

Net Present Value (NPV) Analysis

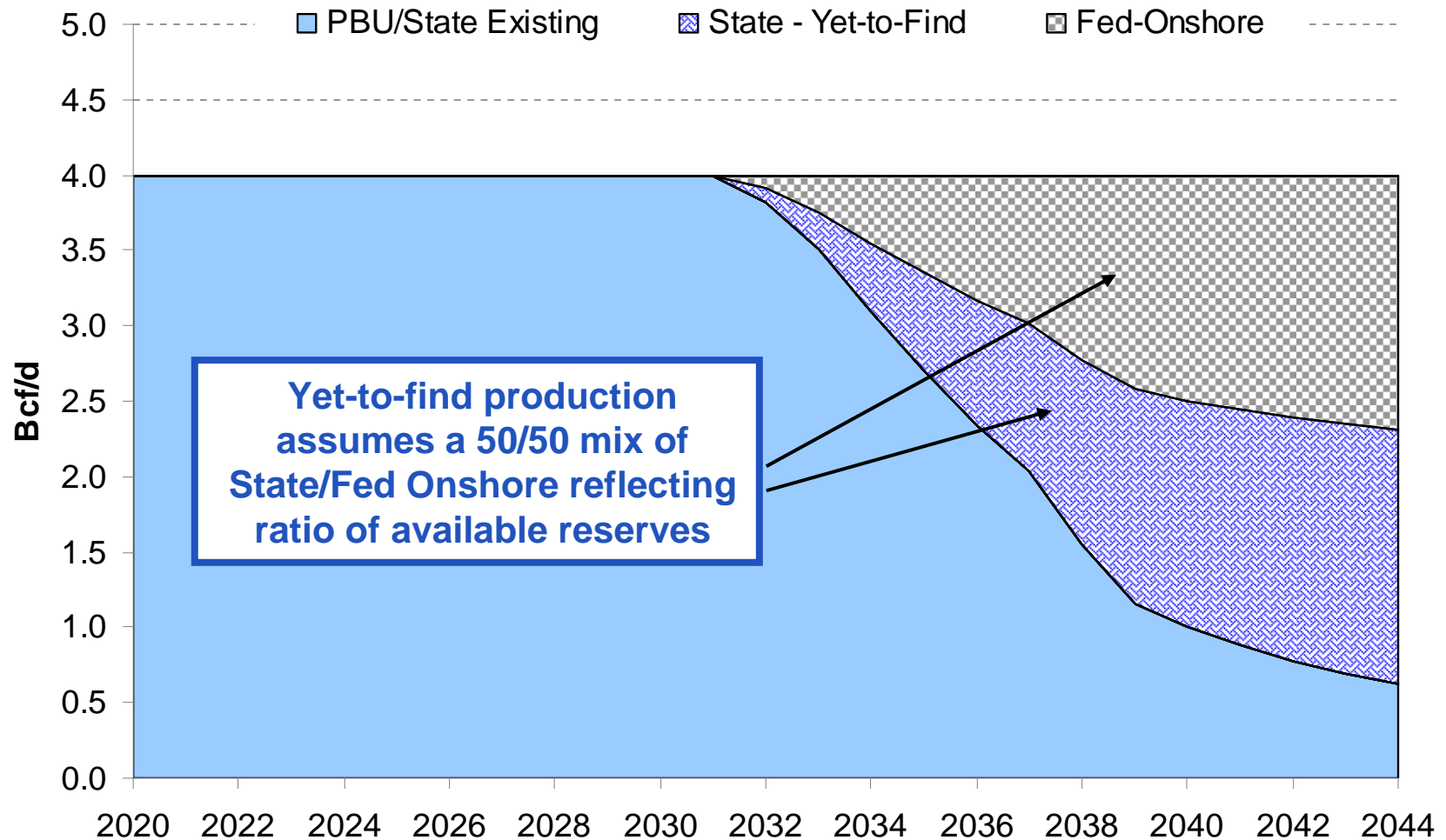
State of Alaska - Anchorage Special Session

June 18, 2008

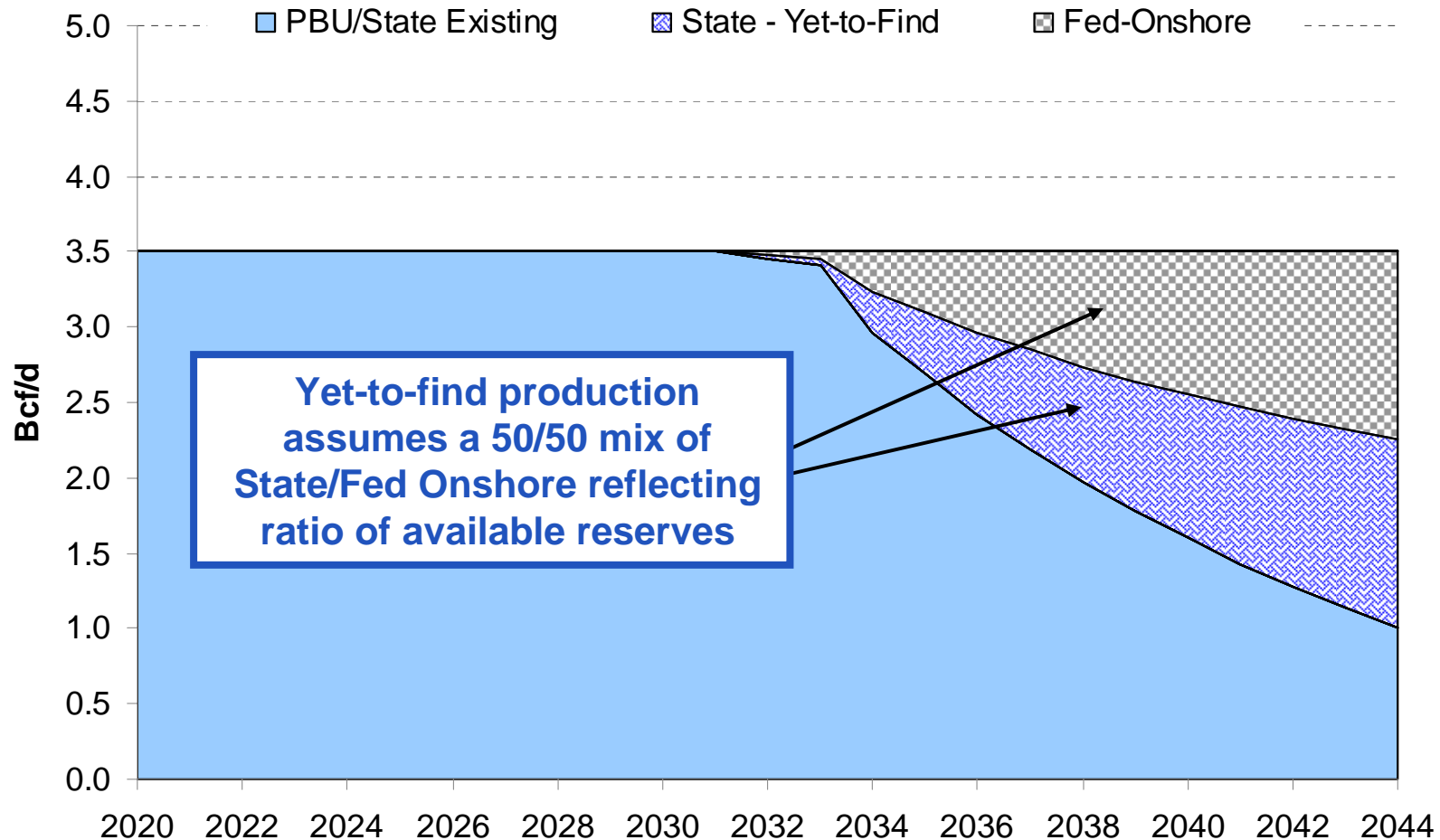
Project Economics are Robust

- NPV for Key Stakeholders Indicates Positive NPV for 4.0 Bcf/d project that does not rely on Pt Thomson
- NPV Results are Sensitive to Many Factors with Commodity Prices being the Most Significant
 - Producer NPV Remains Positive with Low Market Price Assumptions
- 4.0 Bcf/d project has acceptable netback risks, lower reserve risk than 4.5 Bcf/d project with Pt Thomson gas
- NPV positive across wide range of project cost outcomes, cost escalation scenarios
- Tariffs for Smaller Pipeline Configurations (4.0 & 3.5 Bcf/d) Increase by 13% to 21% Relative to the 4.5 Bcf/d Proposal Base Case

Production Assumptions: 4.0 Bcf/d Case



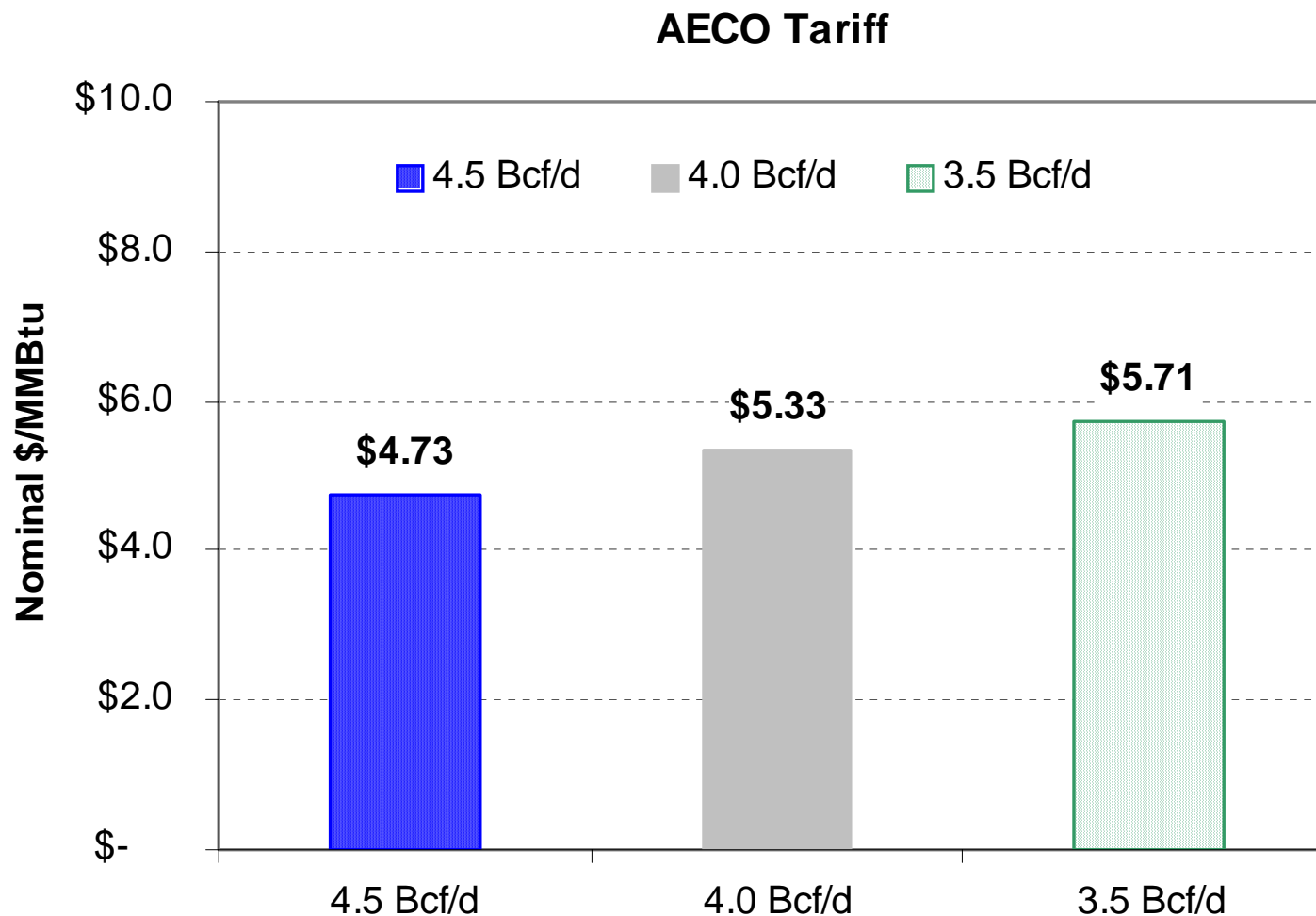
Production Assumptions: 3.5 Bcf/d Case



Production Assumptions used in the NPV Analysis for the 4.0 Bcf/d Conservative Base Case

