

Questions from Rep. Gara for SB 138

7. Administration and Black & Veatch: It is in our interest to encourage as much exploration on the North Slope for gas and incidental finds of oil as possible. We have been told expansion by looping, if paid only by the new party and state, will be uneconomic. How much in this pipeline will be left for affordable expansion by compression for new shippers? How will a new party afford to expand by looping if only they and the state pay?

Response: Steve Butt has said that the pipeline expansion capacity could range between 800 – 1000 MMCFD, probably closer to the lower end. It is important to keep in mind that while pipeline expansion through added compression is somewhat incremental, the governing commercial decision will be at the LNG plant. An expansion at the LNG plant will be a big step, on the order of adding an additional 800 MMCFD train. As it turns out, this is a good fit to the compression expansion range expected for the pipeline.

The future cost of expansion capacity is driven by various factors that are unknown at this time. Some of these factors are whether or not the GTP will need to be expanded, whether or not the entire pipeline or only a portion of it will need to be expanded (depending on in-state gas delivery volumes). There are a number of ways in which the cost of future expansions can be impacted to facilitate reasonable expansion costs for new shippers. As an example, one alternative would be for the State to pay for “over-build” of the pipeline by moving from a potentially 42” pipeline to say, a 48” pipeline which would have higher compression expansion capabilities. It should be noted that it may not always benefit the State to facilitate economic expansions, especially the expansions that are further out in the future that may require looping since these may be associated with production from off-shore fields wherein the State may not have a fiscal share.

8. Black & Veatch: Show the state government take under this project, factoring in our infrastructure road and bridge costs, compared to other jurisdictions with large gas sales at various high, current, and low gas prices under RIK and RIV versions.

Response: Please see attached .

## QUESTION

- Show the state government take under this project, factoring in our infrastructure road and bridge costs, compared to other jurisdictions with large gas sales at various high, current, and low gas prices under RIK and RIV versions.

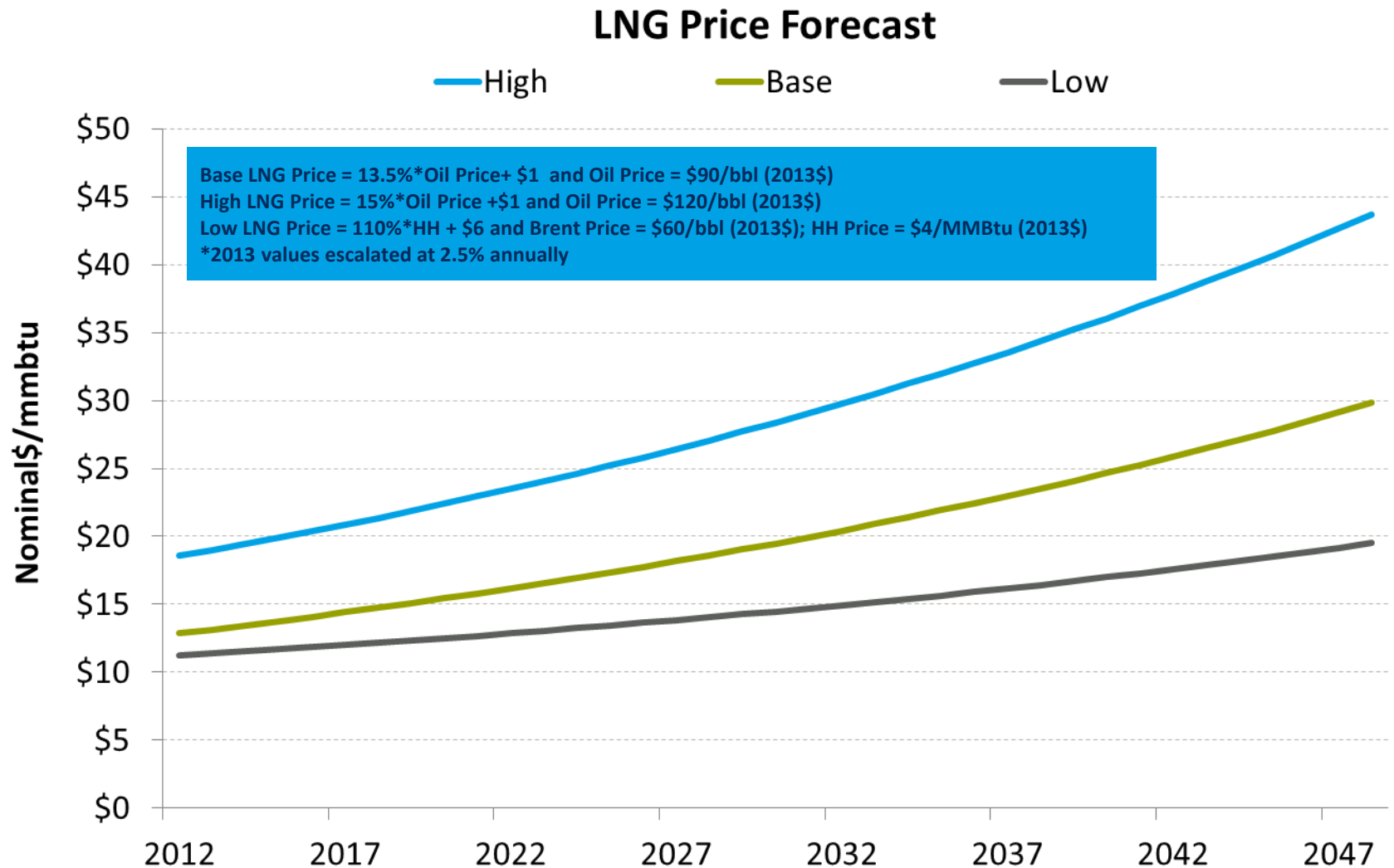
# ANALYSIS OF IMPACT OF ADDITIONAL SUPPORT INFRASTRUCTURE COSTS ON GOVERNMENT TAKE FROM AKLNG PROJECT

