



Cost Benefit Analysis of Market Based Balancing on Maui Pipeline

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Cost Benefit Analysis Summary

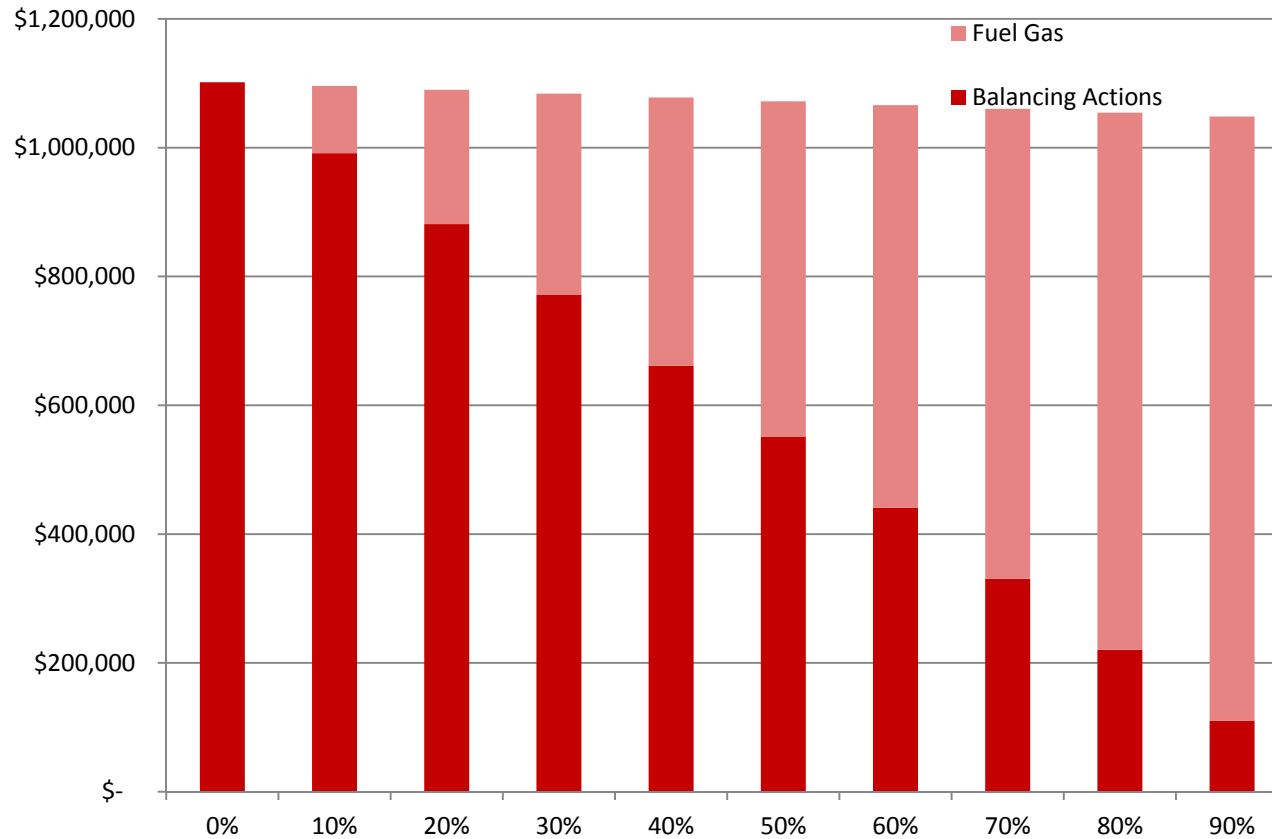


- Scenarios
 - Status quo vs MBB change request
- Three primary effects of MBB were assessed
 - More primary balancing
 - More liquid market for balancing actions
 - More admin processing cash-out invoices
- Other dynamic efficiency benefits not quantified
 - More efficient price signals
 - For day-to-day usage of pipeline
 - For investment in storage and other forms of swing
 - More market liquidity
 - Upstream benefits



- Two main effects
 - Balancing agent trades in more liquid market
 - Smaller spreads \Rightarrow total cost of balancing is lower
 - As primary balancing improves
 - The above spread benefit falls (fewer/smaller balancing actions)
 - Higher savings on Fuel Gas
- Note these move in opposite directions as primary balancing improves

Benefits stable across scenarios



Costs of MBB



- Cash out costs are transfers between participants
 - not counted
- Investments by participants are assumed net positive
 - We exclude the costs and the benefits
- Necessary admin costs are relevant
 - Coping with a larger number of invoices
- Report values these at \$150,000 per annum
 - Would appreciate feedback on this

Feedback requested



- Are there any categories of cost or benefit missing?
- Do you agree with our treatment each category?
- Any extra information that should be incorporated?