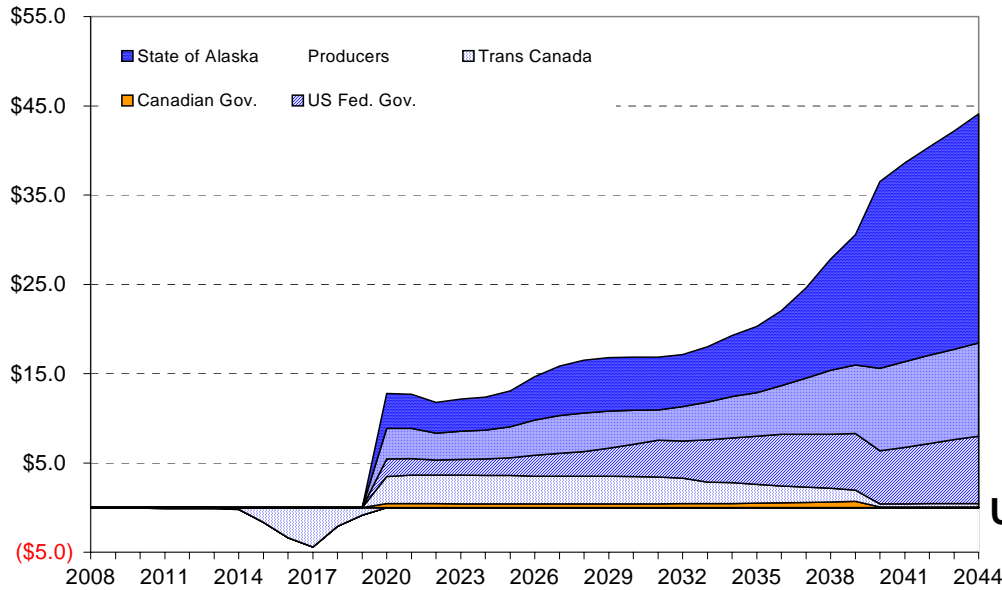
- Prudhoe Bay:
 - 24.5 Tcf
 - Initial production rate – 3.5 Bcf/d
- State existing:
 - 3.7 Tcf:
 - Colville River – 0.4 Tcf
 - Duck Island – 0.8 Tcf
 - Kuparuk – 1.2 Tcf
 - Northstar – 0.5 Tcf
 - GPMA – 0.9 Tcf
 - Initial production rate – 0.5 Bcf/d
- Note – this case assumes NO Point Thomson production

Expected Tariffs from the North Slope to the AECO Market

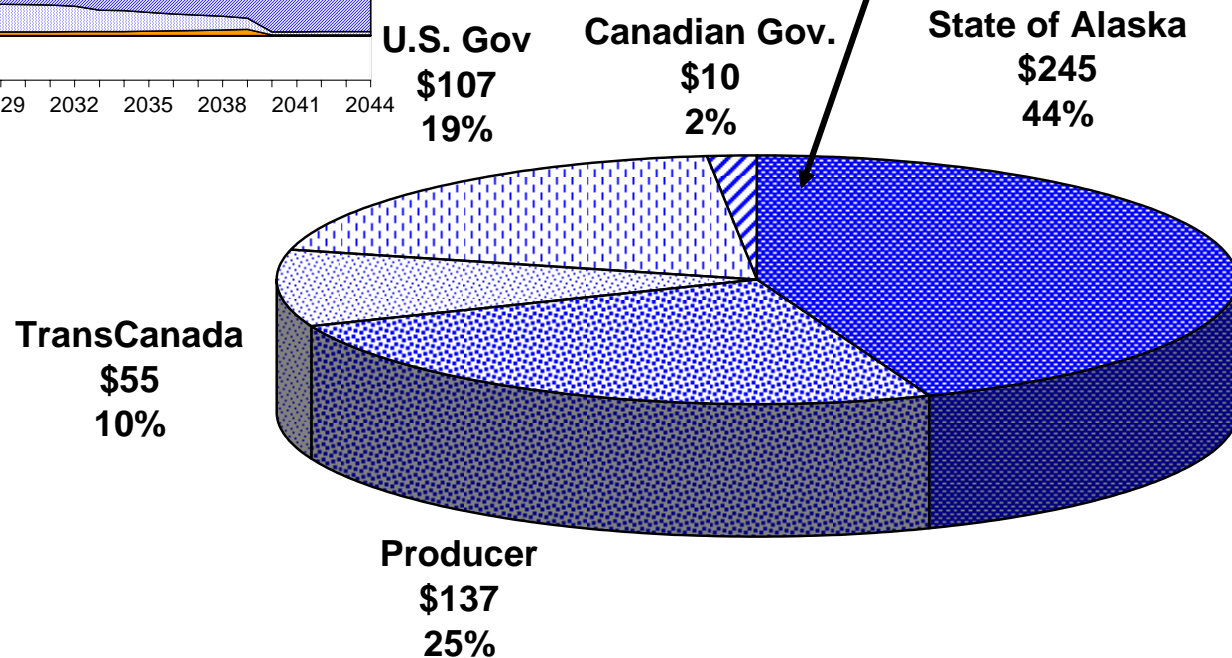


4.0 Bcf/d Conservative Base Case Cash Flows

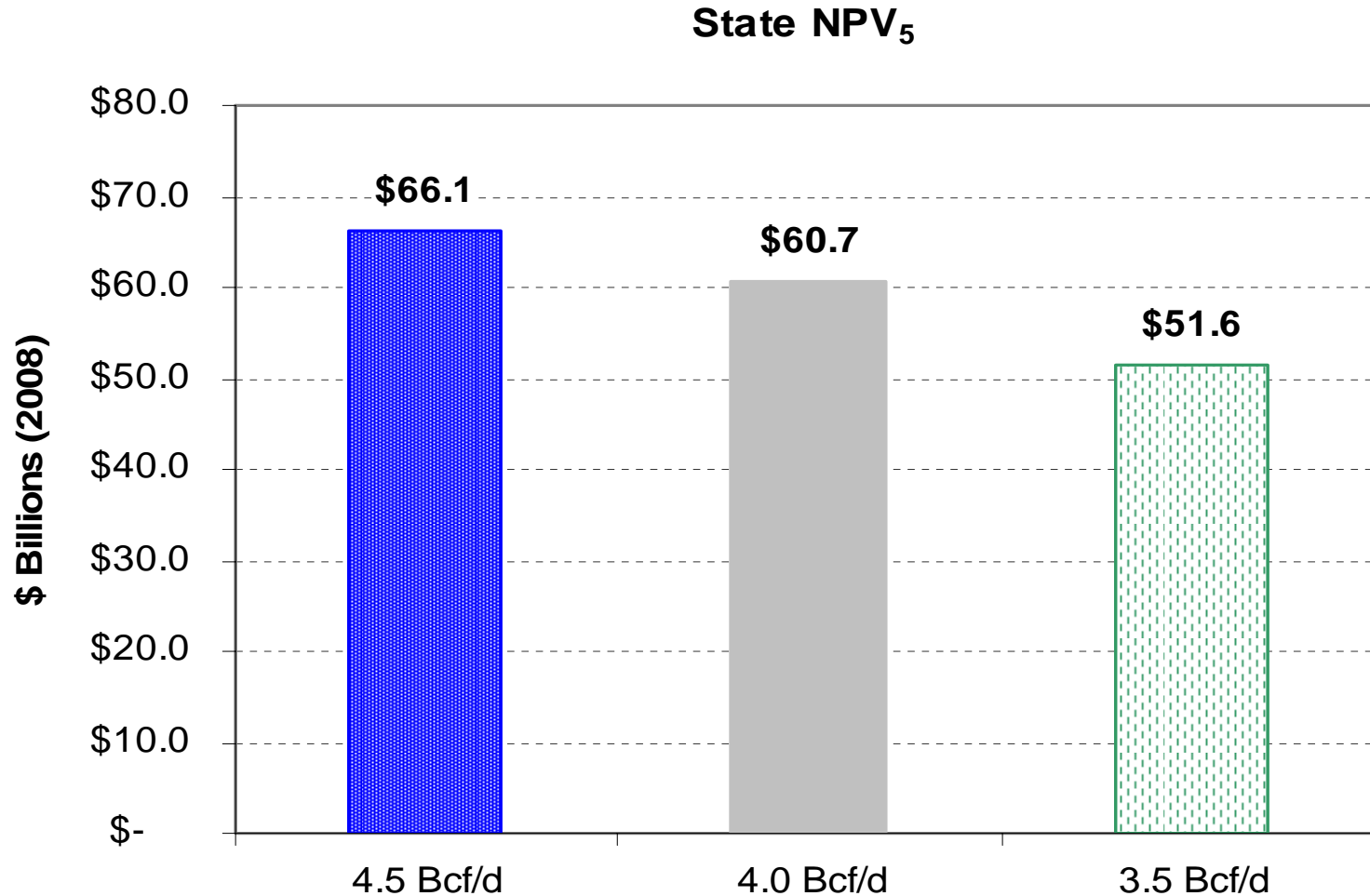
Cash-flows to Stakeholders



Total Net Cash Flow
for Project by Stakeholder
(Non-Discounted, 2008 – 2044)