- Per legislative request, this analysis examines any potential impact on government take from additional costs for infrastructure roads and bridges associated with the AKLNG project
- At this stage, any additional costs for infrastructure roads and bridges associated with the AKLNG project have not been estimated and these costs, if any, are expected to be borne by the Project rather than by the State alone
- This analysis makes artificial assumptions on these additional infrastructure costs for the purpose of examining the question raised:
  - \$500MM of Additional Infrastructure Cost Borne By Project
  - \$1B of Additional Infrastructure Cost Borne By Project
  - \$500MM of Additional Infrastructure Cost Borne By State Alone (general use infrastructure)
  - \$1B of Additional Infrastructure Cost Borne By State Alone (general use infrastructure)
- These estimates are not based on any real project information and are expected to be high relative to any actual costs that may be incurred

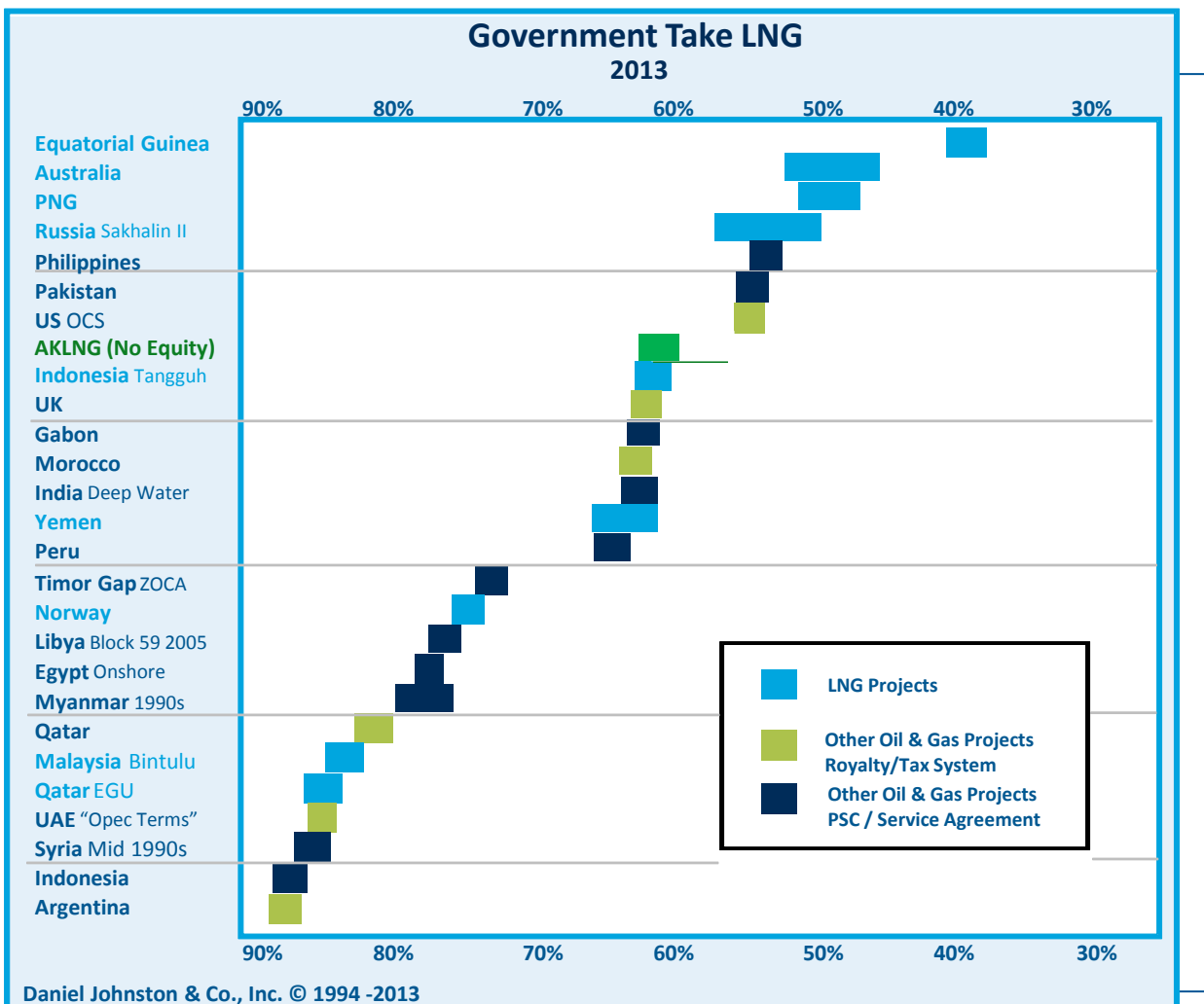
# ANALYSIS OF IMPACT OF ADDITIONAL SUPPORT INFRASTRUCTURE COSTS ON GOVERNMENT TAKE FROM AKLNG PROJECT

