BUILDING A WORLD OF DIFFERENCE

30 September 2015

TRANSCANADA PARTICIPATION DECISION

IMPACT ON STATE OF ALASKA

PREPARED FOR THE STATE OF ALASKA

BLACK & VEATCH
Building a world of difference.

PRESENTATION OVERVIEW

- **Background & Description of TC Decision**
- **Overview of TC's current role and State's alternatives related to TC participation**
- **Some key factors for State to consider in TC participation decision**

SB138 FACILITATED ALIGNMENT OF GAS AND CAPACITY OWNERSHIP

TRANSCANADA PARTICIPATION IN AKLNG

UPSTREAM

MIDSTREAM/DOWNSTREAM

		EM	BP	CP	SOA	Total
Gas	PBU/PTU	32%	21%	22%	25%	100%
	=	=	=	=	=	=
AKLNG Equity & Capacity	GTP	32%	21%	22%	25%	100%
	Pipeline	32%	21%	22%	25%	100%
	LNG	32%	21%	22%	25%	100%

CURRENTLY HELD BY TC

PRODUCER SHARE OF GAS
IS EQUAL TO
PRODUCER EQUITY SHARE IN AKLNG

SOA SHARE OF GAS
IS NOT EQUAL TO
SOA EQUITY SHARE IN AKLNG

- All ownership shares shown are approximate
- State equity participation is based on production mix from PBU and PTU and the State's royalty share from each field; State equity participation is currently expected to equal 24-25%

TC DECISION NEEDED BY DEC 2015: SHOULD SOA ALIGN ITS GAS WITH ITS EQUITY?

	Gas	GTP	Pipeline	LNG Plant
SOA Aligned Equity (SOA Without TC)	SOA: ~ 25%	SOA : ~25%	SOA: ~25%	SOA: ~25%
FTSA With TC (SOA With TC) [1]	SOA: ~ 25%	TC: ~25%	TC: ~25%	SOA: ~25%

[1]The State also has the option to purchase 40% of TC's equity in AKLNG, effectively owning 10% of the midstream (i.e. 40% of 25%). This presentation focuses on the two sideboard options of keeping or terminating TC. The intermediate equity purchase option is presented as an Appendix.

IT WOULD BE PREMATURE & RISKY FOR SOA TO COMMIT TO A LONG TERM FIRM TRANSPORTATION SERVICES AGREEMENT WITH TC BY DECEMBER 2015

VARIOUS AKLNG PROJECT ENABLING AGREEMENTS HAVE NOT BEEN COMPLETED

RIK DECISION (DEPENDENT ON PROJECT ENABLING AGREEMENTS) HAS NOT BEEN MADE

WITHOUT GUARANTEE OF GAS IN KIND, STATE CANNOT COMMIT TO ANY LONG-TERM TRANSPORTATION AGREEMENT

Decision is whether to terminate TC relationship in Dec 2015 or delay decision and consider keeping TC in

DIRECT STATE PARTICIPATION IS ADMINISTRATION'S VIEW OF BEST PATH FORWARD

- **The State's direct investment in the AKLNG Project's midstream reflects more favorable value and risk-reward balance for the State compared to TC participation**
  - Sovereign role - Desire to have greater control and more direct SOA role in AKLNG
    - Improved project alignment
    - Direct voting rights and representation, including on key issues such as budgets, schedule and pipeline size
    - Ability to directly facilitate midstream expansion
  - Commercial role - Reap greater long term cash flows and participation for SOA during project operation by shouldering higher fiscal risk up front
    - Higher operational cash flows of ~$400 million a year
    - Better overall investment value to State
    - Lower risk of State experiencing negative netbacks without TC – on-going costs paid by State will not need to include TC's return on equity - only financing cost and operating expenses

PRESENTATION OVERVIEW

- Background & Description of TC Decision
- Overview of TC's current role and State's alternatives related to TC participation
- Some key factors for State to consider in TC participation decision

HISTORICAL CONTEXT FOR STATE'S 2014 DECISION TO ENTER INTO PRECEDENT AGREEMENT (PA) WITH TC

- **AGIA framework:**
  - TC was the State's licensee under AGIA
  - AGIA work product could not be transferred to AKLNG until after resolution of AGIA abandonment issues (including cost of the work product)
  - AGIA also contained a treble damages provision
  - It was in this context that the prior Administration negotiated an MOU with TC in 2013, and the AGIA Termination Agreement in 2014, to exit AGIA, transition to AKLNG, and sign the PA with TC
- **Entering into the PA with TC gave the State time during pre-FEED to begin to develop its in-house capabilities in order to fully consider the option of participating directly in midstream at appropriate off-ramps**
  - TC's work on AGIA and APP allowed smooth transition into pre-FEED
- **Entering into the PA with TC for pre-FEED gave the State time to assess its ability to finance its share of investment in AKLNG without TC**
- **There was an expectation that project enabling agreements would be defined before Dec 2015 and enable SOA to evaluate TC role going forward**

THE AGIA TERMINATION AGREEMENT

- **Key provisions of the AGIA Termination Agreement include:**
  - TC and State terminated the AGIA License
  - TC waived any claim of treble damages under AGIA
  - TC agreed to provide State with right to use all AGIA work product of value to the AKLNG project, at no additional up front cost to the State
  - State agreed to complete the AGIA reimbursement process
- **Importantly, under the Agreement the State has a clean off-ramp with TC in 2015**
  - No AGIA treble damages liability
  - No ability of TC to delay project by withholding right to use AGIA work product
  - SOA must pay for TC's AKLNG pre-FEED development costs, with interest (but such costs are ultimately unavoidable)
  - No "back in" right for TC (unlike the FTSA)

STATE'S CURRENT ARRANGEMENT WITH TRANSCANADA

TC Owns the State's ~25% Entitlement to GTP+Pipe
Funds up front midstream cash calls
Technical lead for pipeline during pre-FEED

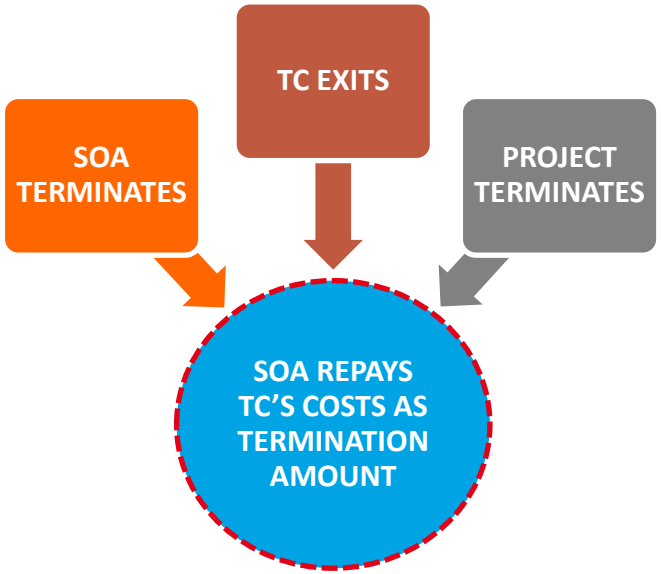
State to Commit to 20-25 Year Transportation Agreement with TC by Dec 2015 to Pay for Using GTP+Pipe

SOA Ultimately pays TC for all its Costs
(including a cost of capital of ~7%)

Both SOA and TC have Milestones & Off Ramps:
SOA Responsible for TC Costs, Regardless of Off Ramps

PER PRIOR AGREEMENTS, SOA IS ALWAYS OBLIGATED TO REPAY TC'S COSTS[1]

IF PROJECT DOES NOT MOVES FORWARD WITH TC



> Project development risk is borne by SOA

IF PROJECT MOVES FORWARD WITH TC

> SOA pays TC tariff regardless of price or volume risks

[1]TC costs to be repaid include its share of AKLNG work plan and budget, AFUDC, and internal management fees

STAKES GET HIGHER AS PROJECT PROCEEDS THROUGH STAGE GATES

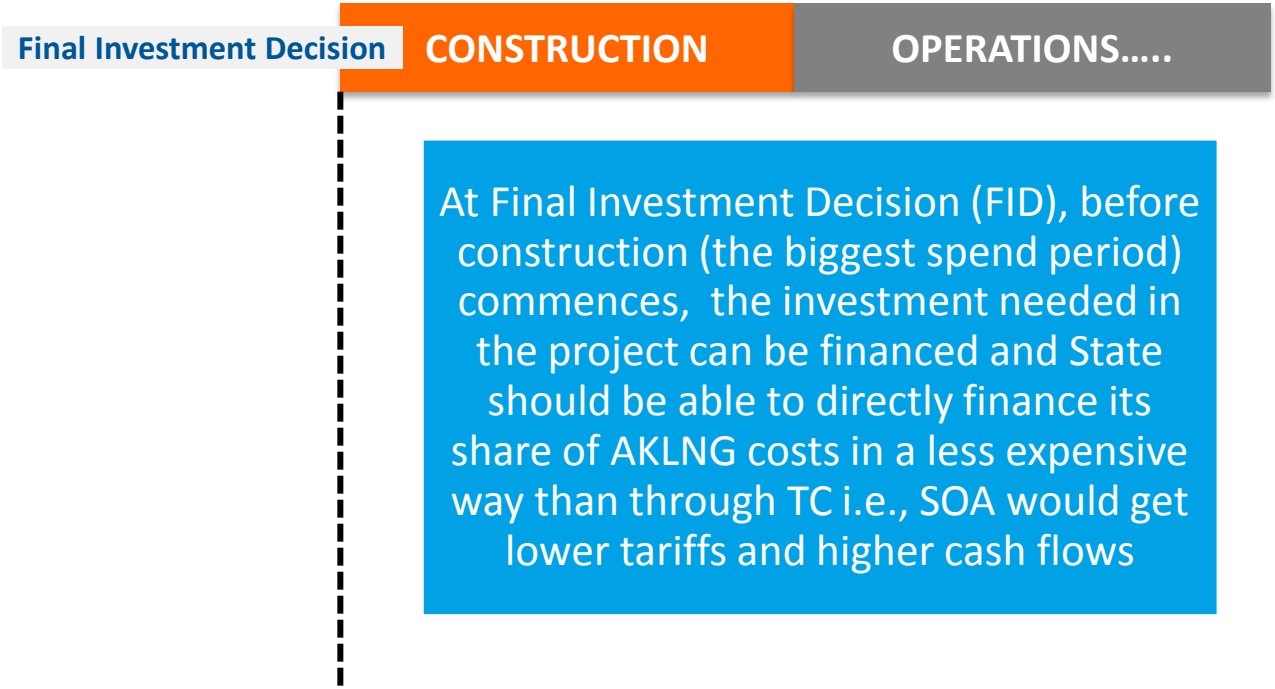
2014-2016	2016-2018	2019-2025
PRE-FEED	FEED	FINAL INVESTMENT DECISION (FID) FOLLOWED BY CONSTRUCTION
Moving from "selecting concepts" towards more detailed engineering ~1% of total project spend Many LNG projects "die" during this stage	Substantially refine project design basis 5-6% of total project spend Few LNG projects get to FEED and then "die"	Turn dirt (!) 93-94% of project spend Long term gas sales agreements in place Financing in place

Less Uncertainty And Increasing Commitments

TIMING OF TC PARTICIPATION DECISION – PROJECT DEVELOPMENT

- **Project development risk is borne by SOA**
- **Unlike the agreements to date, the proposed FTSA contains a "back in" right for TC: no "clean" off ramp if SOA executes it by Dec 2015**
- **If SOA does not execute the proposed FTSA by Dec 2015, TC would have the right but not the obligation to terminate the PA and seek reimbursement of its costs**

TIMING OF TC PARTICIPATION DECISION – PROJECT FID/CONSTRUCTION



=> If the State desires to participate directly in AKLNG midstream, there may not be a strategic reason to wait

$$ IMPLICATIONS OF TC PARTICIPATION DECISION AND POTENTIAL OFF RAMPS[1]