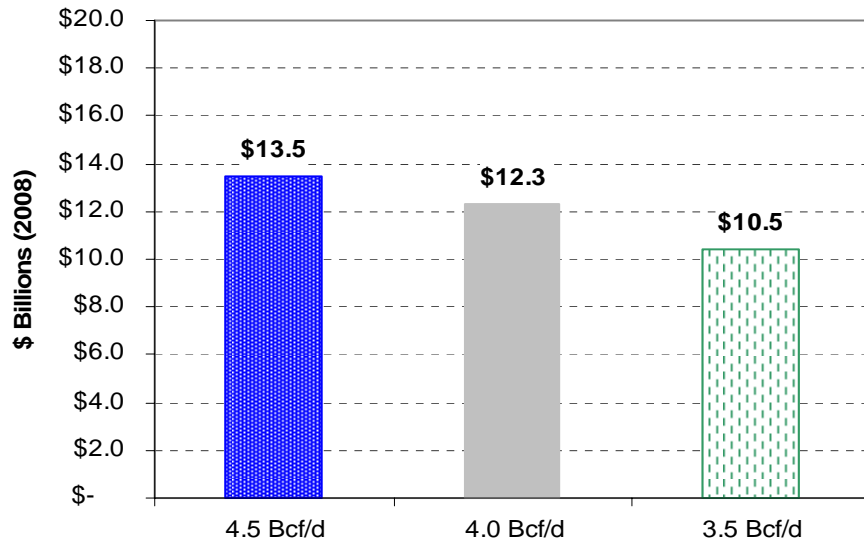


The State's NPV₅ is Lower with Smaller Project Capacity but Remains Significant



Producer NPV Shows a Similar Trend When Compared to the State

Aggregate Producer NPV₁₀



Aggregate Producer NPV₁₅

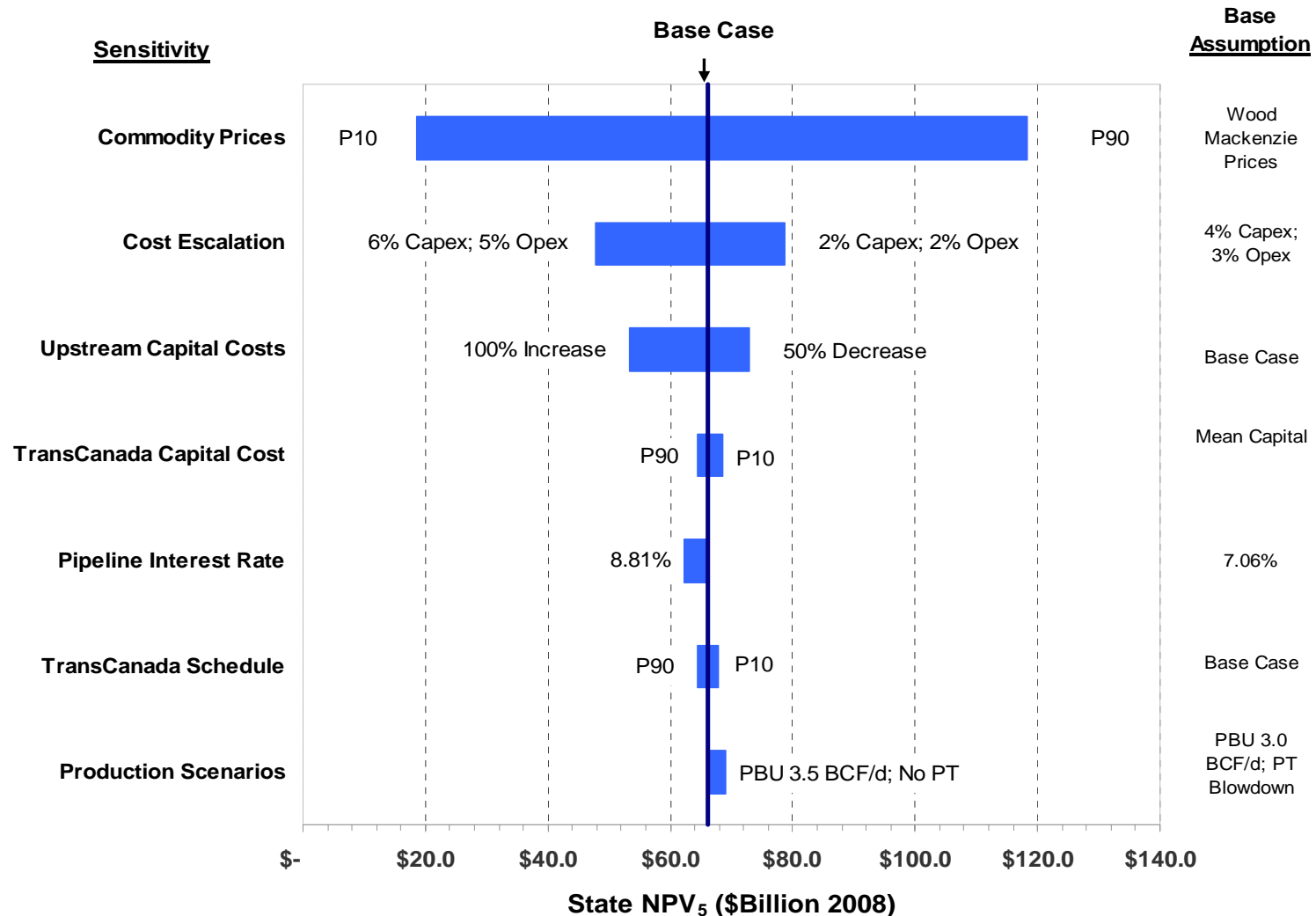


Project NPV is Affected by Many Factors

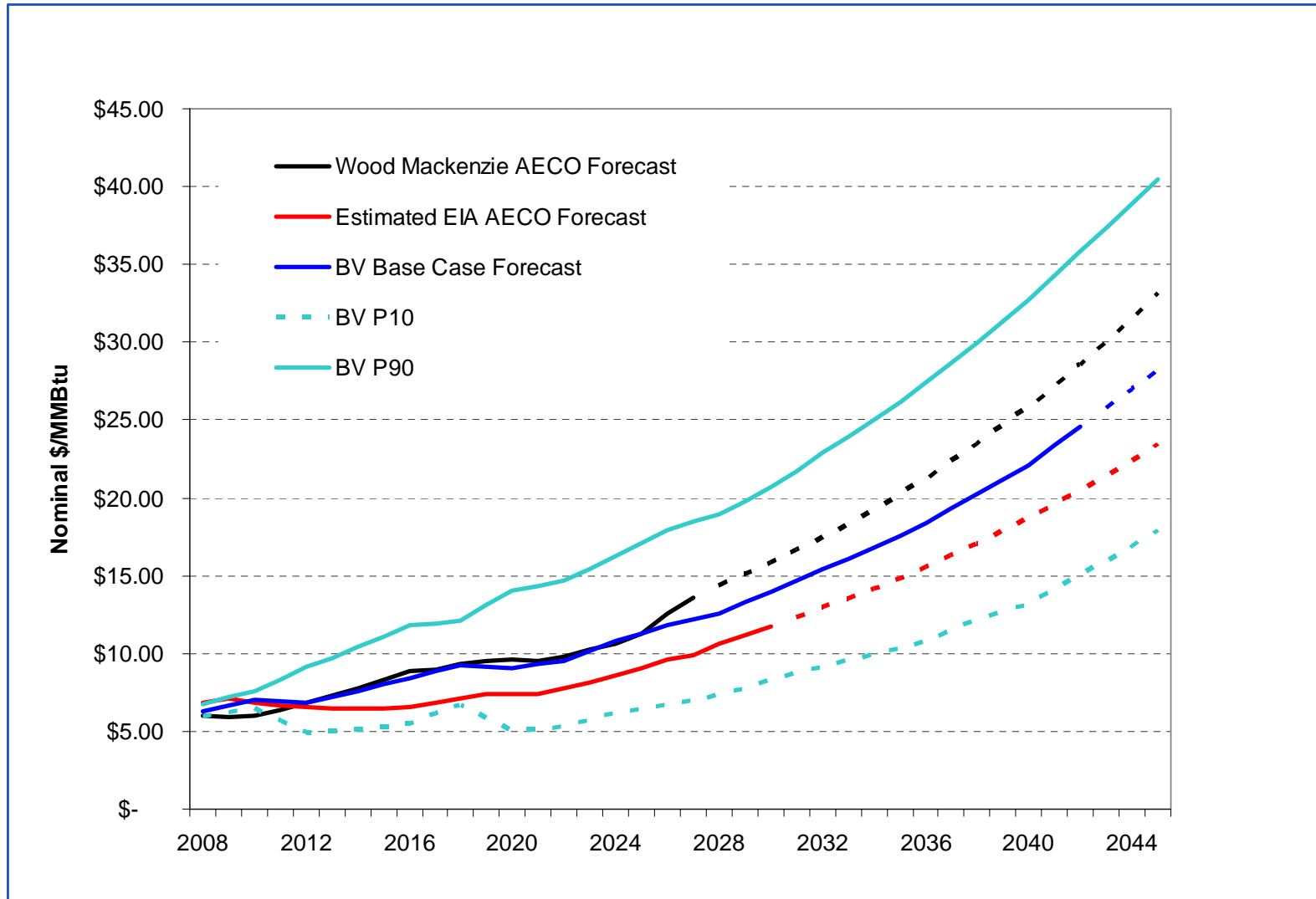
- Prices
- Project cost
- Project cost escalation
- Interest rates
- Cost of finding and developing “new gas”
- Etc.

Bottom line: Understanding how project economics are affected by uncertainty in inputs that affect cash flows.

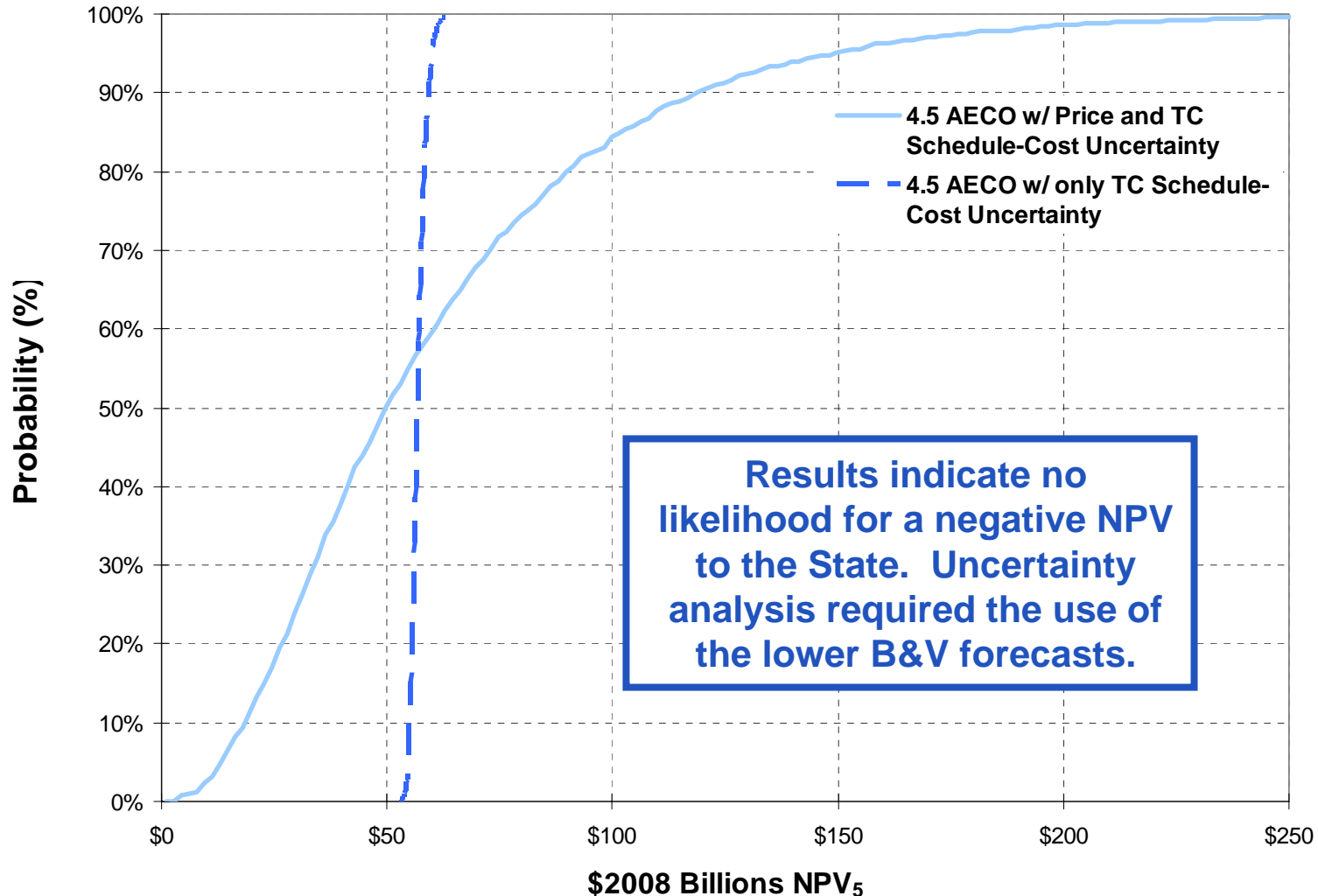
Price is a Key Driver to Variations in the NPV₅ to the State of Alaska



