project developers, investment is likely to come from balance sheet financing.



# MSA's Projected Coal Retirements