PROJECT STAGE:	PRE-FEED	FEED	FID	CONSTRUCTION
TIMELINE:	2014-2016	2016-2018		2019-2026
Percent of Spend:	~1%	~5-6%		~93-94%

STATE INVESTMENT

SOA without TC:	~$130M	~$625M	~$13.1B
SOA with TC:	~$65M	~$315M	~$6.5B

OFF RAMPS:

Termination Dec. 31, 2015
Pay TC Dev. Costs of ~$70M[2]
(Incl. TC Internal Costs[3])
SOA also responsible for remaining GTP and Pipeline Pre-Feed costs from Jan-June 2016 of ~$38M[4]

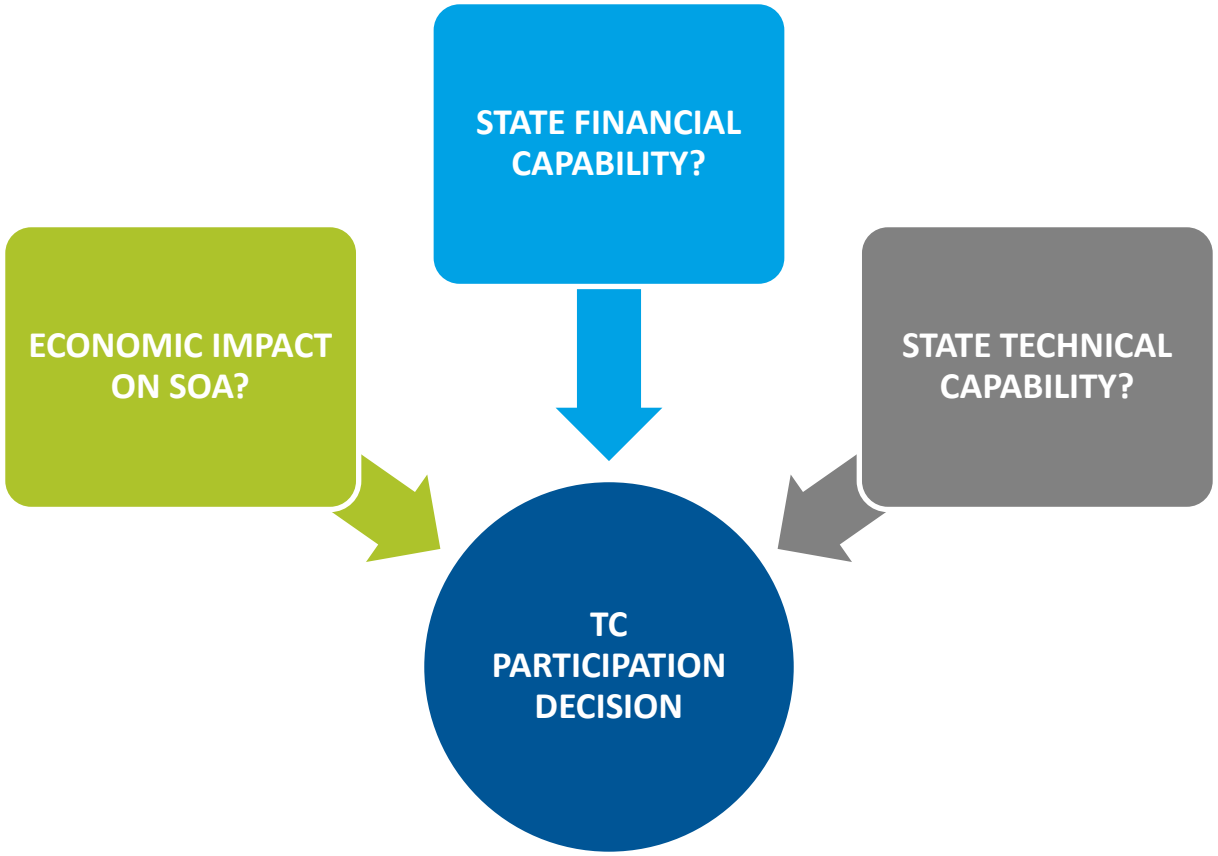
Termination Dec. 31, 2018
Pay TC Dev. Costs of ~$490M
(Incl. TC Internal Costs[3])

[1]Assumes 25% State equity participation
[2]$70M estimate incorporates a $4M credit for an SOA payment to TC for AGIA reimbursement
[3]TC Internal costs include AFUDC and Internal Management Fees
[4] Provided by AGDC based on current approved WP&B for AKLNG and includes an additional 30% contingency

PRESENTATION OVERVIEW

- Background & Description of TC Decision
- Overview of TC's current role and State's alternatives related to TC participation
- Some key factors to consider for State's TC participation decision

SOME KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION



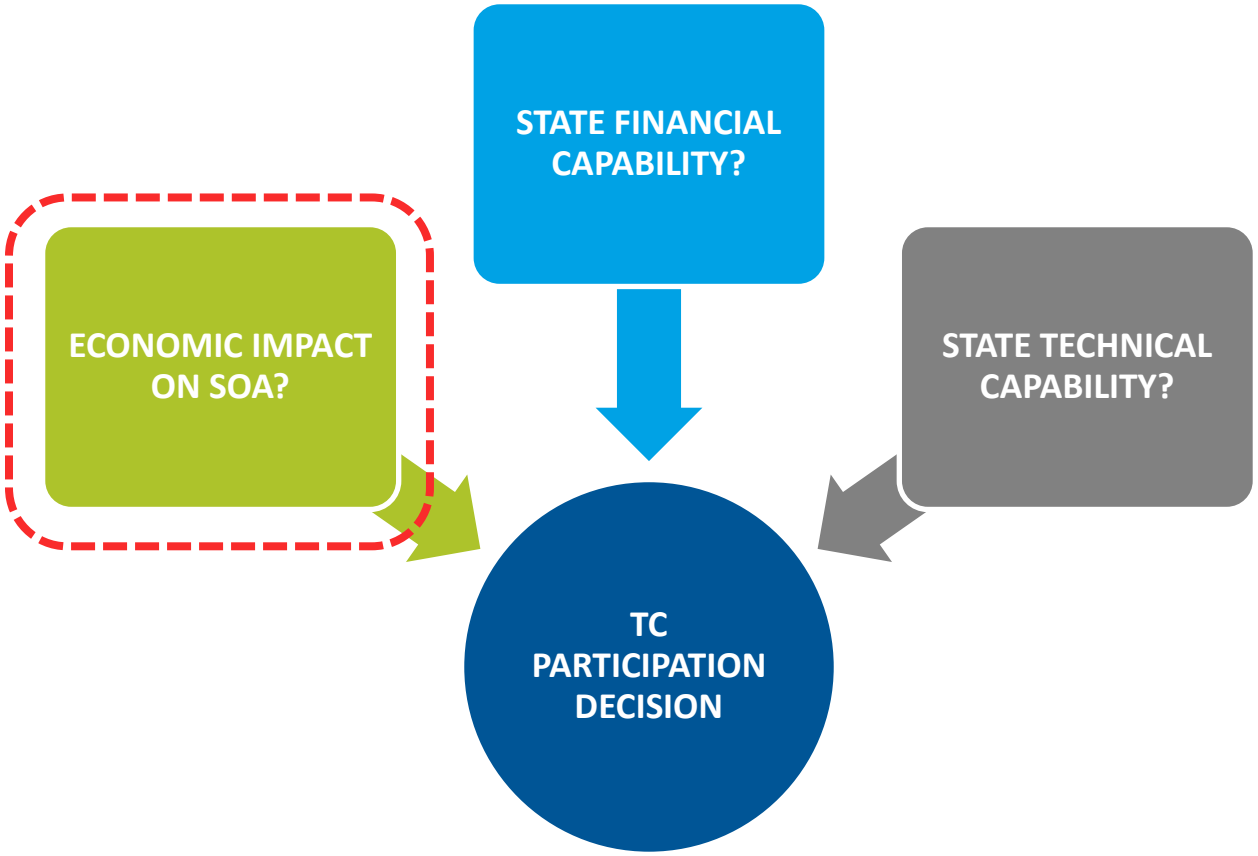
SOME KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION

- **What is the economic impact to SOA with and without TC participation?**
  - Near-term cash calls required from State
  - Long-term cash flows to the State
  - Risk exposure for State

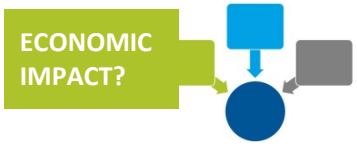
- **Does the State have the financial ability to invest directly in the AKLNG midstream segment (i.e., without TC participation)?**
  - SOA financing of TC termination, remaining pre-FEED, FEED and construction costs

- **Does the State have the technical ability to participate directly in the AKLNG midstream segment?**
  - TC is currently the technical lead for pipeline segment; can this role be continued by the State or another project partner?

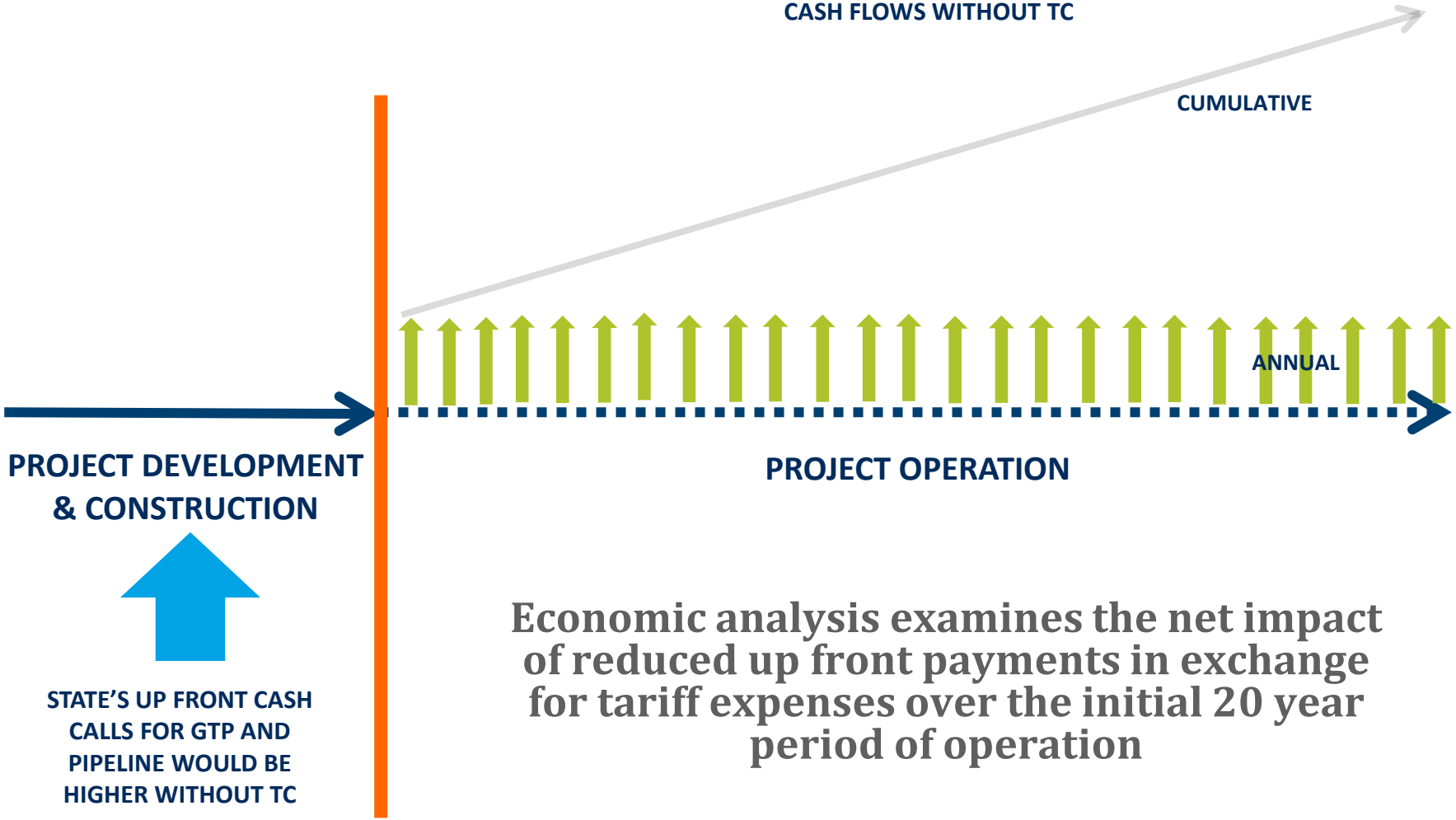
SOME KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION