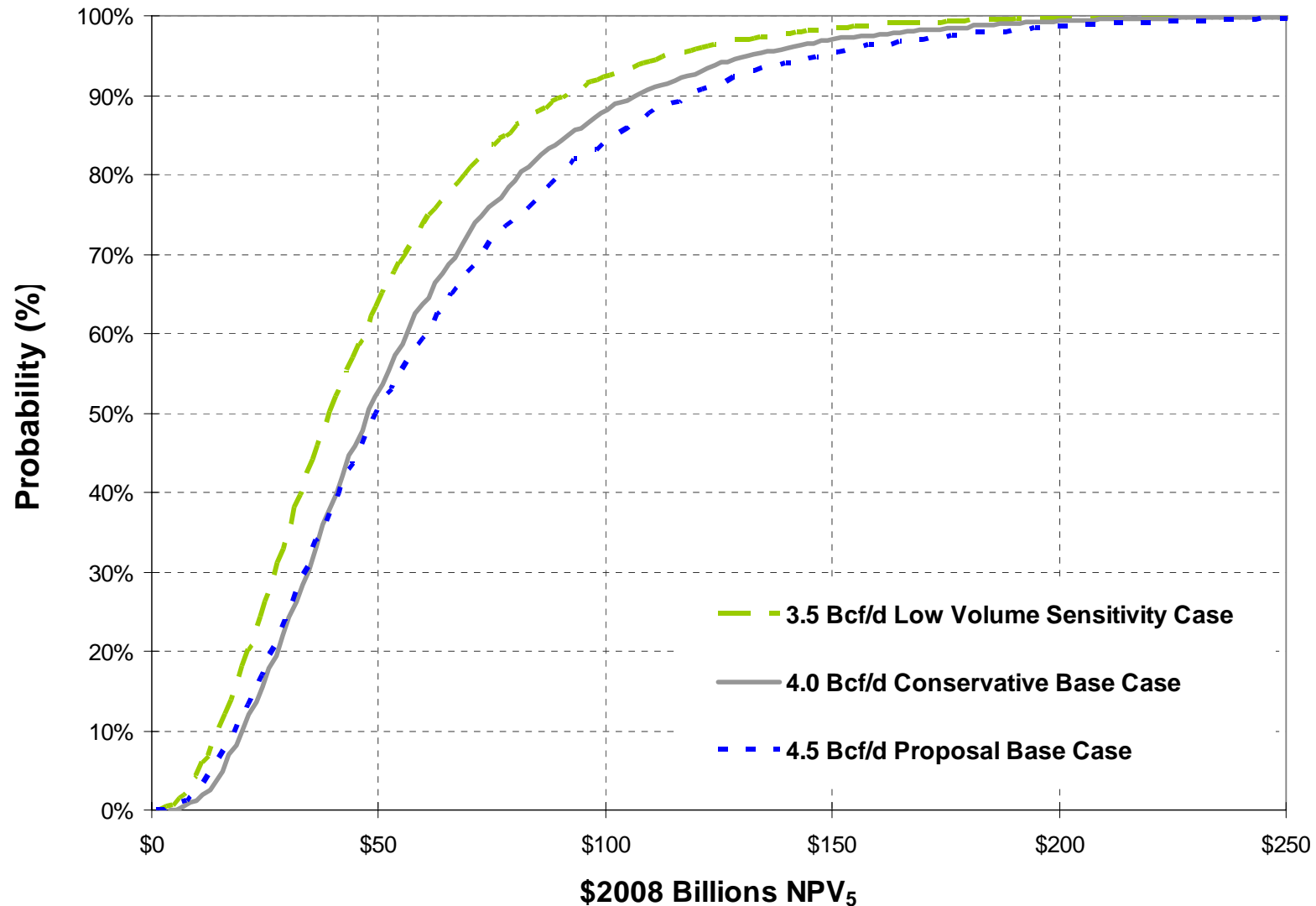
Various Price Forecasts were Considered in Analysis



The impact from price uncertainty swamps estimated capital cost and schedule uncertainty.