- Per the request, the impact on government take has been examined for royalty in value (RIV) with no equity participation by the State in the AKLNG project as well as for royalty in kind (RIK) assuming 25% equity participation by the State in the AKLNG project
- Three different price scenarios – low, base and high – have been utilized to examine government take
- State of Alaska take as well as total government take (to benchmark against other jurisdictions) have been presented here for the various scenarios examined
- The analysis indicates that the infrastructure costs, if any are incurred, have no material impacts on government take from the AKLNG project
- Price is the primary variable that has an impact on government take in this analysis with greater exposure to low price risk shown in the RIV scenario without State equity participation when compared to the RIK scenario with 25% State equity participation.
  - The price impact is unaltered by any additional infrastructure costs assumed.

# SENSITIVITY SCENARIOS – LNG PRICE ASSUMPTIONS



# GOVERNMENT TAKE FOR AKLNG PROJECT COMPARED TO OTHER OIL & GAS PROJECTS, BY COUNTRY (NPV<sub>0</sub>) – RIV WITH NO EQUITY STAKE FOR SOA IN AKLNG PROJECT



Source: Daniel Johnston & Co, Inc; Black & Veatch Analysis

# GOVERNMENT TAKE FOR AKLING PROJECT – RIV WITH NO EQUITY STAKE FOR SOA IN AKLING PROJECT

## RIV With No State Equity Participation

### State of Alaska Take

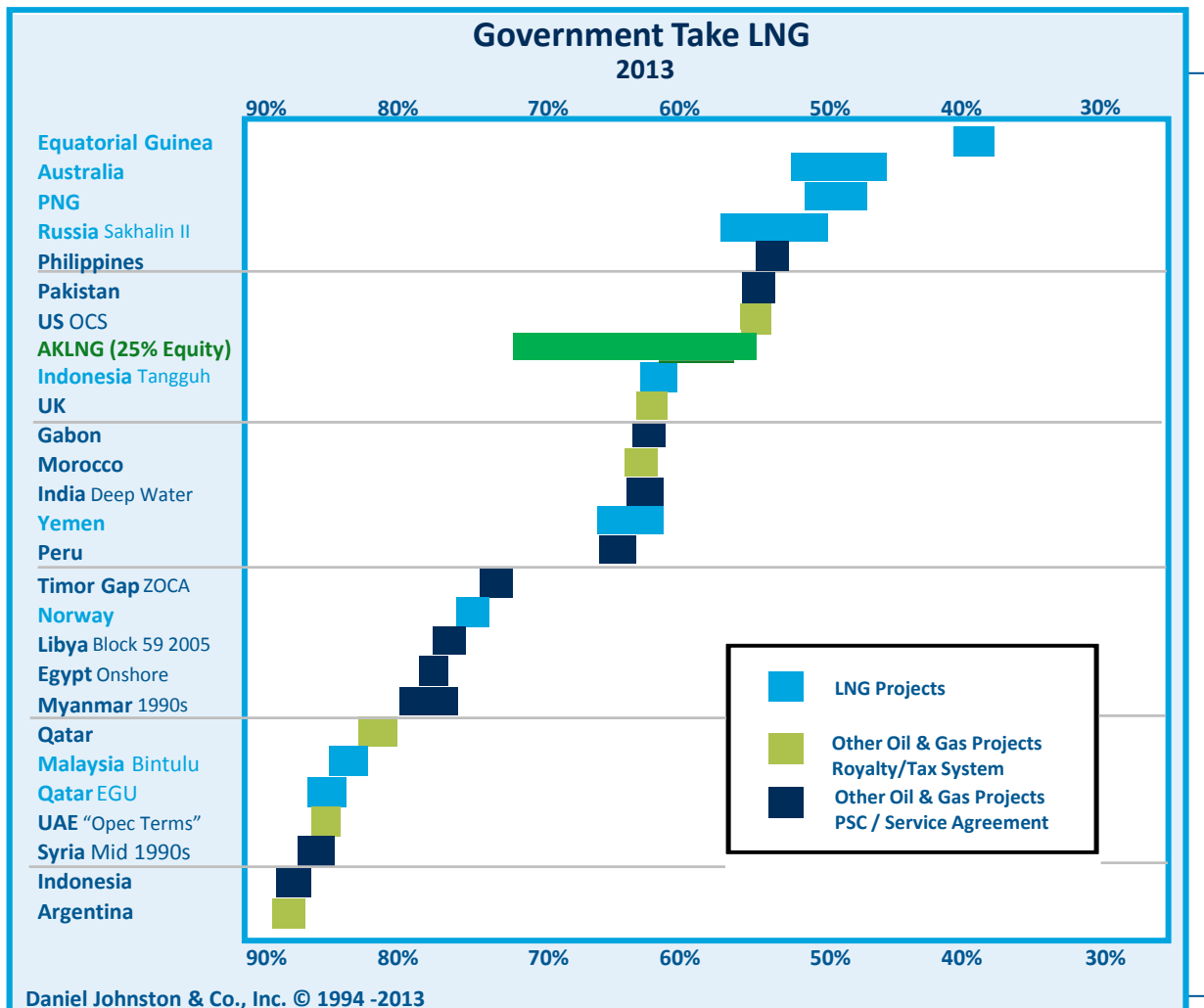
	Low Price	Base Price	High Price
No Additional Infrastructure Costs	32%	35%	38%
\$500MM Additional Infrastructure Cost Borne By Project	32%	35%	38%
\$1B Additional Infrastructure Cost Borne By Project	32%	35%	37%
\$500MM Additional Infrastructure Cost Borne By State	32%	35%	38%
\$1B Additional Infrastructure Cost Borne By State	32%	35%	37%