TRANSCANADA IN OR OUT – ECONOMIC IMPACT

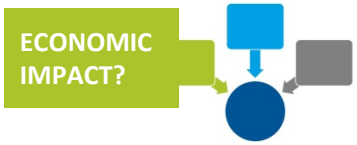


ONCE THE PROJECT IS OPERATIONAL, STATE WOULD ACHIEVE HIGHER ONGOING CASH FLOWS WITHOUT TC



Economic analysis examines the net impact of reduced up front payments in exchange for tariff expenses over the initial 20 year period of operation

CRITERIA FOR EVALUATING ECONOMIC IMPACT OF TC PARTICIPATION ON SOA

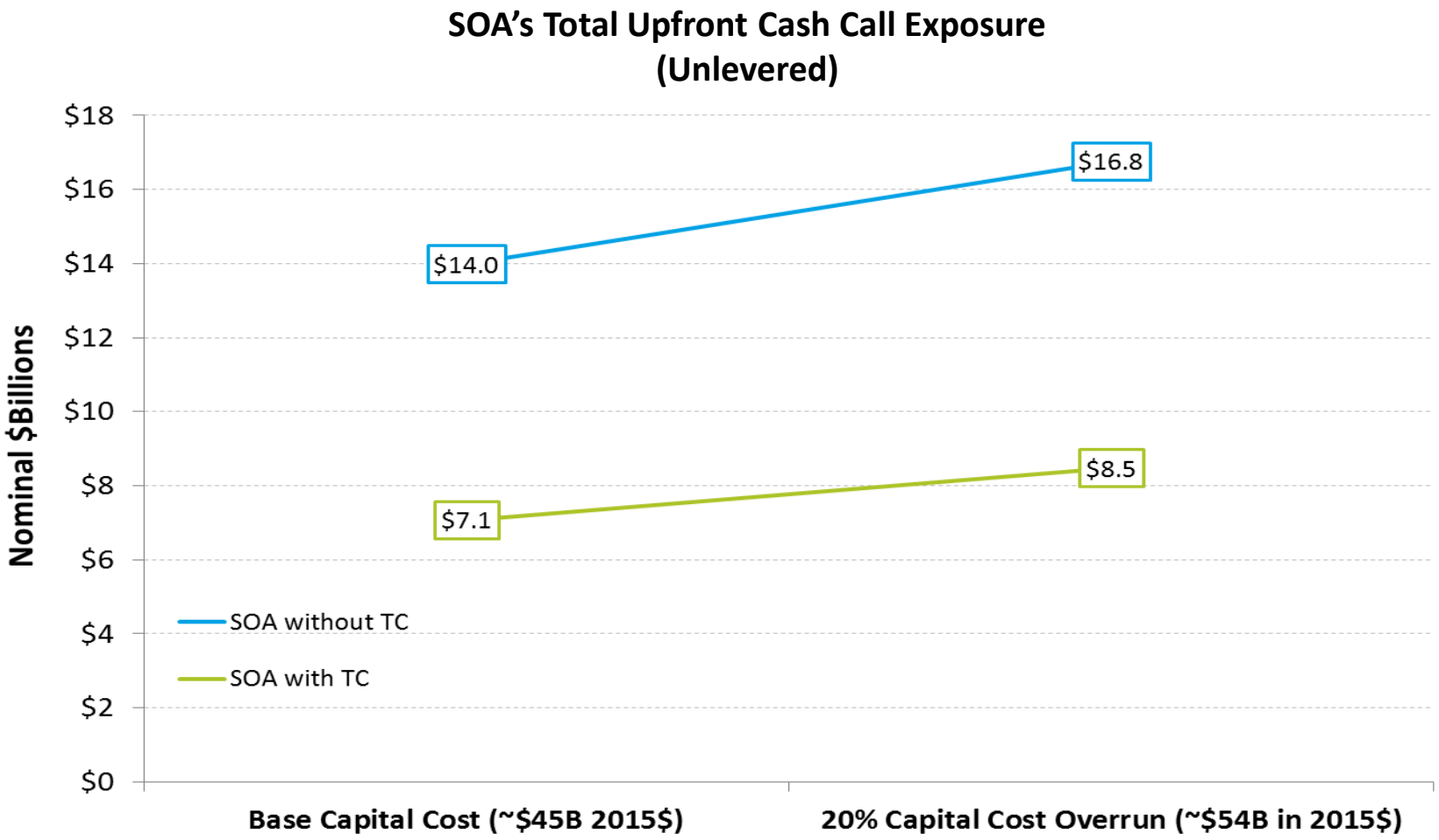


CRITERIA FOR SOA IMPACTS

- **Cash flows** → Up front cash calls → Operational cash flows
- **Net present value** → Over a range of discount rates
- **Risk** → Incremental risk from TC participation

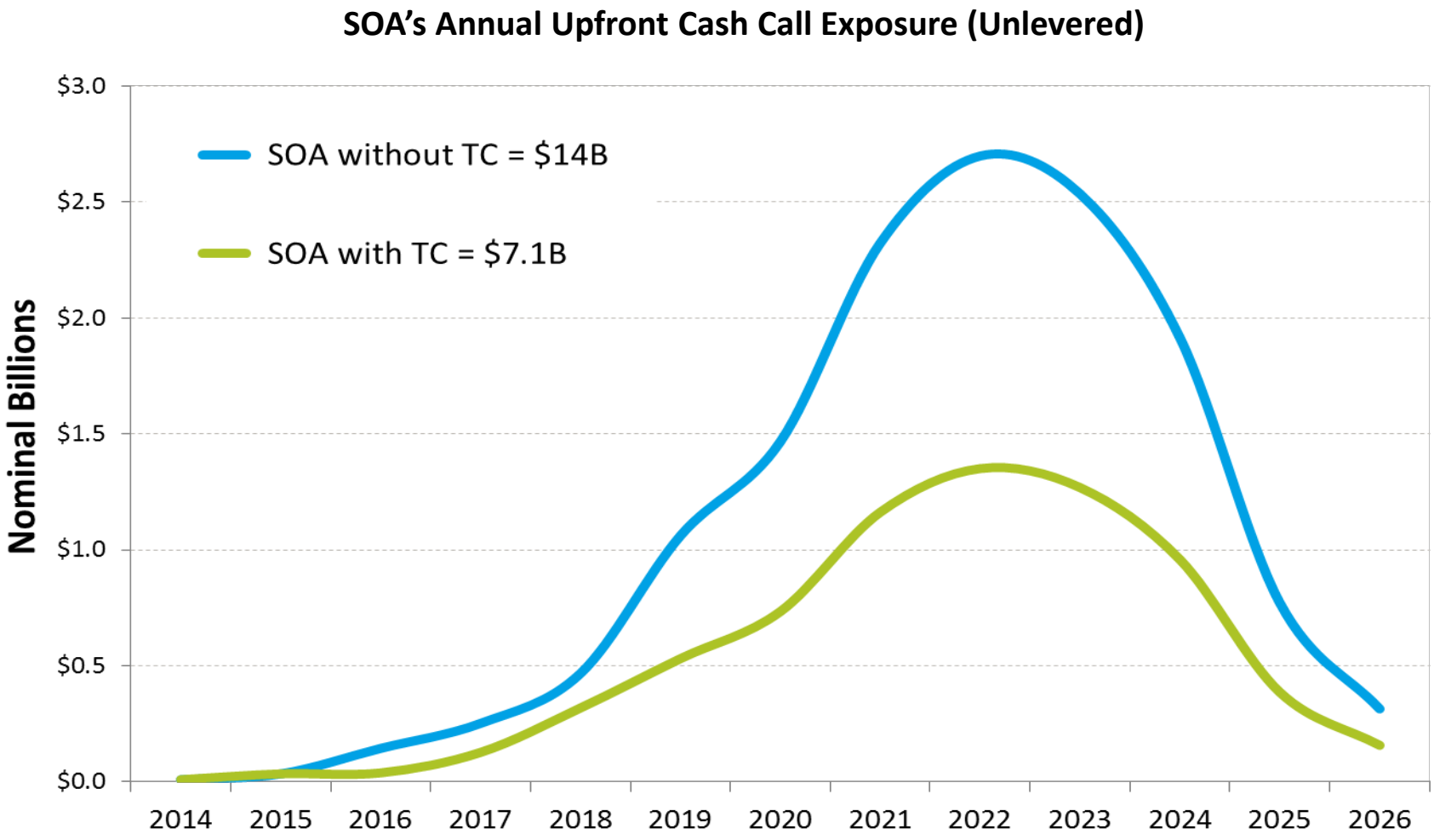
SOA'S TOTAL UPFRONT CASH CALL EXPOSURE IS $6.9-8.3B HIGHER WITHOUT TC PARTICIPATION

ECONOMIC IMPACT?



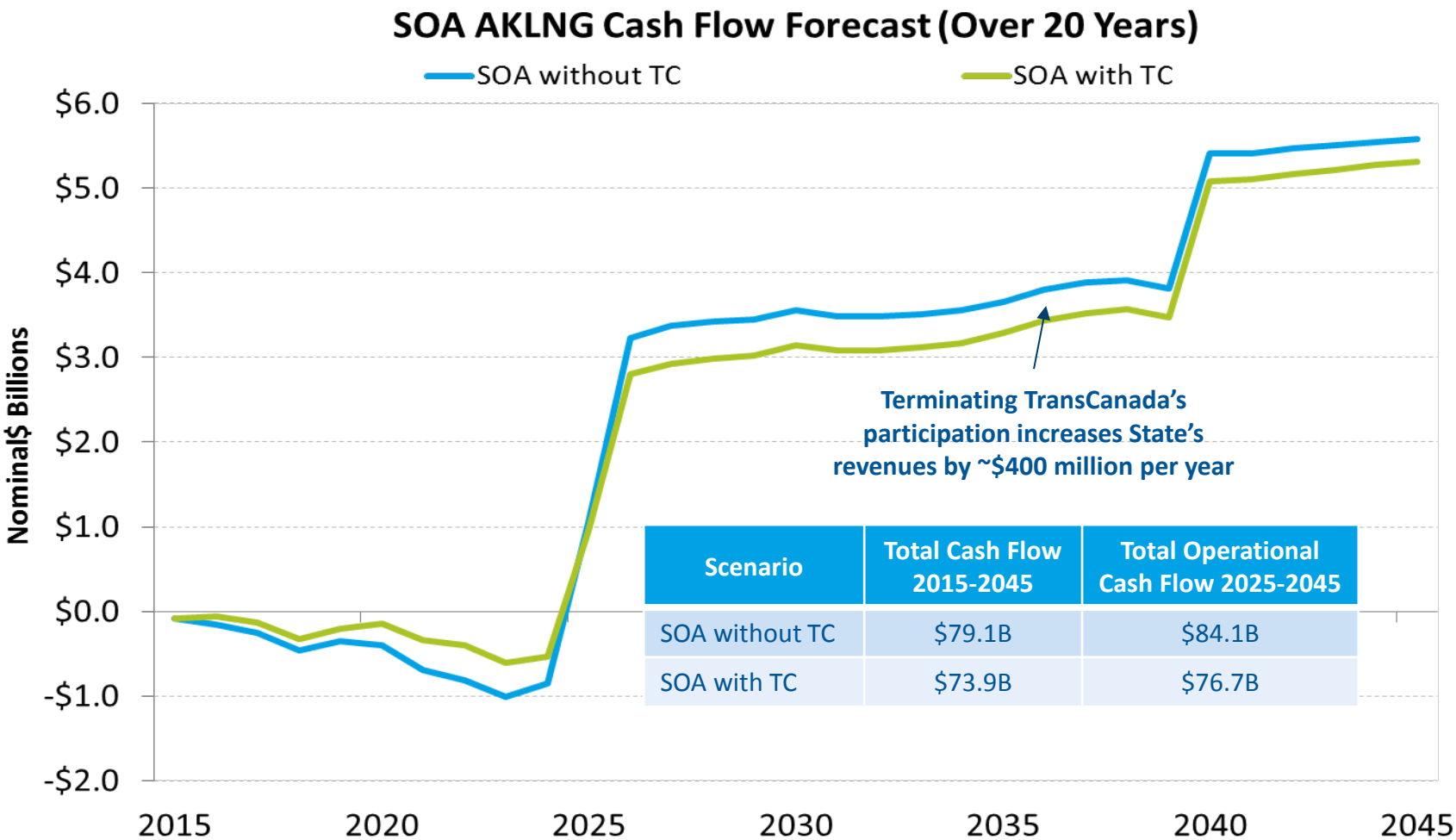
SOA'S ANNUAL UP FRONT CASH CALLS IN THE AKLNG PROJECT ARE EXPECTED TO NEARLY DOUBLE WITHOUT TC