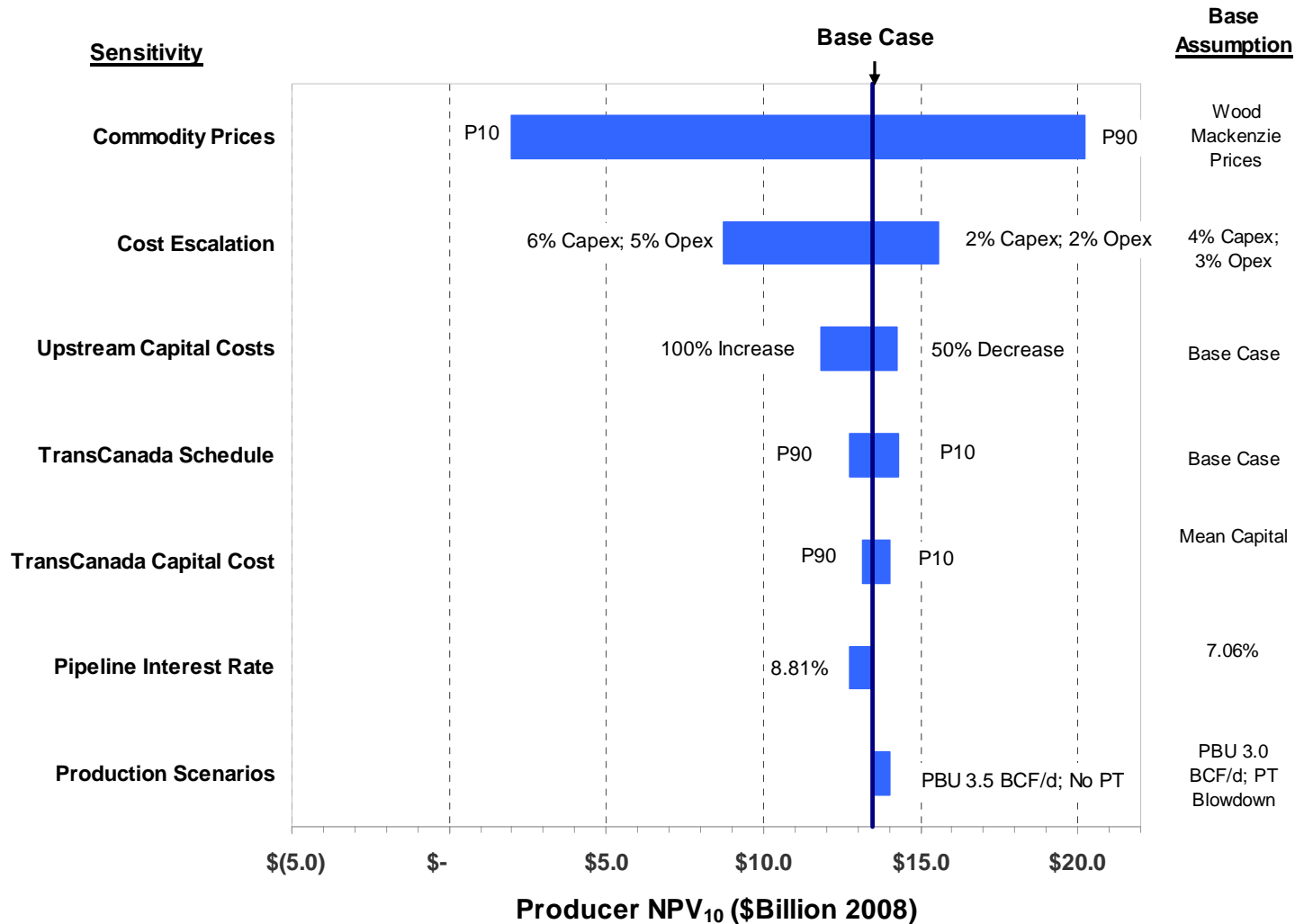


Lower Project Volumes yield similar State NPV results

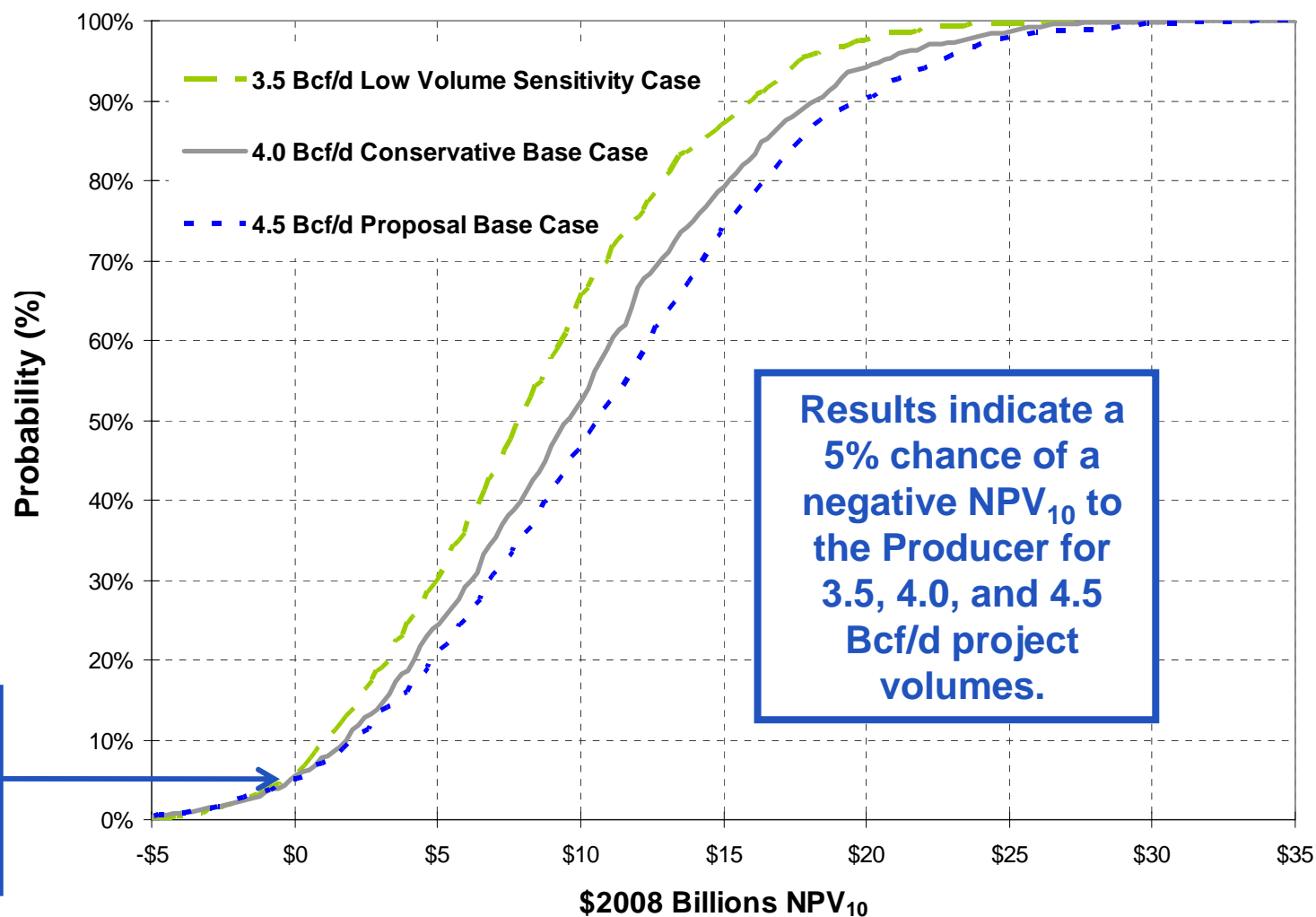


Results shown are with both Price Uncertainty (B&V Price Scenarios) and TC Schedule / Cost Uncertainty

Producer Sensitivity to Key Variables is Similar to that seen in State Results

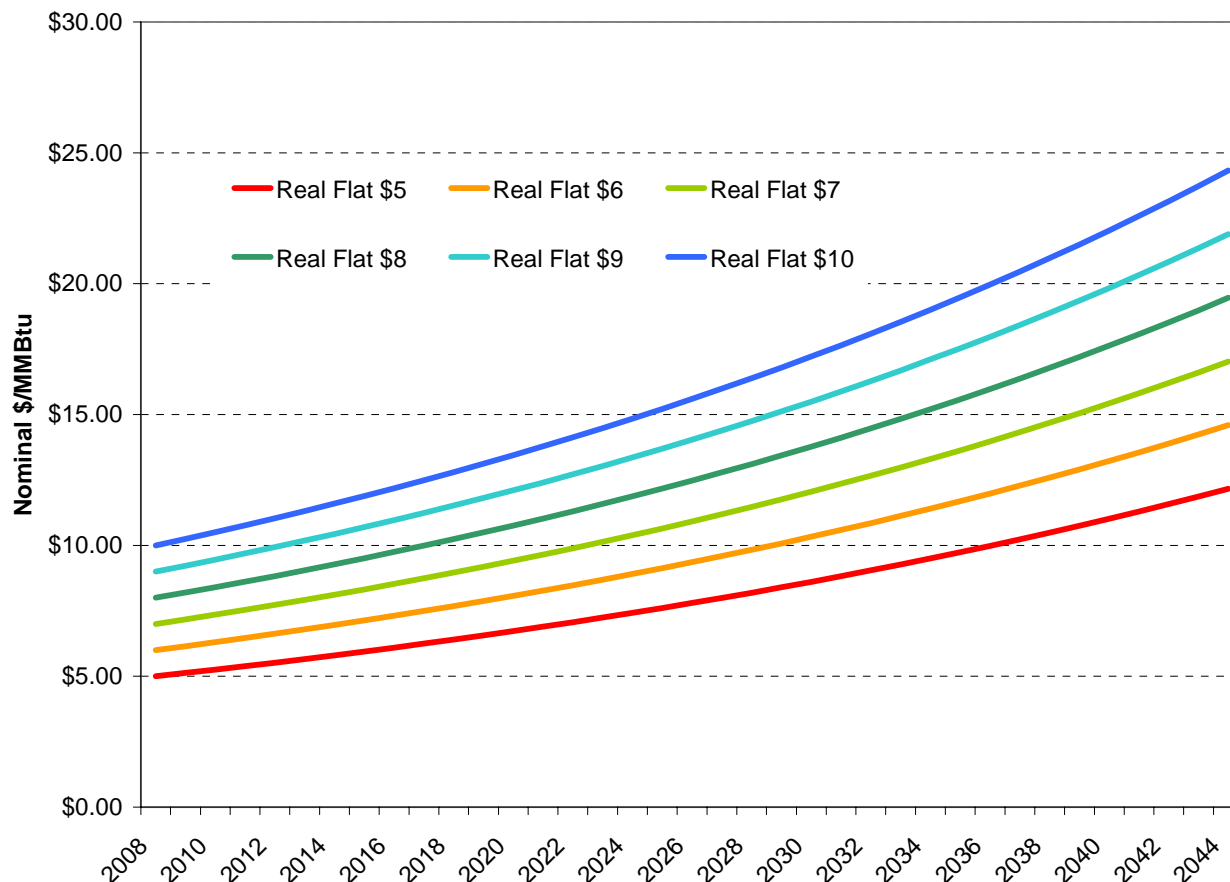


The producers have a very low likelihood for a negative NPV₁₀, even with lower project volume of 3.5 or 4.0 Bcf/d.



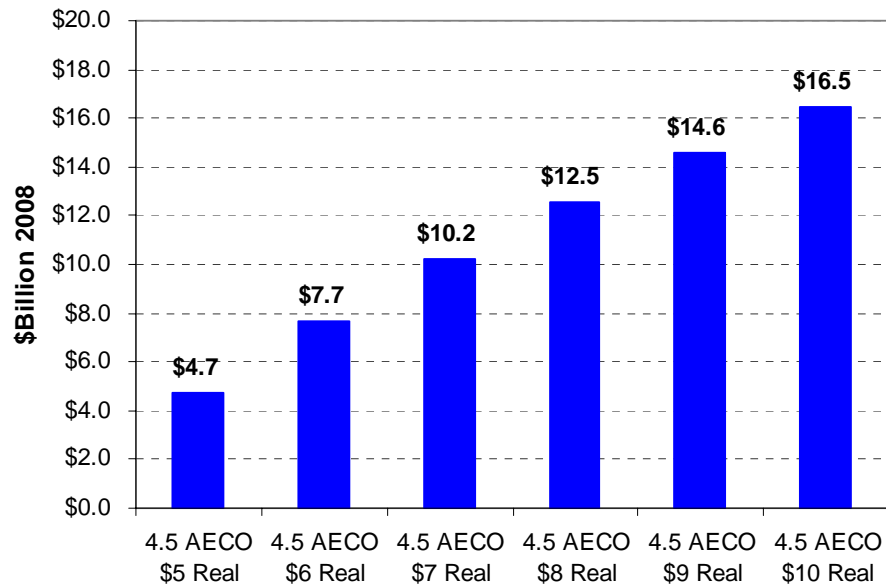
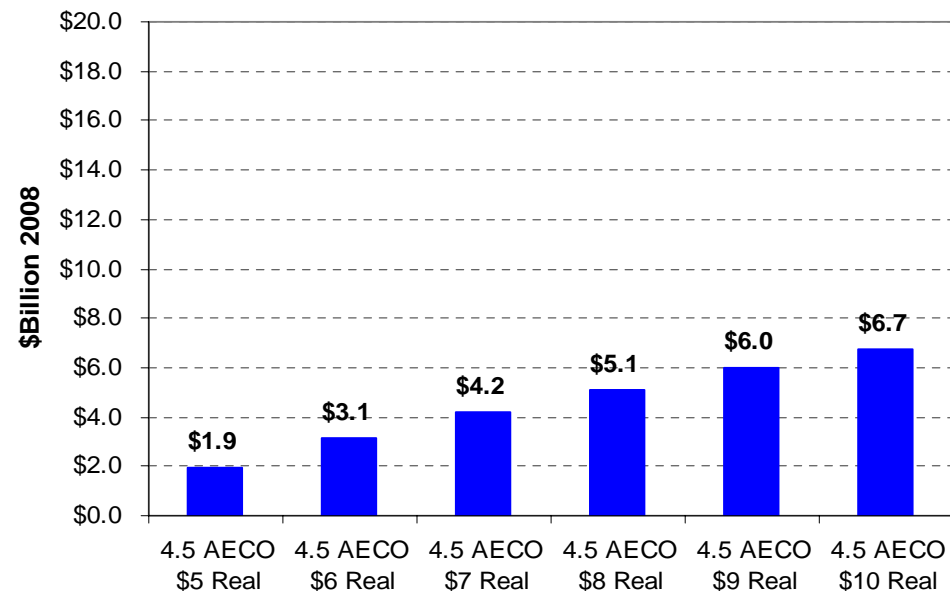
Results shown are with both Price Uncertainty and TC Schedule / Cost Uncertainty

Analysis of Impact of Price Levels - Flat Real Prices



- Analysis investigated the impact of price levels on project economics
- Flat real prices levels from \$5/MMBtu to \$10/MMBtu were considered for natural gas price at AECO
- 2.5% inflation assumed to estimate dollars of the day prices