### Total Government Take

	Low Price	Base Price	High Price
No Additional Infrastructure Costs	63%	60%	60%
\$500MM Additional Infrastructure Cost Borne By Project	63%	60%	60%
\$1B Additional Infrastructure Cost Borne By Project	63%	60%	60%
\$500MM Additional Infrastructure Cost Borne By State	63%	60%	60%
\$1B Additional Infrastructure Cost Borne By State	63%	60%	60%

\* This analysis assumes a modified status quo for RIV wherein the production credits in SB21 are extended to reflect a \$5/BOE credit for gas, similar to the credit extended to new oil production

# GOVERNMENT TAKE FOR AKLNG PROJECT COMPARED TO OTHER OIL & GAS PROJECTS, BY COUNTRY (NPV<sub>0</sub>) – RIK WITH 25% EQUITY STAKE FOR SOA IN AKLNG PROJECT





# GOVERNMENT TAKE FOR AKLNG PROJECT – RIK WITH 25% EQUITY STAKE FOR SOA IN AKLNG PROJECT

## RIK With 25% State Equity Participation (with TC)

### State of Alaska Take

No Additional Infrastructure Costs  
 \$500MM Additional Infrastructure Cost Borne By Project  
 \$1B Additional Infrastructure Cost Borne By Project  
 \$500MM Additional Infrastructure Cost Borne By State  
 \$1B Additional Infrastructure Cost Borne By State

Low Price	Base Price	High Price
48%	34%	29%
48%	34%	29%
48%	34%	29%
48%	33%	29%
47%	33%	29%

### Total Government Take

No Additional Infrastructure Costs  
 \$500MM Additional Infrastructure Cost Borne By Project  
 \$1B Additional Infrastructure Cost Borne By Project  
 \$500MM Additional Infrastructure Cost Borne By State  
 \$1B Additional Infrastructure Cost Borne By State

Low Price	Base Price	High Price
73%	59%	55%
74%	59%	55%
74%	59%	55%
73%	59%	55%
73%	59%	55%

\* This analysis assumes 25% equity participation in AKLNG project for the State of Alaska with TransCanada holding the state's share of the project in the GTP and Pipeline components.