ECONOMIC IMPACT?



ONCE OPERATIONAL, SOA IS EXPECTED TO RECEIVE ANNUAL CASH FLOWS OF ~$400 MILLION HIGHER WITHOUT TC

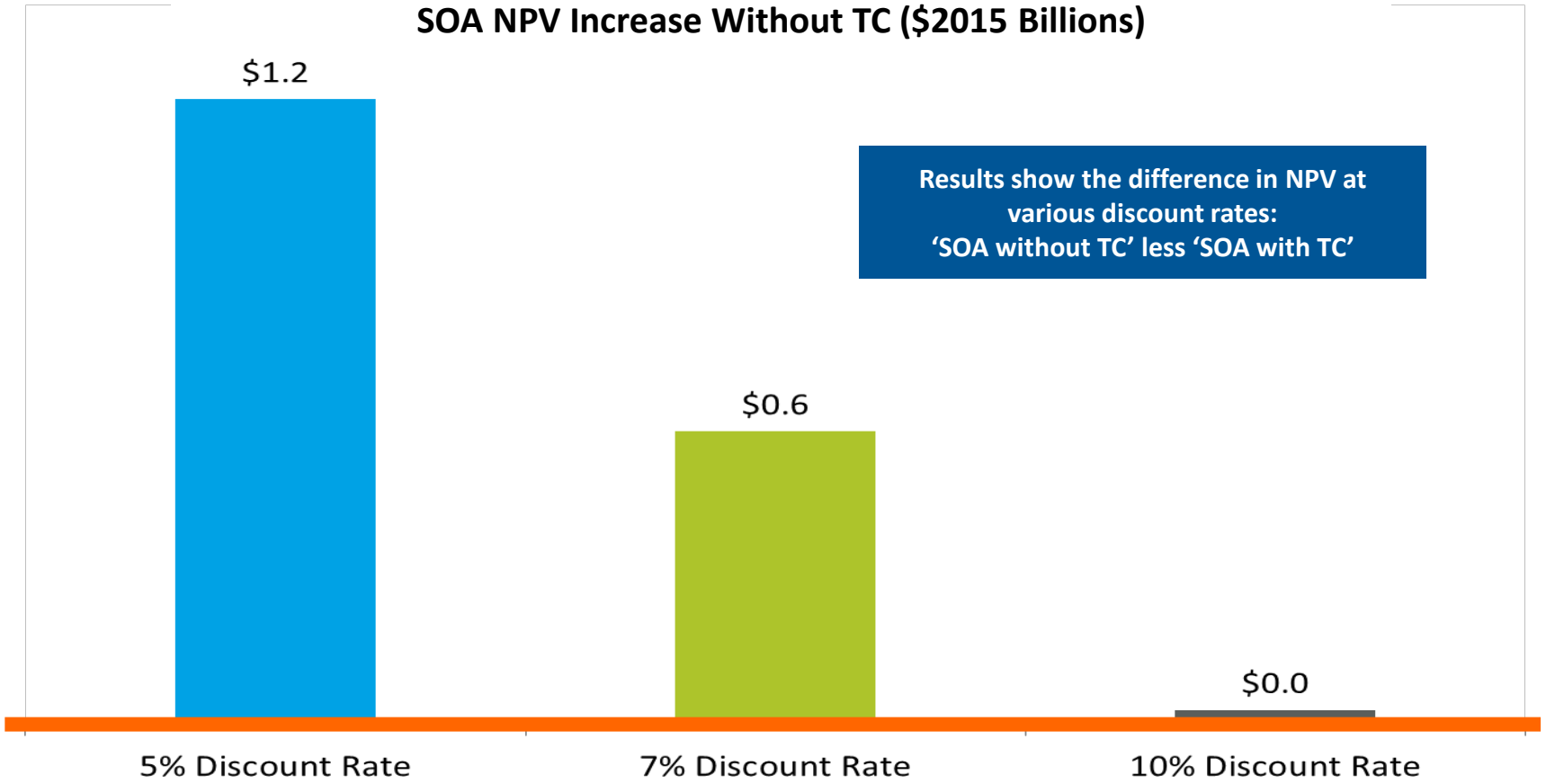
ECONOMIC IMPACT?



Scenario	Total Cash Flow 2015-2045	Total Operational Cash Flow 2025-2045
SOA without TC	$79.1B	$84.1B
SOA with TC	$73.9B	$76.7B

NPV INCREASE TO THE STATE WITHOUT TC CAN BE BETWEEN $0-1.2B OVER 20 YEARS

ECONOMIC IMPACT?



Results show the difference in NPV at various discount rates:
'SOA without TC' less 'SOA with TC'

5% may be seen as a proxy for SOA's Cost of Borrowing

7% may be seen as a proxy for Permanent Fund returns

10% may be seen as a proxy return for a commercial investment

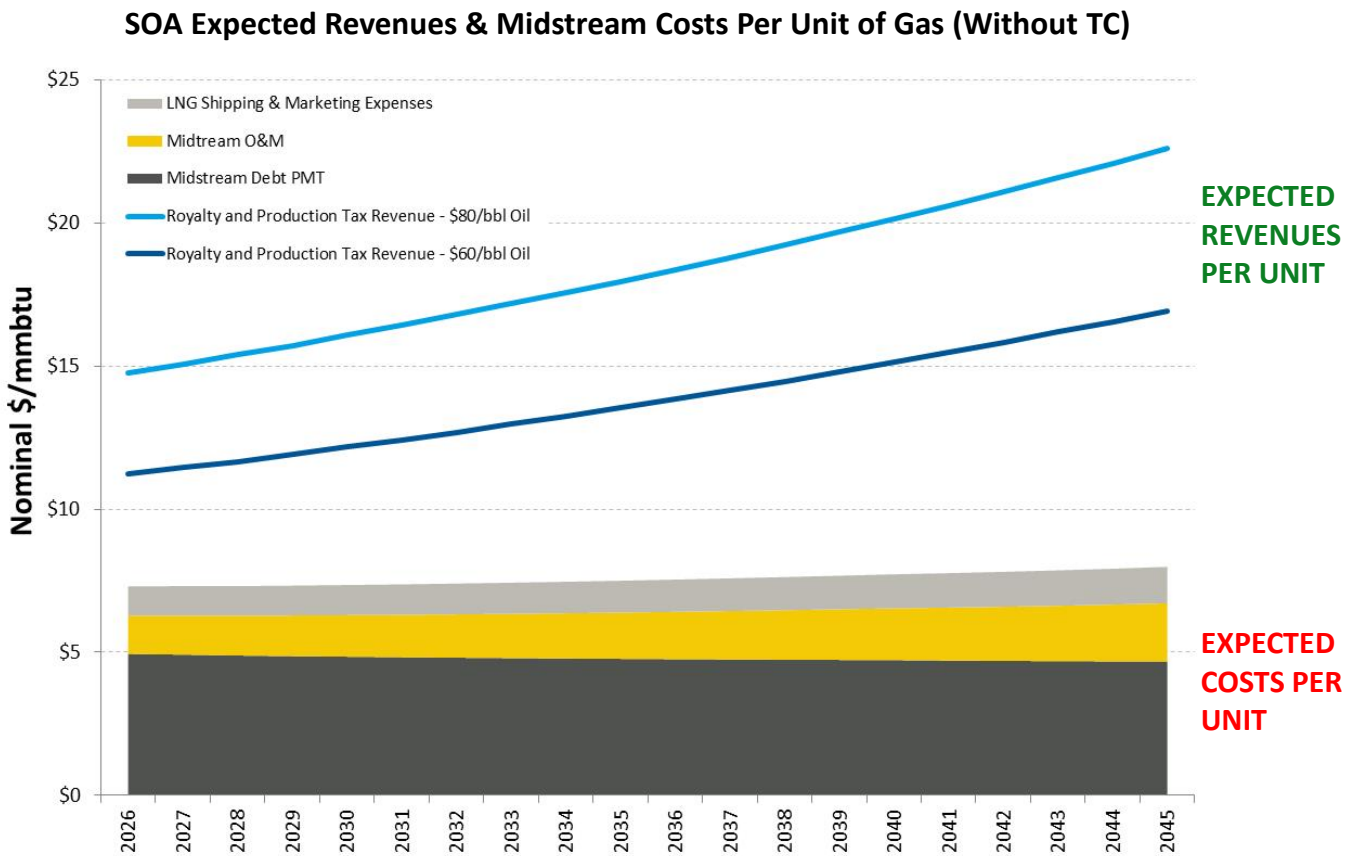
TC INVOLVEMENT AND THE RISK OF NEGATIVE NETBACK FOR THE STATE

- **With an RIK election, the State could be exposed to negative netback if the revenue from its sale of RIK + TAG gas/LNG volumes is insufficient to cover its cost obligations as a shipper**
- **The State's midstream cost obligations as a shipper are directly affected by midstream ownership (State Midstream Company, TransCanada)**
  - Many of the cost obligations would be the same regardless of who owns the midstream assets. These include any upstream expenses, midstream O&M costs, marketing costs, and LNG liquefaction and shipping costs
  - Differences in the obligations arise from factors including how the project is financed, income tax, property tax, and return on equity

- **Note: During the sale of RIK and TAG gas and LNG , market pricing mechanisms such as price collars may be available to help manage the State's negative netback risk. The risk management available and associated costs to the State from such mechanisms will be evaluated during the marketing process and are not considered here. This analysis simply looks at the level of negative netback risk for the State that will need to be managed, with and without TC.**

STATE'S MIDSTREAM COST OBLIGATIONS WITHOUT TC ARE EXPECTED TO BE ~$7.30/MMBTU

ECONOMIC IMPACT?