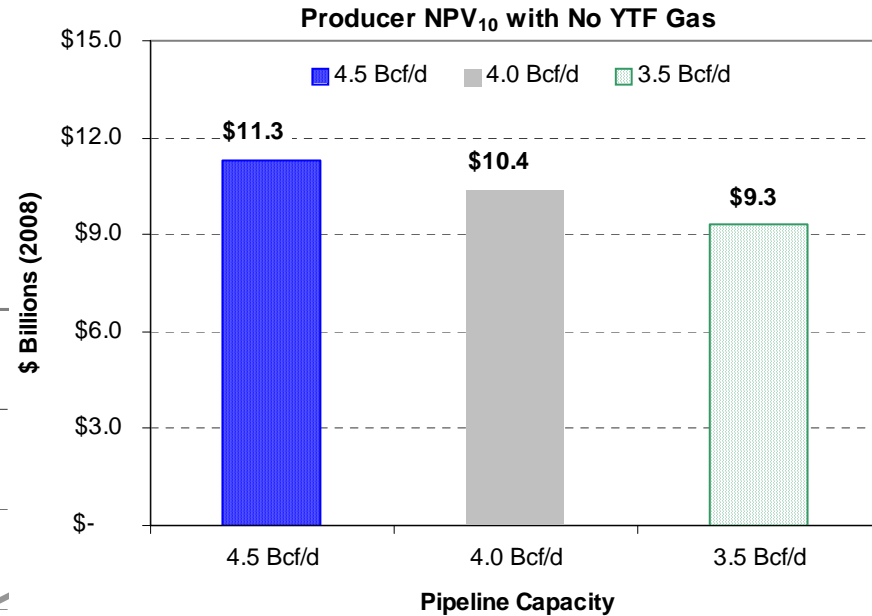
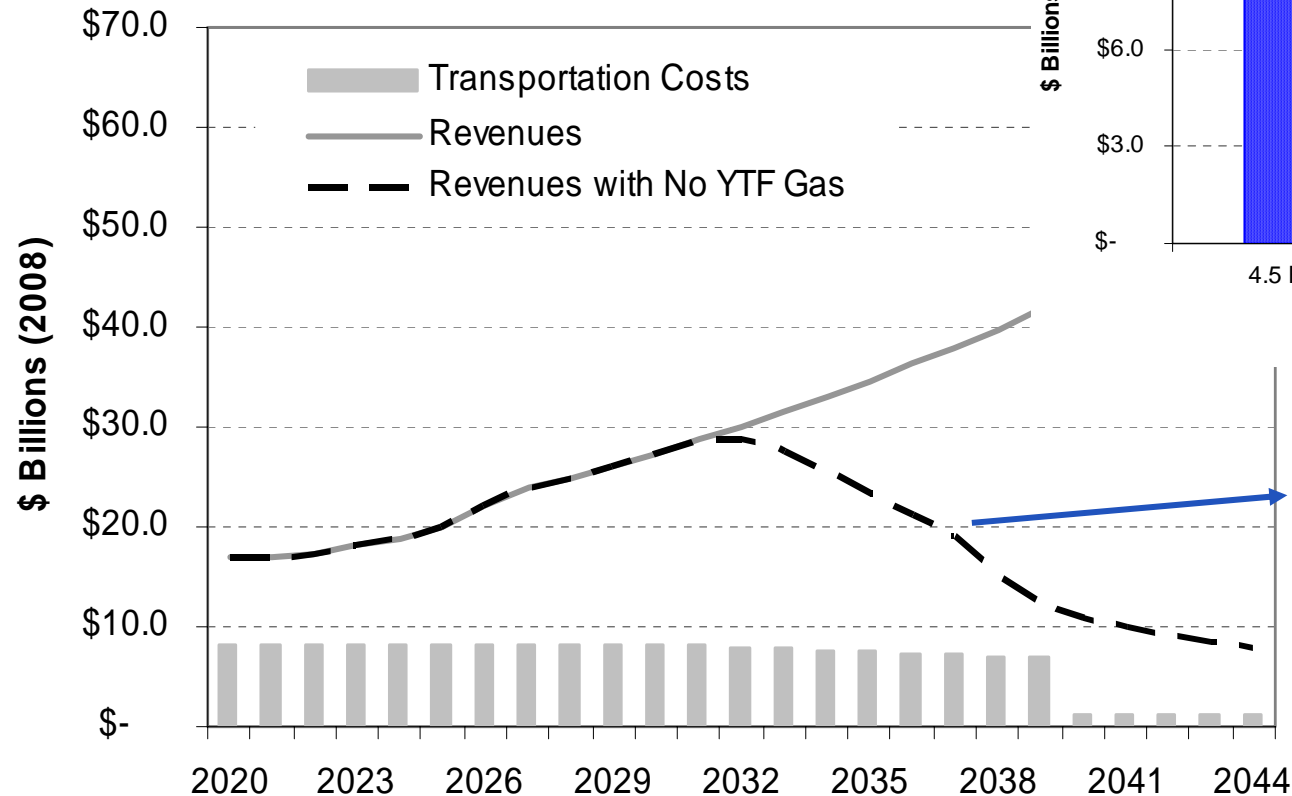
**Price levels have a significant impact on Producer NPV.
NPV₁₀ remains positive with real prices in \$5-\$10/MMBtu
range for the 4.5 Bcf/d case.**

Aggregate Producer NPV₁₀**Aggregate Producer NPV₁₅**

Even at very low future prices, Producer NPV remains positive.

Producer NPV (for 4.0 Bcf/d) is Expected to Remain Positive if No YTF Gas is Produced

**Revenue vs. Transportation Costs
4.0 Bcf/d (3.5 PBU, No PT)**



Producer NPV₁₀ is equal to \$10.4 billion with No YTF Gas at 4.0 Bcf/d

Appendix

Impact of the Gasline: Cash flows and NPV calculated are the difference between oil+gas and oil only operations.

Oil + Gas \$\$

—

Oil Only \$

=

Cash Flows from Gas \$

Overview of Natural Gas Price Assumptions Utilized in the NPV Analysis

- Gas delivered to different locations has different prices: Henry Hub vs. AECO
- Prices dependent on the supply/demand balance and pipeline infrastructure
- Forecasts are required to evaluate the project from 2020 to 2045+
- Relied on range of forecasts
 - EIA
 - Wood Mackenzie
 - B&V
 - Others
- Wood Mackenzie is the base case for analysis
 - Independent market assessment
 - Projects an AECO price

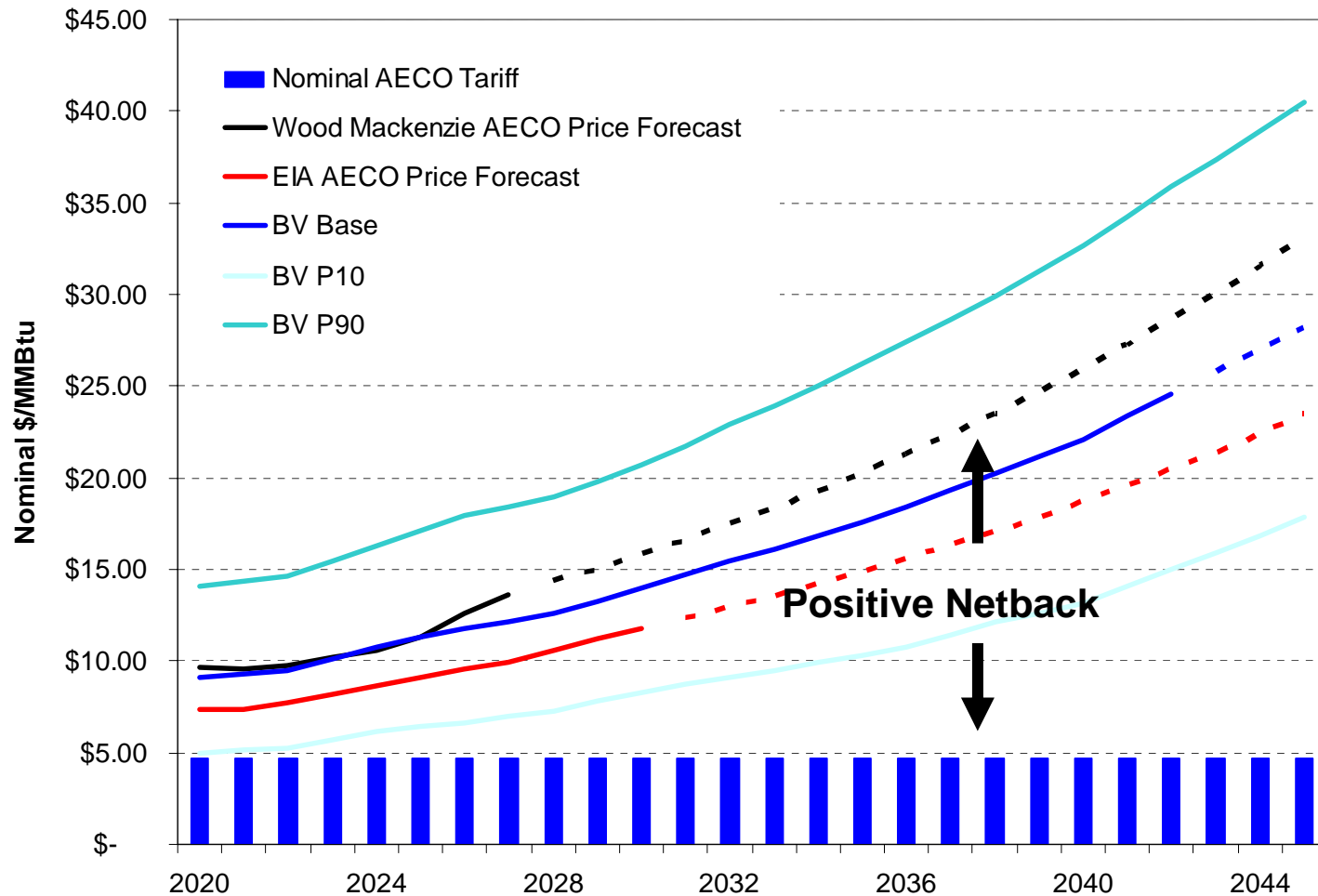
Understanding the Factors that Lead to Future Prices

- Forecasted prices are “point” estimates, all dependent on a specific set of assumptions
- None are expected to be on the dot “correct”
- Price uncertainty and associated risks could be better illustrated using a forecasted price distribution:



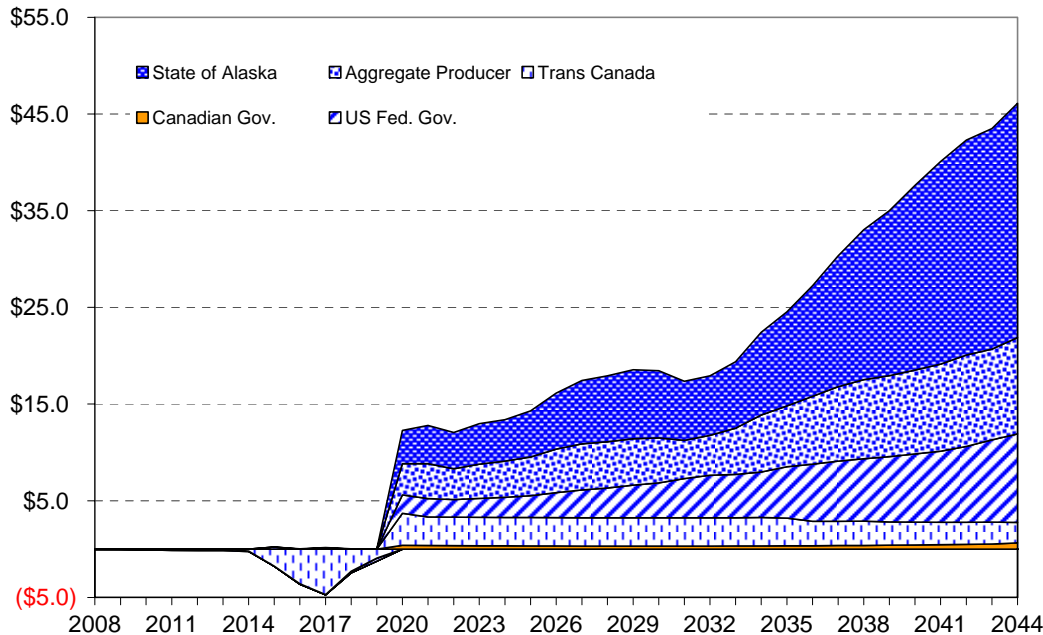
- Black & Veatch assumes that the majority of price risks comes from uncertainty in fundamental factors:
 - Finding & development costs
 - Technological improvement
 - LNG imports
 - Power generation demand
 - US industrial demand
 - CDN industrial demand