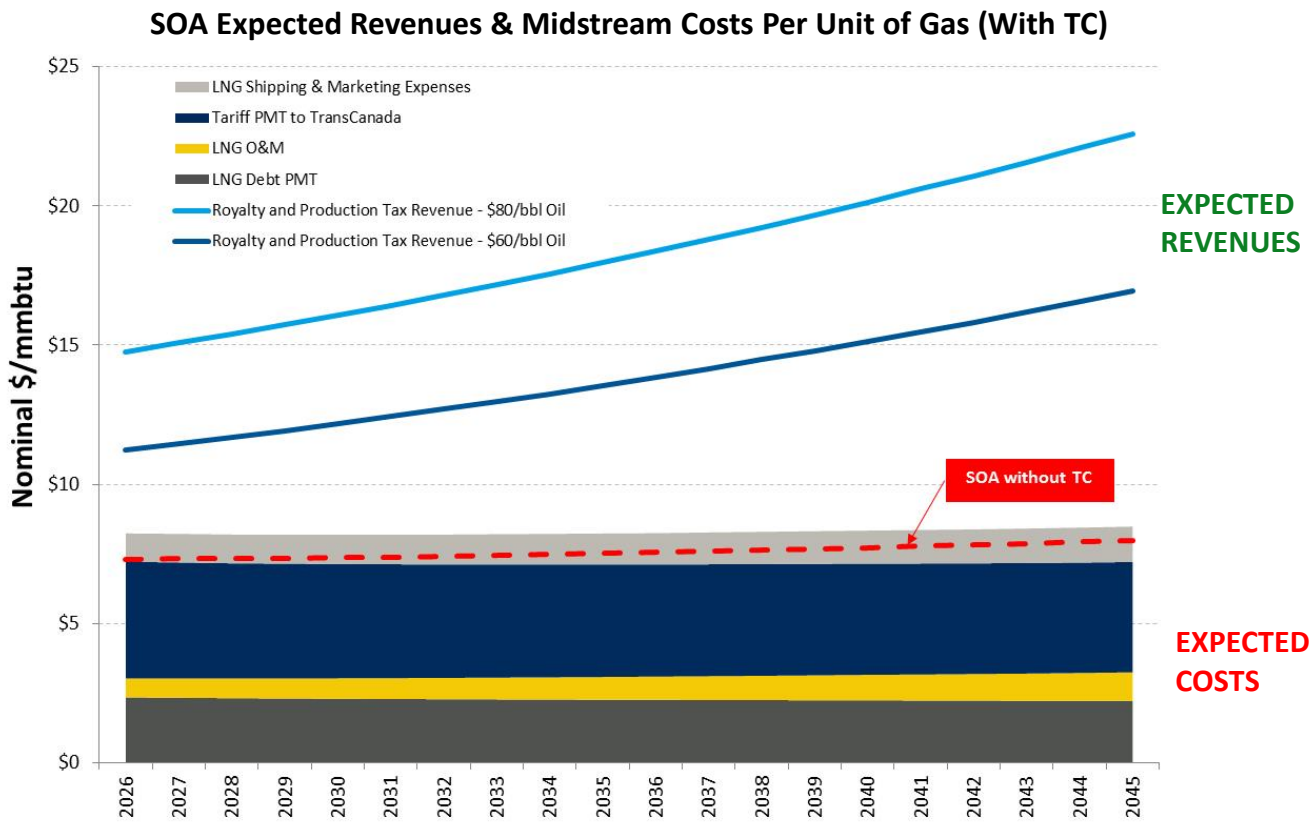


- State's midstream cost obligations are expected to be ~$7.30/MMBtu
- Equivalent to Oil prices in today's dollars at ~$33/bbl (assuming 13.5% Slope and $1/MMBtu price adder)
- Oil/LNG prices & gas production are key risks in meeting midstream payment obligations

How does TC Involvement in the project impact the State's ability to meet midstream obligations and not have negative netbacks?

WITH TC, THE STATE'S MIDSTREAM COST OBLIGATIONS ARE EXPECTED TO INCREASE TO ~$8.20/MMBTU

ECONOMIC IMPACT?



- State's midstream cost obligations are expected to be **~$8.20/MMBtu** with TC compared to ~$7.30/MMBtu without TC
- Equivalent to Oil prices in today's dollars at **~$38/bbl** compared to ~33/bbl. (assuming 13.5% Slope and $1/MMBtu price adder)

What is driving the ~$0.90/MMBtu (in 2026$) or $5/bbl (in 2015$) difference with TC's involvement?

MIDSTREAM COST OBLIGATION DIFFERENCES

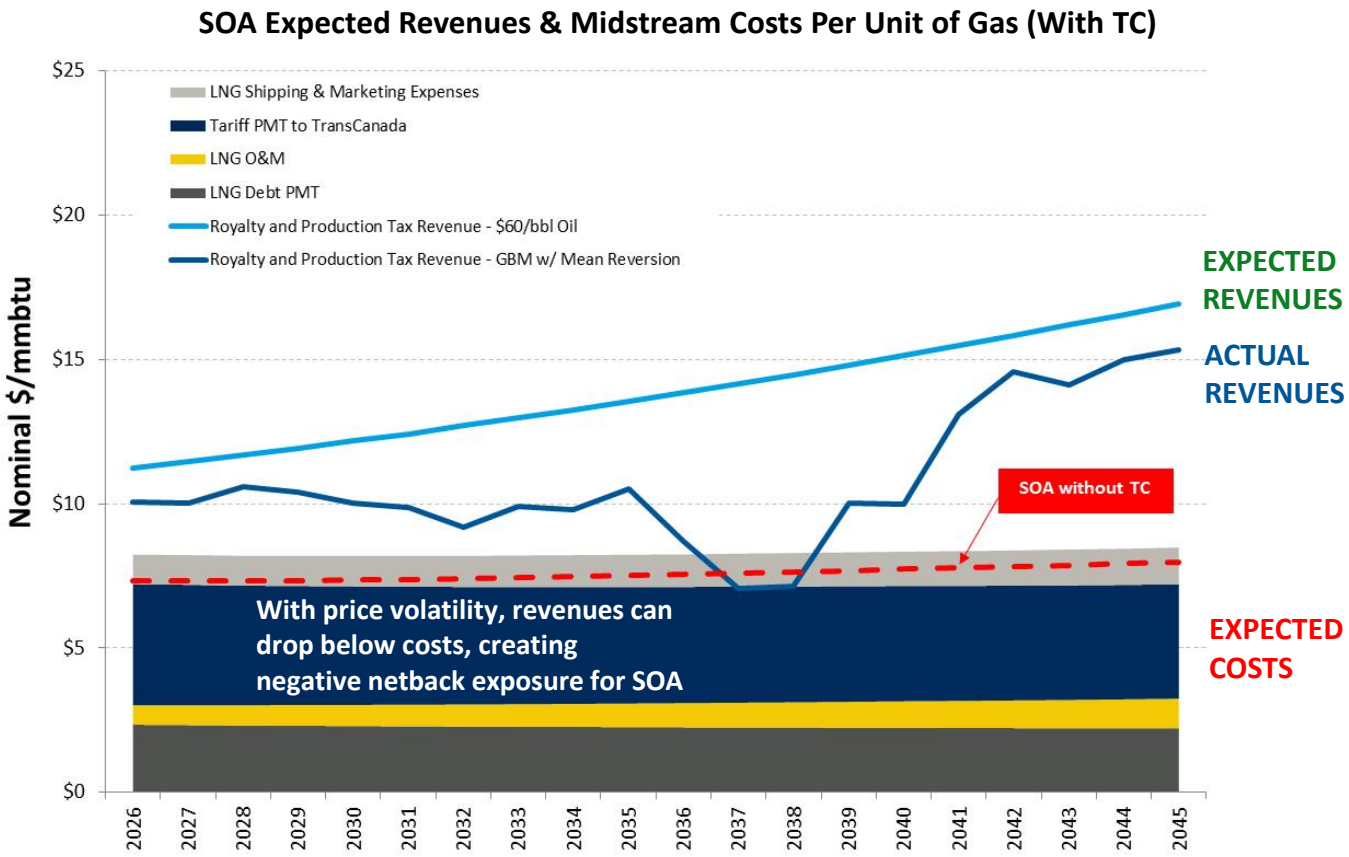
ECONOMIC IMPACT?

State Midstream Obligation	SOA Without TC	SOA With TC
Midstream O&M	No Difference	
LNG Shipping & Marketing	No Difference	
Weighted Cost of Capital (Return on equity & Cost of debt)	SOA is expected to have lower cost of capital than with TC	SOA pays TC's weighted cost of capital of 7.1% during construction & 6.75% during operations
Property Taxes	SOA Does Not Pay	SOA Tariff includes TC Property Tax Obligation
Income Taxes	SOA Does Not Pay	SOA Tariff includes TC's Payment of Income Taxes

Additional cost elements make SOA's midstream obligations higher with TC

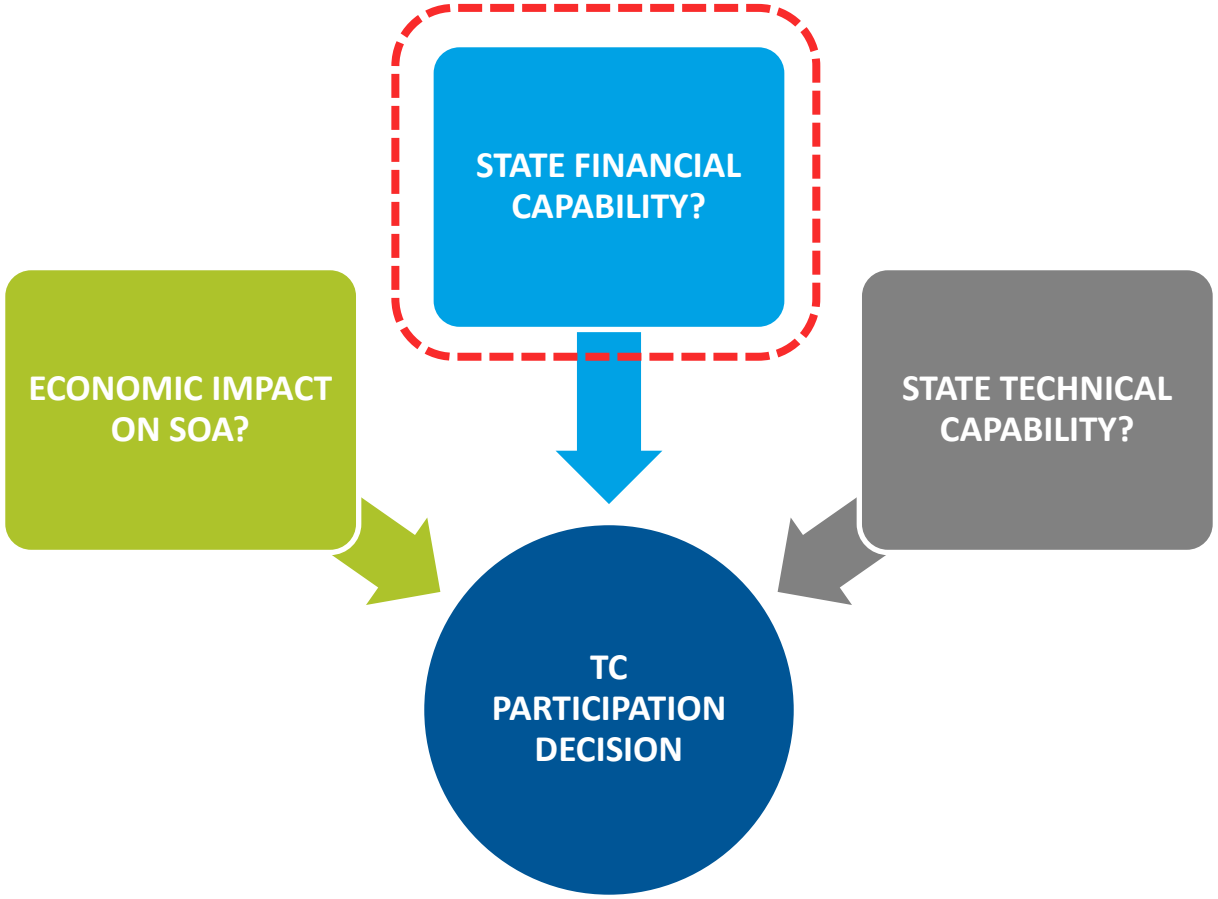
STATE'S NEGATIVE NETBACK RISK INCREASES WITH TC: EXAMPLE

ECONOMIC IMPACT?