Positive Netbacks Are Expected Under All Price Forecasts



Cash flows to from 4.5 Bcf/d Proposal Base Case

Cash Flows to Stakeholders



Total Net Cash Flow
for Project by Stakeholder
(Non-Discounted, 2008 – 2044)

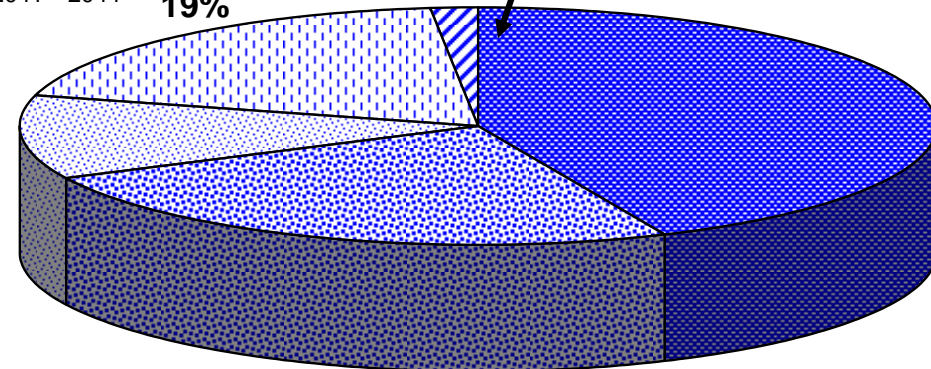
TransCanada
\$69
11%

U.S. Gov
\$116
19%

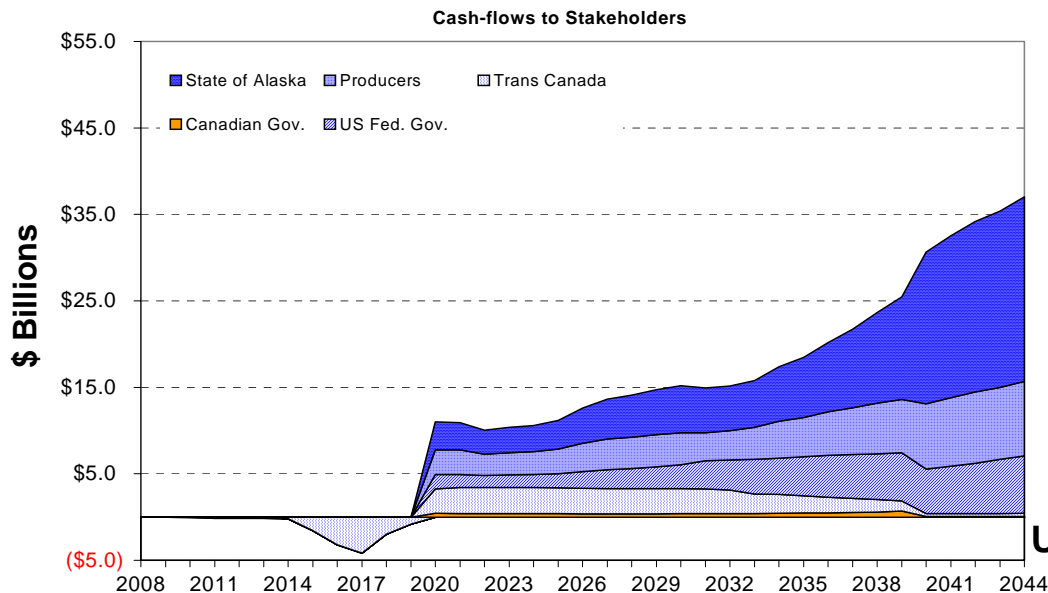
Canadian Gov.
\$9
2%

State of Alaska
\$262
44%

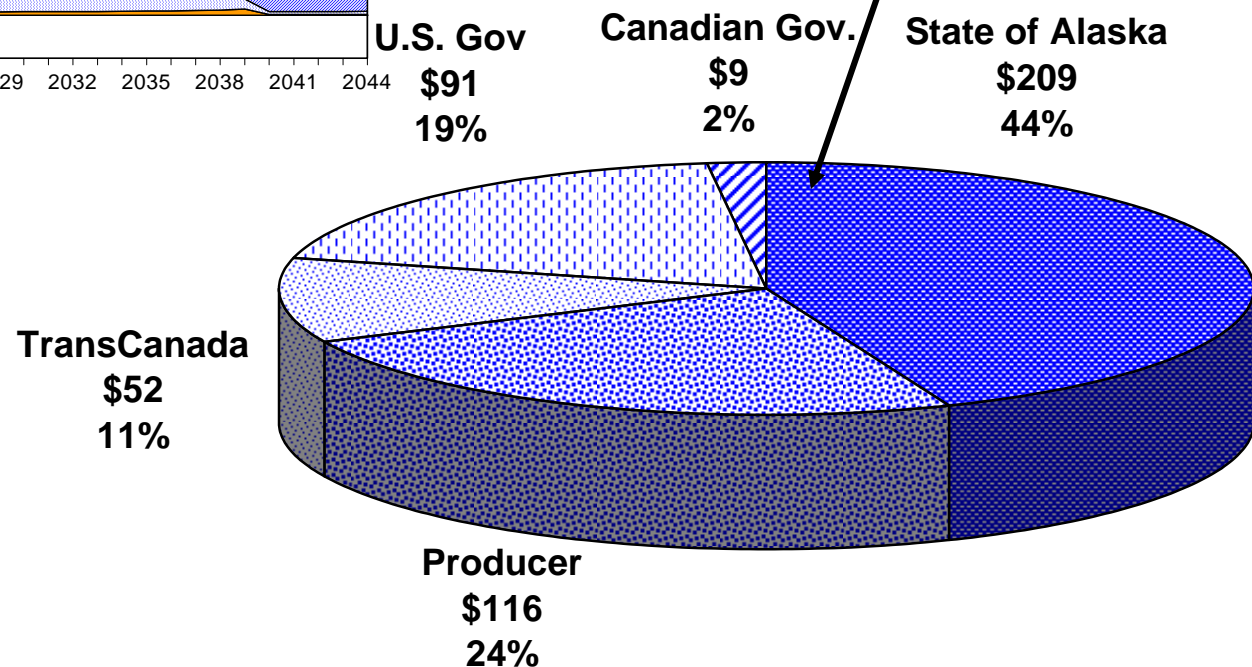
Producer
\$148
24%



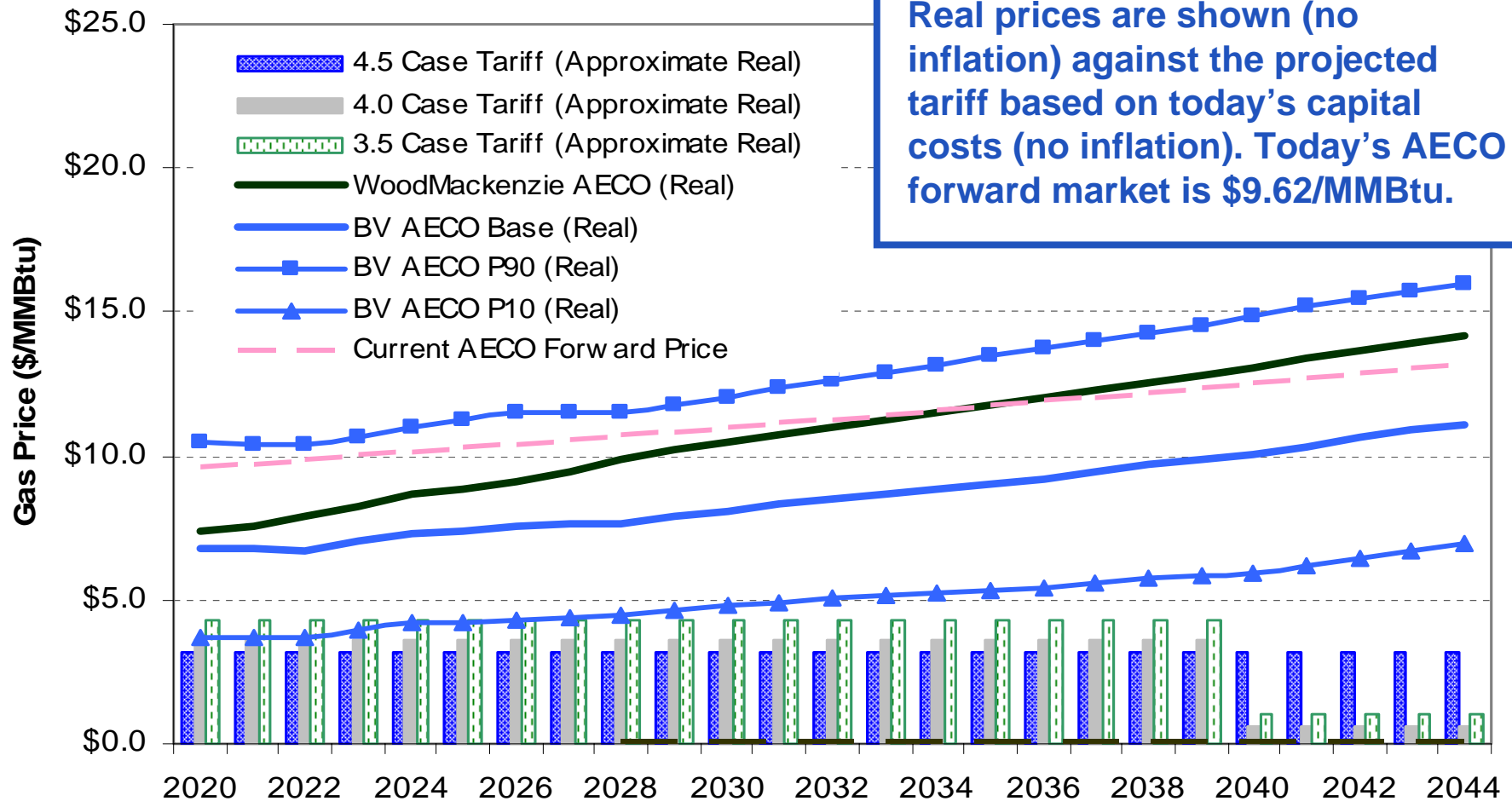
3.5 Bcf/d Low Volume Sensitivity Case



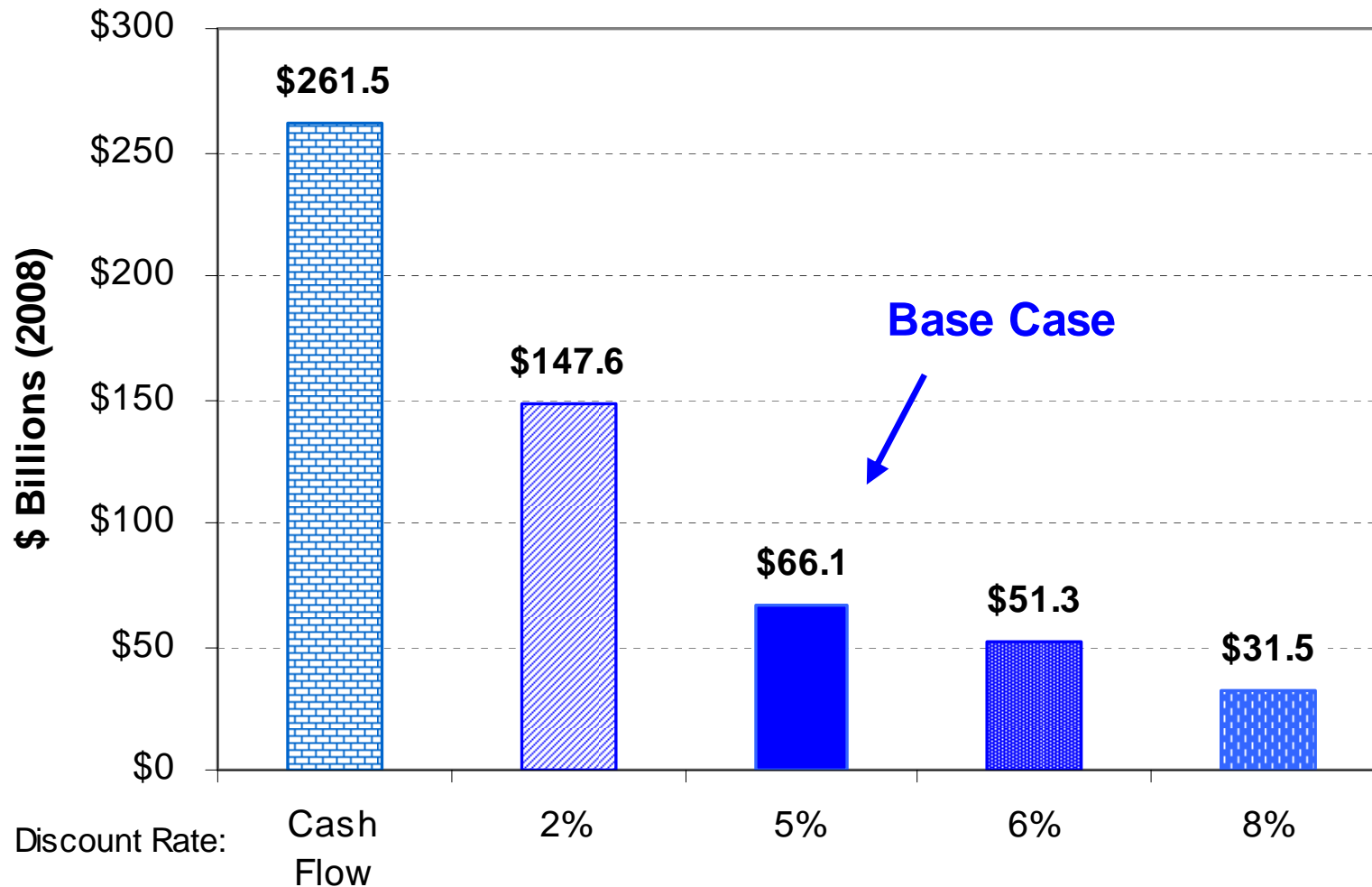
Total Net Cash Flow
for Project by Stakeholder
(Non-Discounted, 2008 – 2044)



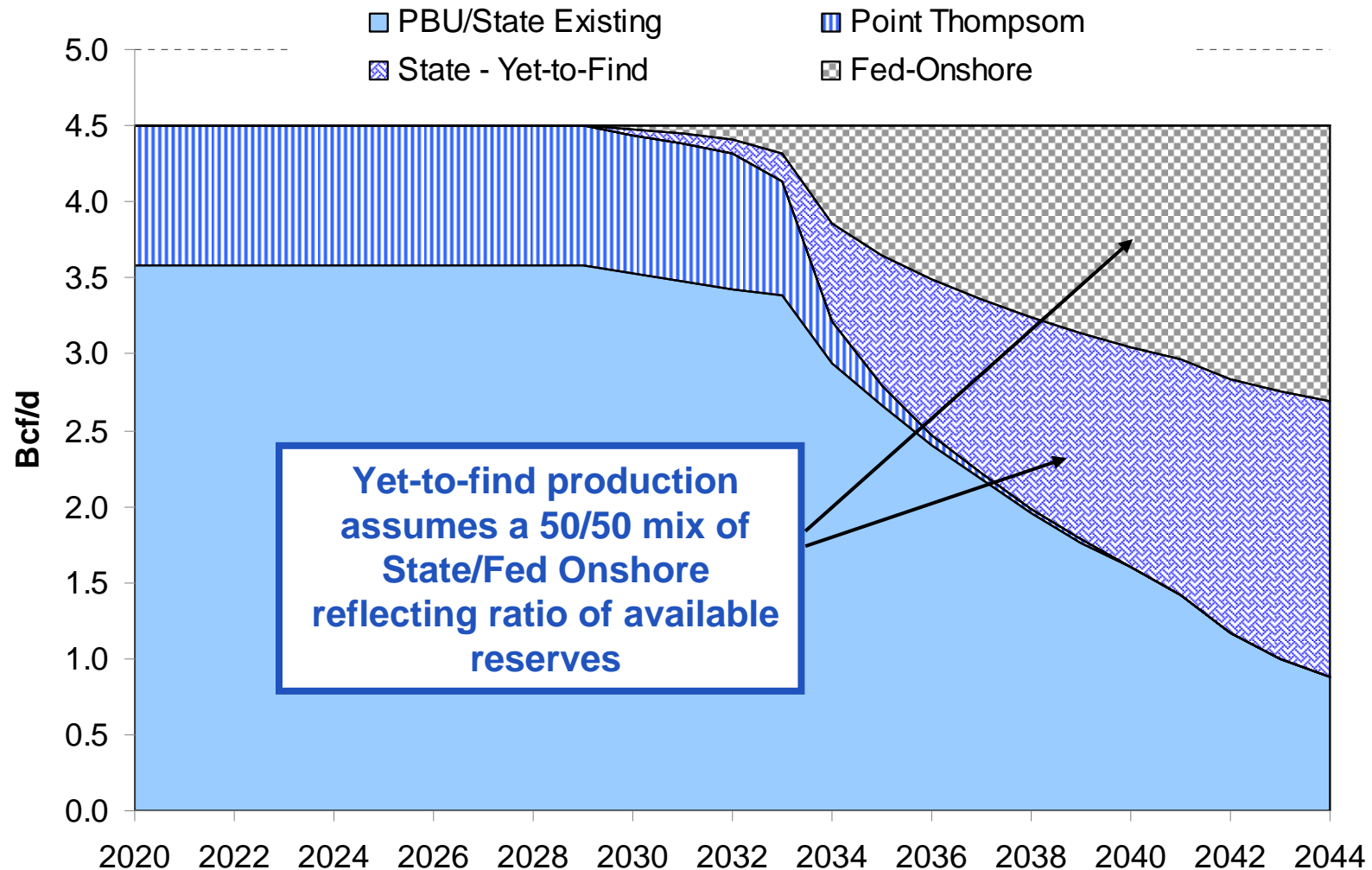