- With TC, the cost level that the State's revenues need to cover are about $1/MMBtu higher than without TC
- This is expected to increase the likelihood and magnitude of negative netback– i.e., potential draws on the General Fund - that the State could experience during low price events

SOME KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION



WHAT ARE THE FINANCIAL IMPLICATIONS TO SOA OF TC PARTICIPATION?

- **Two financial costs of terminating TC relationship:**
  - Immediate transition costs of terminating TC involvement
  - Subsequent direct investment in AKLNG midstream
- **Two financial benefits of terminating TC relationship:**
  - Immediate relief from funding TC administrative costs[1]
  - Eliminate accrual of TC financing costs (~7% interest)

[1] There may be corresponding increases to AGDC administrative costs associated with the Midstream.

SOA'S UPFRONT CASH CALLS WITHOUT TC INCREASE BY ~$108M FOR PRE-FEED AND ~$310M FOR FEED

Nominal $M	Midstream[1]
TC Termination Amount	~$70[2]
AGDC Pre-FEED	~$38[3]
FEED	~$310
Construction[4]	~$6,500 - $7,800

Pre-FEED

[1] Midstream includes PBU & PTU Transmission Lines, Gas Treatment Plant, and Mainline
[2] TC Termination Amount includes TC Internal Costs (AFUDC + Management Fees) and a credit of ~$4M for SOA payment to TC for AGIA reimbursement
[3] Provided by AGDC based on current approved WP&B for AKLNG and includes an additional 30% contingency
[4] Range of costs is based on current estimates to 20% cost overrun

WITHOUT TC, SOA'S TOTAL UPFRONT CASH CALLS WOULD BE ~$173M FOR PRE-FEED & ~$625M FOR FEED

Nominal $M	Midstream[1]	LNG	Total
TC Termination Amount	~$70[2]	-	~$70
AGDC Pre-FEED	~$38[3]	~$65	~$103
FEED	~$310	~$315	~$625
Construction[4]	~$6,500 - $7,800	~$6,500 - $7,900	~$13,100 - $15,700

Pre-FEED

[1] Midstream includes PBU & PTU Transmission Lines, Gas Treatment Plant, and Mainline
[2] TC Termination Amount includes TC Internal Costs (AFUDC + Management Fees) and a credit of ~$4M for SOA payment to TC for AGIA reimbursement
[3] Provided by AGDC based on current approved WP&B for AKLNG and includes an additional 30% contingency
[4] Range of costs is based on current estimates to 20% cost overrun

SOA'S COST OF CAPITAL IS EXPECTED TO BE LOWER THAN TC'S

DOR analyzes the TransCanada agreement as a non-GO State debt borrowing that may be called on demand by TransCanada with an interest cost significantly higher than the State could achieve through a market-rate State debt borrowing

- **TC's "deemed" weighted cost of capital per contract is**
  - Development & Construction:
    - 70/30 Debt/equity ratio[1]
    - 4.05% Cost of Debt/ 11.05% Return on Equity[2]
    - Weighted average cost of capital = **6.15%[2]**
  - Operation:
    - 75/25 Debt/equity ratio
    - 4.05% Cost of Debt/ 11.05% Return on Equity[2]
    - Weighted average cost of capital = **5.80%[2]**
- **SOA's cost of financing its midstream share directly is expected to be lower than through TC**

[1]Ratio applies through the second anniversary of the in-service date
[2]TC deemed cost of capital changes with variations in the yield of 30-year Treasuries. The cost of capital figures shown are based on the Treasuries yield as of September 25, 2015

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STATE'S ABILITY TO FUND TERMINATION AMOUNT FOR TC

- **The costs for the TC termination amount through pre-FEED to date will need to be funded through legislative appropriation**
- **Legislature has a number of viable readily implemented funding options available to it for the TransCanada reimbursement of Developments Costs.**
  - The Legislature could appropriate funds from the CBRF or authorize a short or intermediate term borrowing with non-GO State debt (moral obligation or certificates of participation)
  - The Legislature could also do a combination of the two, with initial funding from the CBRF to be reimbursed by a non-GO State debt issuance or proceeds from financing provided by future equity partners and/or LNG buyers
  - Note that given the relatively small size of the TransCanada reimbursement, the State could consider both bank financing and municipal market bonding
  - First Southwest believes that a State borrowing could be feasible and would result in materially lower interest costs to the State than under the TransCanada agreement
  - Interest payments on any State borrowing would be funded by annual appropriation, with the anticipation that principal repayment would be rolled into a future long term financing if the Project reaches FID

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STATE'S ABILITY TO FINANCE ITS SHARE OF AKLNG COSTS – PRE-FEED

- **AGDC's remaining midstream Pre-FEED JVA costs will need to be funded through legislative appropriations**
- **The funding could be done in the same way as the current AGDC Downstream Pre-FEED JVA costs are funded**
- **Alternatively, the same funding program identified for the TransCanada reimbursement of Development Costs could be utilized**
  - The Legislature could appropriate funds from the CBRF or authorize a short or intermediate term borrowing with non-GO State debt or a combination of the two

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STATE'S ABILITY TO FINANCE ITS SHARE OF AKLNG COSTS – FEED

- **The AGDC Downstream and Midstream FEED costs will need to be funded through legislative appropriations**
- **It is anticipated that the SOA total share of FEED amount could approach $625 million, an increase of $310 million without TC**
- **For the AGDC Downstream and Midstream FEED costs, the Legislature would have the same options available to fund such costs as outlined in the funding program identified for the TransCanada reimbursement**
- **In addition, given the additional time available before the FEED funding decision is ripe, the Legislature could consider proposing a GO debt offering which would require a voter referendum approval**
  - The State would have the option to issue annual tranches of debt to meet the annual appropriation requirements or a single tranche to fund the total FEED period costs.
  - Interest payments could be funded by annual appropriation, with the anticipation that principal repayment would be rolled in a future long term financing.

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STATE'S ABILITY TO FINANCE ITS SHARE OF AKLNG COSTS – FEED (CONT.)

- **The state may also be able to obtain financing from future equity investors and/or LNG buyers**
- **Under the existing agreements with TC, the State has to support its obligations under the PA and FTSA with the full faith and credit of the State of Alaska or provide other credit support acceptable to TC**
  - The State is expected to obtain less expensive borrowing on its own in the debt market
- **Given that the State's financial consultants, First Southwest and Lazard, advise that the State would have the ability to access the bank debt and municipal bond market for funds to replace the TransCanada debt, DOR is comfortable the State can readily fund AGDC's share of costs through FEED at a lower overall cost to the State**

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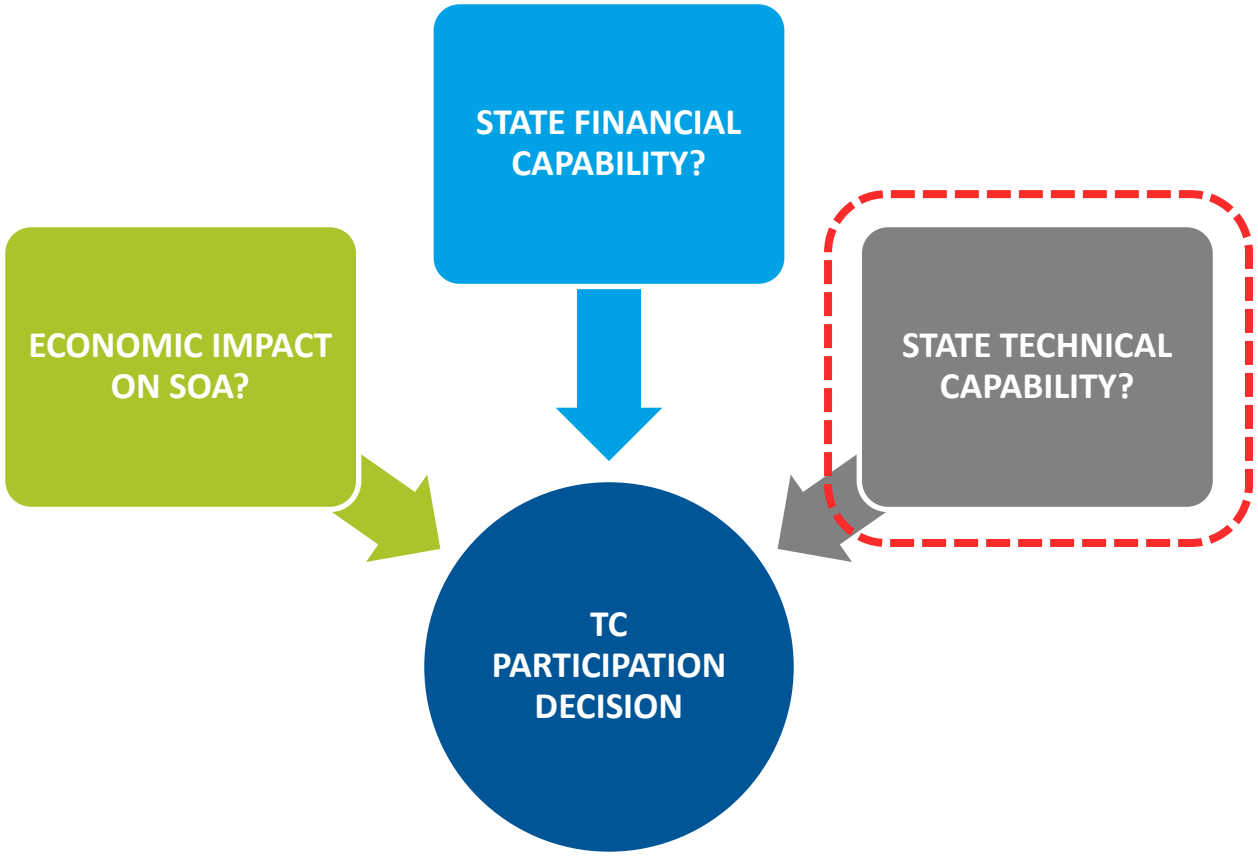
STATE'S ABILITY TO FINANCE ITS SHARE OF AKLNG COSTS – CONSTRUCTION

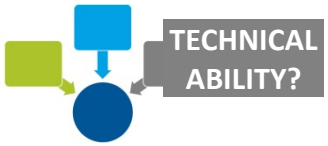
- **The AGDC Downstream and Midstream post-FID construction costs will need to be funded through legislative appropriations**
- **It is anticipated that this amount could approach $13.1-15.7 billion**
- **The Legislature would have the same options as for FEED costs to fund construction costs**
- **Given the magnitude of the expenditures, the borrowing plan would look more to the municipal bond market than to bank borrowing**
- **It is anticipated that at the time of placement of the Project into operation, the State would re-finance outstanding debt with long term municipal bond market borrowing or a Permanent Fund investment or a combination of both**
- **SOA/AGDC would not have the option to access project financing under our understanding of the current Constitution's limitations against pledging State royalties and tax revenues.**
  - A Constitutional Amendment would be required specifically to allow a pledge of RIK/TAG revenues to enable an SOA/AGDC borrowing for the AKLNG Project

PROVIDED TO BLACK & VEATCH BY DEPARTMENT OF REVENUE

SOME KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION

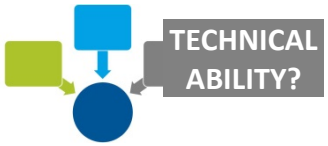


CAN THE STATE PROCEED WITHOUT TC – TECHNICAL ABILITY?