Project Cash Flows are Favorable if Built Today



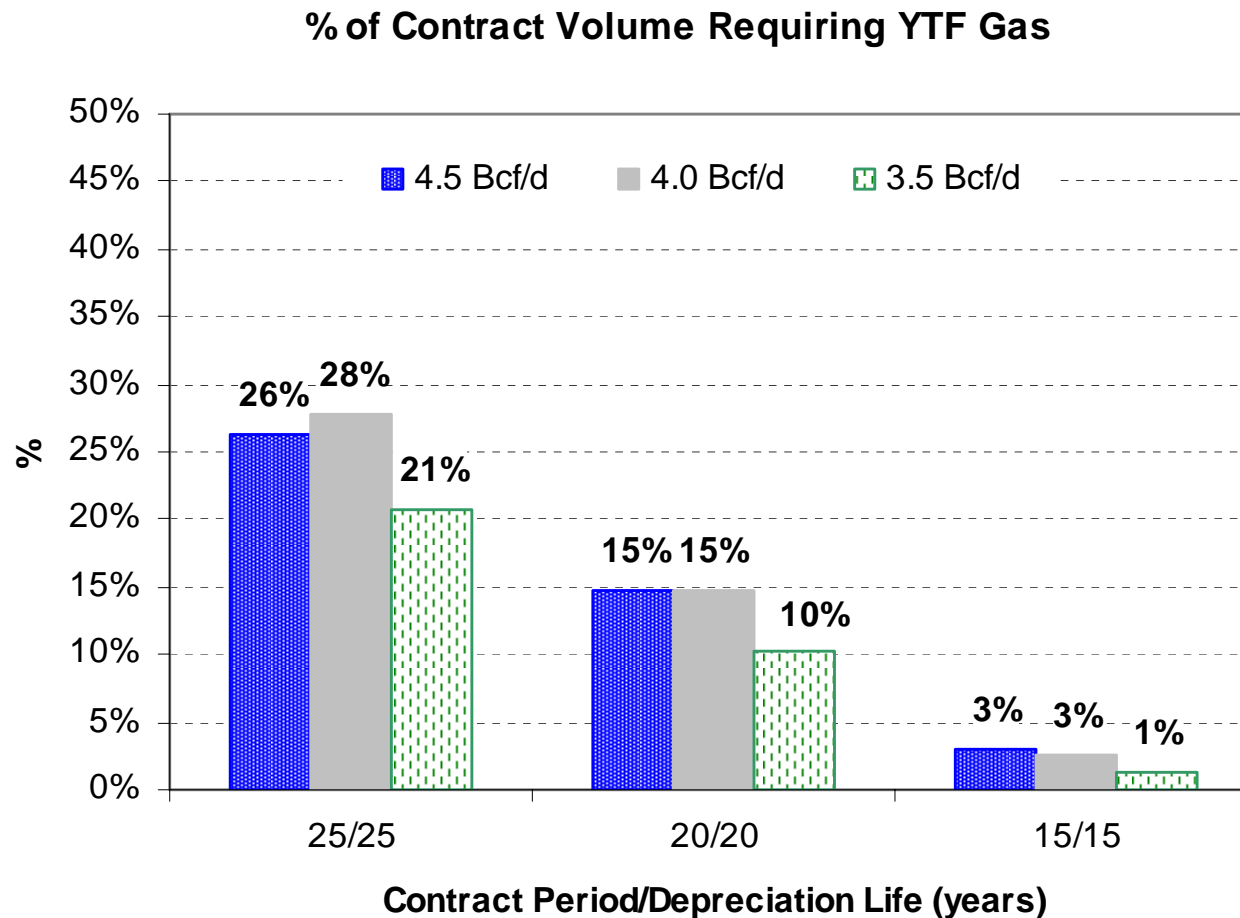
Expected State of Alaska NPV₅ is \$66.1 billion



Production Assumptions: 4.5 Bcf/d Proposal Base Case



YTF Gas Required to Keep Pipeline Full under Different Contract Periods and for Different Pipeline Capacities



Why does a delay increase State NPV₅?

- Why does a delay increase State NPV₅?
 - Prices increase
 - Progressivity for production taxes increases as prices rise
 - Production Tax in 2020 = ~25%
 - Production Tax in 2045 = ~50%
- Could a delay cause a decrease in the State NPV₅?
 - Yes, if prices increase at a lower rate than the baseline Wood Mackenzie prices, then a project delay would cause a decrease in the State NPV₅