- **TC is highly experienced in northern pipelines and leads the pipeline technical work for AKLNG**
- **TC in its current role performs or has performed several functions including the following:**
  - Holds State of Alaska's midstream equity in AKLNG as signatory to the JVA
  - Is SOA's midstream participant in JVA Governance and decision making
  - Provided the majority of the pipeline SMEs that were seconded to the JVA PMT
  - Provided technical advice to the State of Alaska on midstream design, especially the 48 inch pipe position
  - Helpful assistance and input on negotiation of key agreements like Expansion
  - Coordinated FERC NEPA Process

MIDSTREAM CAPABILITIES WITHIN AKLNG



- **The end of the pre-FEED stage in the AKLNG Project's development is a natural transition point in activities**
- **Project delay is not expected if TC agreement is terminated in December 2015, as the pre-FEED work products near completion**
- **The AKLNG Project producer partners have worldwide experience and resources to be able to step into the pipeline technical lead role played by TC**
  - The #2 on the Pipeline Team is an EM employee with significant experience
  - The GTP, which is part of Midstream is already being managed by an EM secondee
  - Exxon designed and built TAPS and thus has Alaska-relevant experience on midstream
- **AKLNG may be able to hire pipeline employees currently seconded to the project by TC**

AGDC CAPABILITIES IN MIDSTREAM

TECHNICAL ABILITY?

TRANSCANADA PARTICIPATION IN AKLNG

- **AGDC has completed Pre-FEED and FEED work on ASAP**
- **Practical knowledge/experience with the proposed RoW on ASAP – already have all the State lands RoW granted to them and expect the Federal portion to be granted as soon as the NEPA process is completed in mid 2016**
- **Experienced in the NEPA process although ASAP is under USACE and not FERC – AGDC has filed an EIS**
- **AGDC's ERL person has taken over the permitting from the TC person who had led that effort**
- **Challenges/gaps –**
  - Limited current experience on the GTP - AGDC is expected to add staff/contractors to close this gap
  - Limited direct experience with 48" pipelines in northern conditions

OTHER CAPABILITIES – COMMERCIAL

TECHNICAL ABILITY?

TRANSCANADA PARTICIPATION IN AKLNG

- Both the State Gas Team and AGDC have strong midstream regulatory and commercial skills to participate in regulatory processes as well as in commercial negotiations with Producers

- Negotiations with Producers on project expansion and third party access issues are being led by the State Gas Team and AGDC using legal resources and SMEs where appropriate for support

SUMMARY OF 3 KEY FACTORS TO CONSIDER FOR STATE'S TC PARTICIPATION DECISION

STATE FINANCIAL CAPABILITY?

- Financing options include CBRF and non-GO borrowing
- Long-term options include above and GO debt and/or financing from buyers/equity investors

ECONOMIC IMPACT ON SOA?

Without TC:
- Higher SOA investment of ~$6.9B - $8.3B
- Annual cash flows during operation higher by ~$400MM
- Higher NPV
- Lower negative netback risk

STATE TECHNICAL CAPABILITY?

- AGDC capabilities
- AKLNG project partners capabilities
- No delay expected

TC PARTICIPATION DECISION

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APPENDICES

HIGH LEVEL ASSUMPTIONS FOR ANALYSIS

Description	Assumption
Project In-Service	2025/2026
Analysis Period	First 20 years of operation
Pipeline Inlet (Tbtu/d)	3.2
Royalty	In Kind
Production Taxes (13% Gross)	Tax as Gas
AKLNG Project Capital Costs (2015$)	~$45B
SOA Equity	~24-25%
Long Term Flat Real Oil Prices (2015$)	$80/bbl
LNG Price ($/MMBtu)	13.5%* Oil Price + $1
Midstream CapEx Escalation (Short-term)	3.0%
Long Term Escalation	2.5%
Capital Structure	70% Debt/ 30% Equity
Cost of Debt	5%
ROE	12%

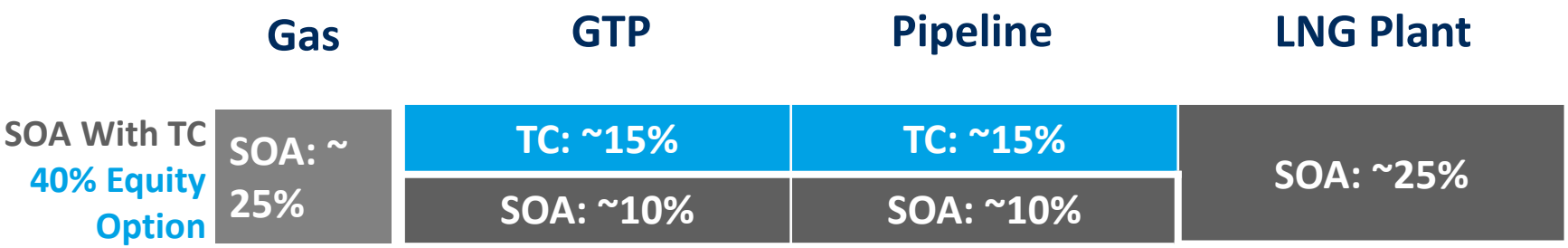
LIST OF ACRONYMS

Acronym	Definition	Acronym	Definition
AFUDC	Additional Funds Used During Construction	MMBTU	Million British Thermal Units
AGDC	Alaska Gasline Development Corporation	MOU	Memorandum of Understanding
AGIA	Alaska Gasline Inducement Act	NEPA	National Environmental Policy Act
AKLNG	Alaska Liquefied Natural Gas Project	non-GO	non-General Obligation
APP	Alaska Pipeline Project	NPV	Net Present Value
ASAP	Alaska Stand Alone Pipeline	O&M	Operations and Maintenance
BP	(Formerly British Petroleum)	PA	Precedent Agreement
CBRF	Constitutional Budget Reserve Fund	PBU	Prudhoe Bay Unit
CP	Conoco Phillips	PMT	Payment
DNR	Department of Natural Resources	pre-FEED	Pre-Front End Engineering & Design
DOR	Department of Revenue	PTU	Point Thomson Unit
EIS	Environmental Impact Statement	RIK	Royalty in Kind
EM	ExxonMobil	ROE	Return on Equity
ERL	Environmental, Regulatory & Land	RoW	Right of Way
FEED	Front End Engineering & Design	SME	Subject Matter Expert
FERC	Federal Energy Regulatory Commission	SOA	State of Alaska
FID	Final Investment Decision	TAG	Tax as Gas
FTSA	Firm Transportation Sales Agreement	TAPS	Trans-Alaska Pipeline System
GBM	Geometric Brownian Motion	TC	TransCanada
GTP	Gas Treatment Plant	USACE	United States Army Corps of Engineers
JVA	Joint Venture Agreement	WACC	Weighted Average Cost of Capital
LNG	Liquefied Natural Gas	WP&B	Work Plan and Budget

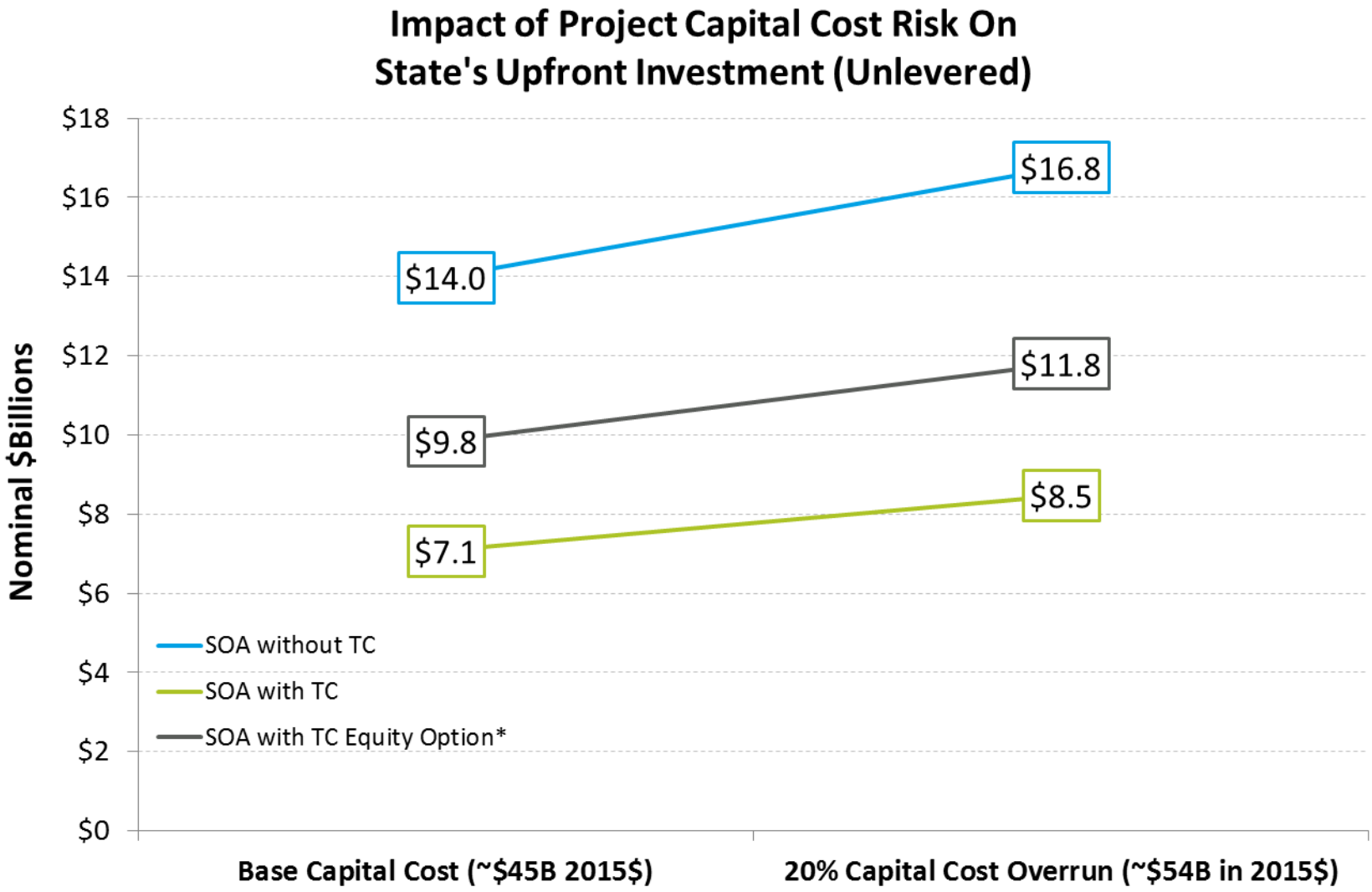
TC WITH 40% EQUITY OPTION

THE OPTION TO BUY BACK 40% EQUITY

- Current MOU/PA with TransCanada also gives the State an option to buy back 40% of its original 25% share in the pipeline and GTP from TC
- Under the currently contemplated structure, the 40% interest would equate to ~10% equity (i.e., 40% of 25%) in GTP and Pipeline project
- Option must be exercised by December 2015

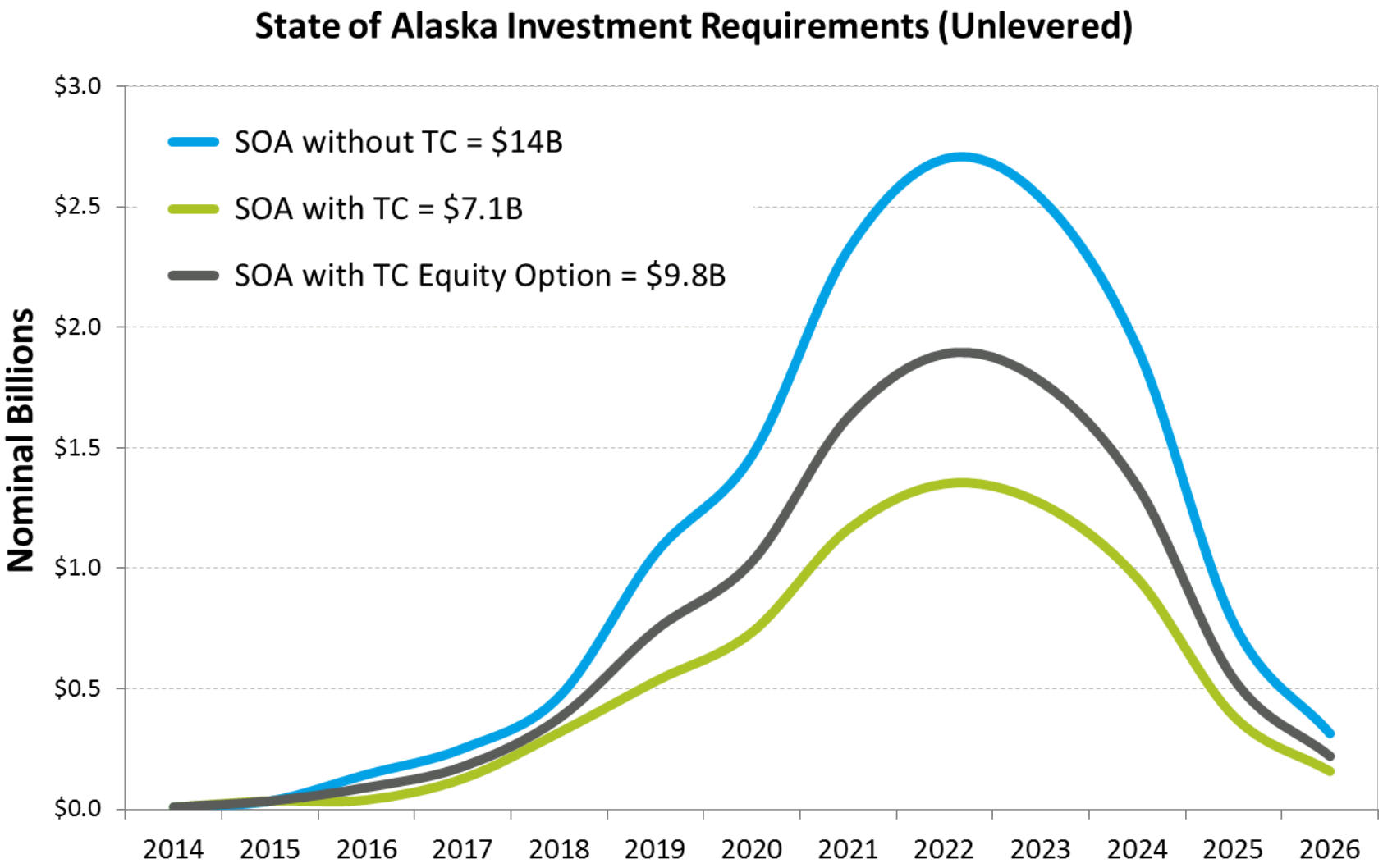


SOA UPFRONT CAPITAL COST EXPOSURE WITH TC EQUITY OPTION IS $4.2-5.0B LOWER THAN WITHOUT TC



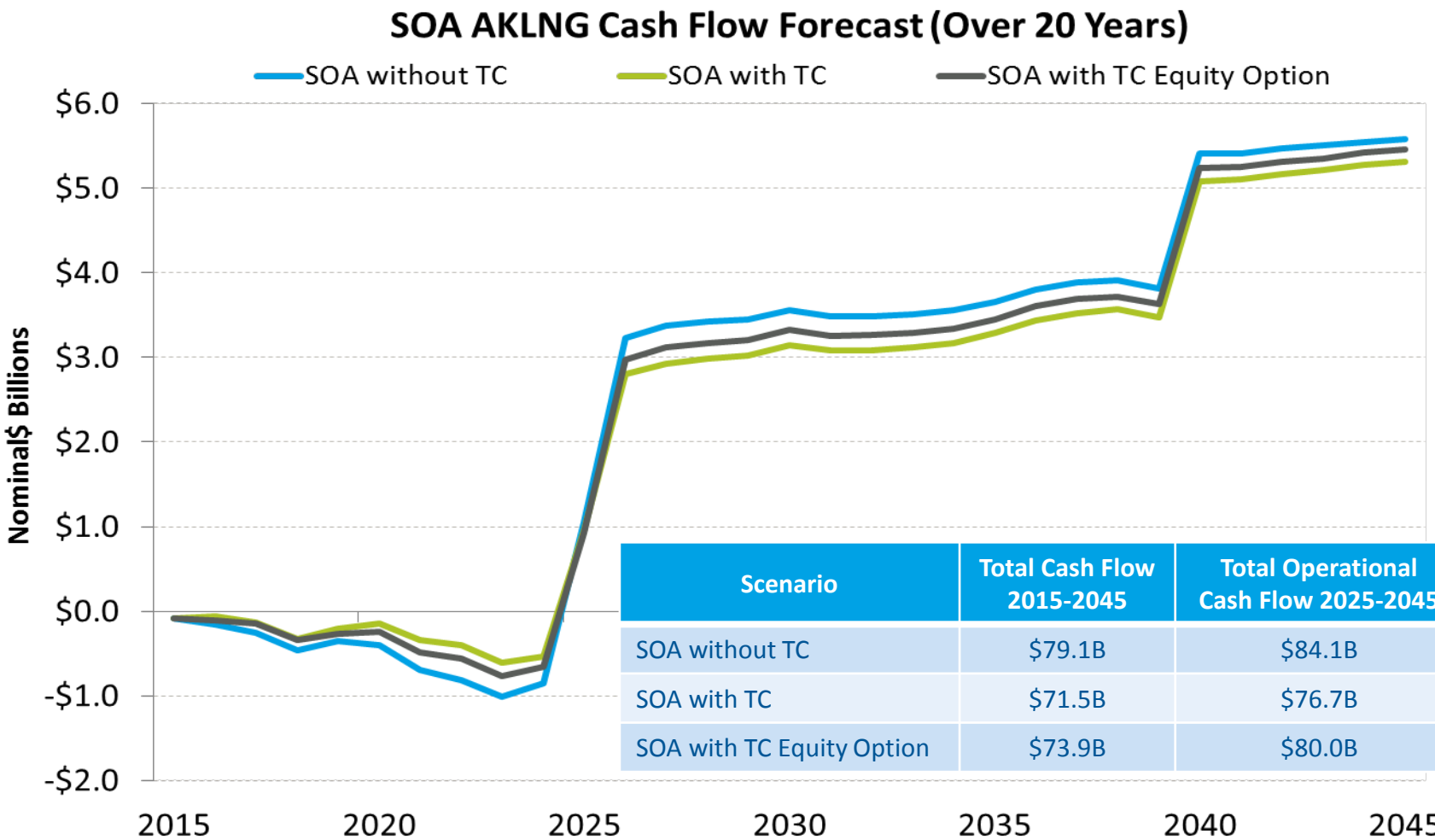
* Assumes State exercises 40% equity buy back with TransCanada at the beginning of FEED

SOA'S ANNUAL INVESTMENT IN THE AKLNG PROJECT WITH TC EQUITY OPTION



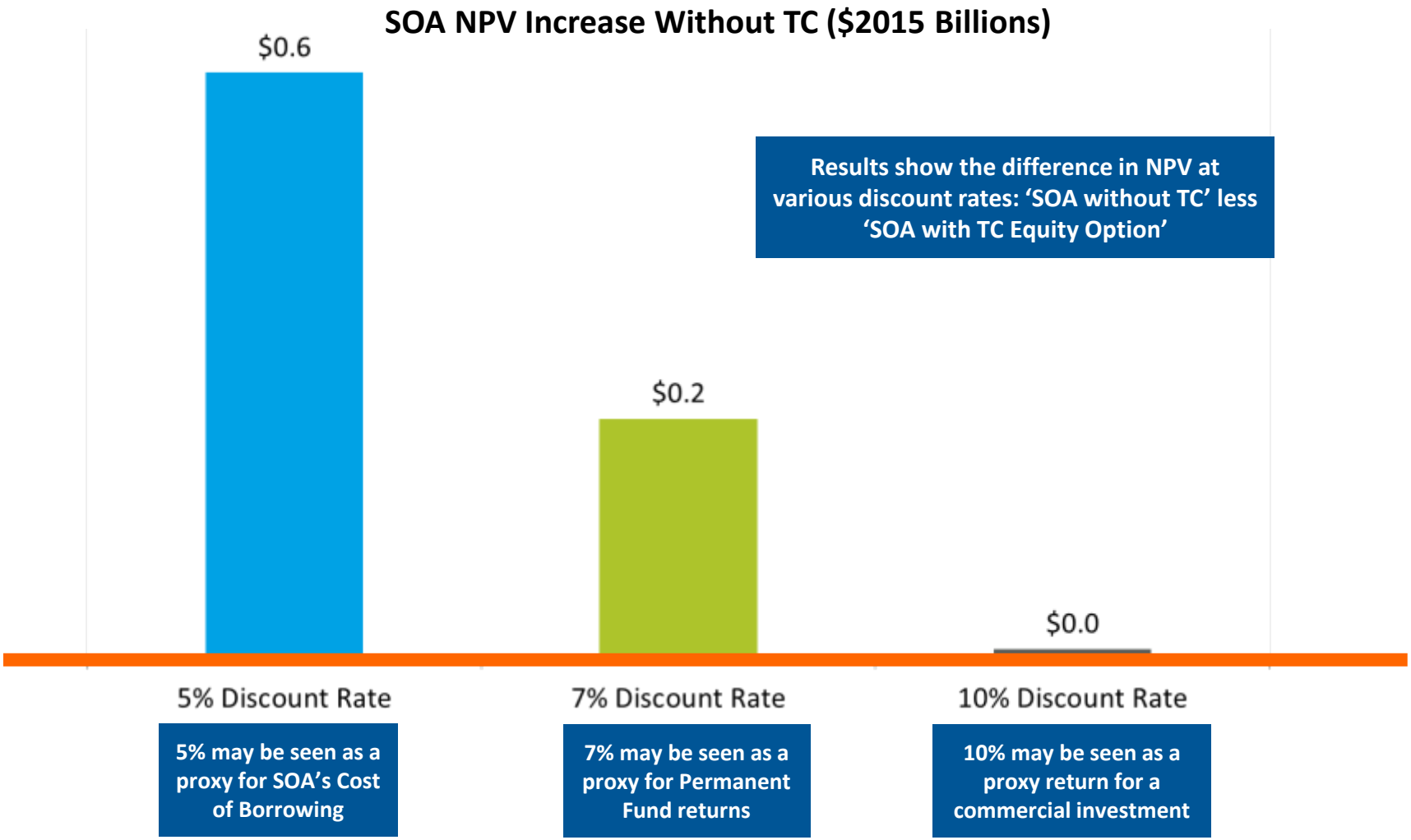
* Assumes Capital Cost escalation of 3%

SOA WITH TC EQUITY OPTION WOULD RECEIVE ANNUAL CASH FLOWS OF ~$220M LOWER THAN WITHOUT TC DURING OPERATIONS



Scenario	Total Cash Flow 2015-2045	Total Operational Cash Flow 2025-2045
SOA without TC	$79.1B	$84.1B
SOA with TC	$71.5B	$76.7B
SOA with TC Equity Option	$73.9B	$80.0B

NPV INCREASE TO THE STATE WITHOUT TC CAN BE BETWEEN $0-0.6B OVER 20 YEARS WHEN COMPARED TO WITH TC EQUITY OPTION



Results show the difference in NPV at various discount rates: 'SOA without TC' less 'SOA with TC Equity Option'

* Assumes 25% State equity participation