

ENBRIDGE GAS DISTRIBUTION



uniongas

A Spectra Energy Company

Concerns with Proposed Energy East Project

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January 29, 2015

1. Executive Summary

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1. Background
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3. Commodity Price Issues
4. Rate Impact Issues
5. Reliability Issues
6. Closing

1.1 Background

TransCanada's Energy East Proposal

TransCanada proposes to remove existing 42-inch pipeline in North Bay Short Cut



TransCanada proposes to replace capacity with 36-inch Eastern Mainline Project built along the Montreal Line

We do not believe that Energy East is a fair deal for natural gas consumers

1.1 Background

Principles to Evaluate Energy East

- Union Gas and Enbridge support most of TransCanada's Energy East application, however, we are concerned about negative impacts to natural gas markets and consumers in the Eastern Ontario Triangle
- Principles include:
 1. Capacity Neutrality: Energy East reduces natural gas capacity on a fully utilized system. Some of EGD and Union's customers rely on delivered supply instead of firm contracts
 2. Commodity Price Neutrality: Energy East will result in natural gas commodity price spikes in the eastern Ontario market area due to scarcity of supply when demand is highest, during the coldest periods
 3. Natural Gas Rate Neutrality: Energy East will increase natural gas rates to customers due to the attribution of higher replacement cost for low cost capacity that exists today
 4. Continued Reliability: Energy East increases risk from a reliability perspective due to diminished discretionary capacity which has served to provide flexibility in upset conditions
- The Energy East project must not negatively impact Enbridge and Union Gas' statutory obligation to service current natural gas customers that rely on TransCanada's system today
- Oil shippers that get the benefits of the project should pay the costs. We are not asking for anything more for our customers than what they already have. No more, and certainly no less

1.1 Background

Summary of Energy East Costs & Benefits

	Natural Gas Customers			Oil Shippers		
	Costs	Benefits	Risk	Costs	Benefits	Risk
Prairies Line / Northern Ontario Line	none	NPV of avoided cost of ~\$1B for entire Mainline	Timing (delay will reduce benefits)	~\$0.6B	Avoided New Build Cost of >\$20B ~ 20% discretionary capacity	none
Eastern Ontario Triangle	\$1.5B capacity shortfall & no discretionary capacity	NPV of ~\$0.5B for EOT	Timing Capacity Commodity Price Rate Reliability	~\$0.4B NBV +\$0.5B premium (15 year rate reprieve)	Avoided New Build Cost of ~\$3B ~ 20% discretionary capacity	none

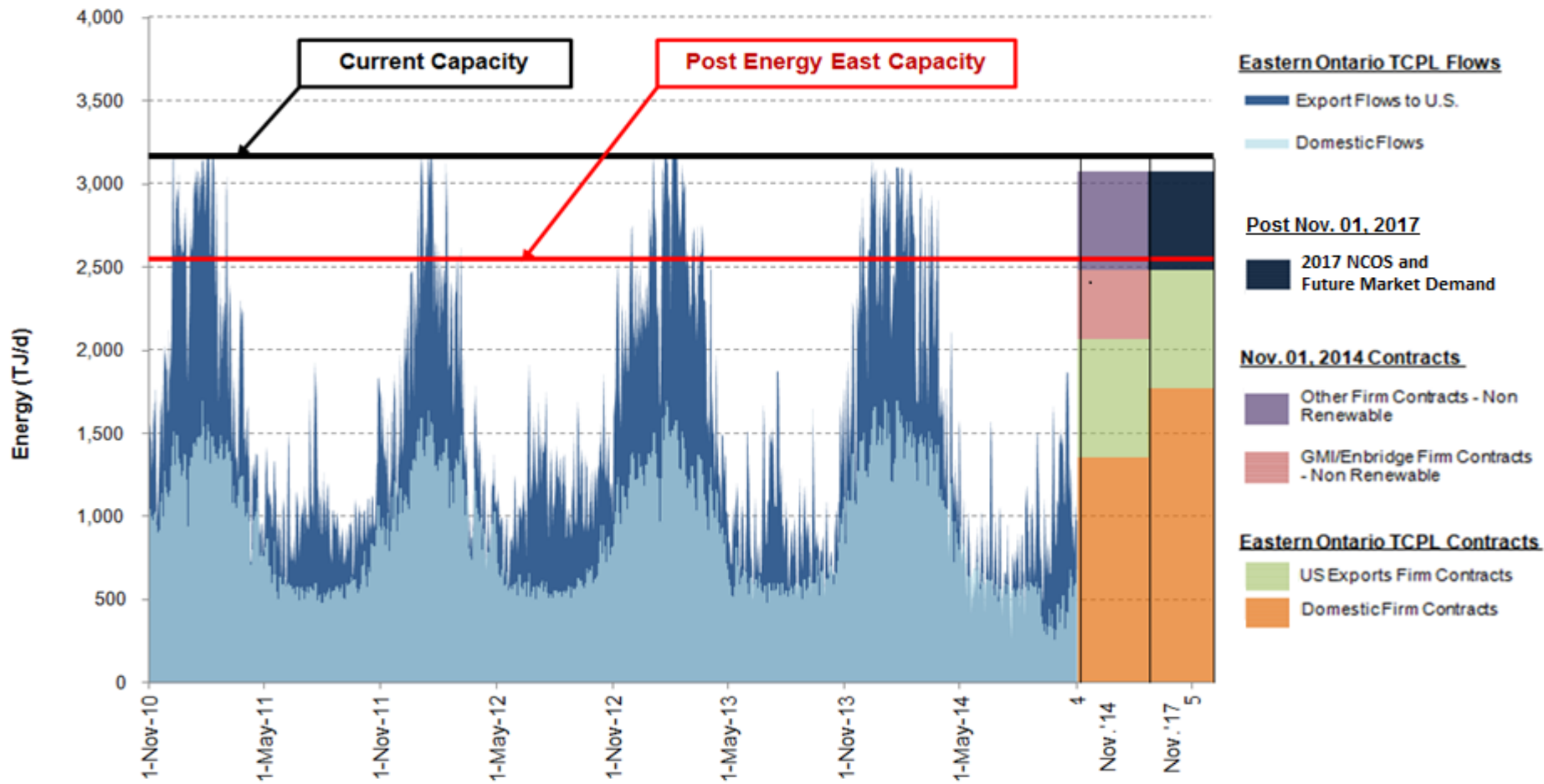


Unfair for eastern gas customers

Oil shippers shielded from risk while eastern natural gas customers are exposed to significant costs

1.2 Capacity Issues

Eastern Ontario Triangle Utilization

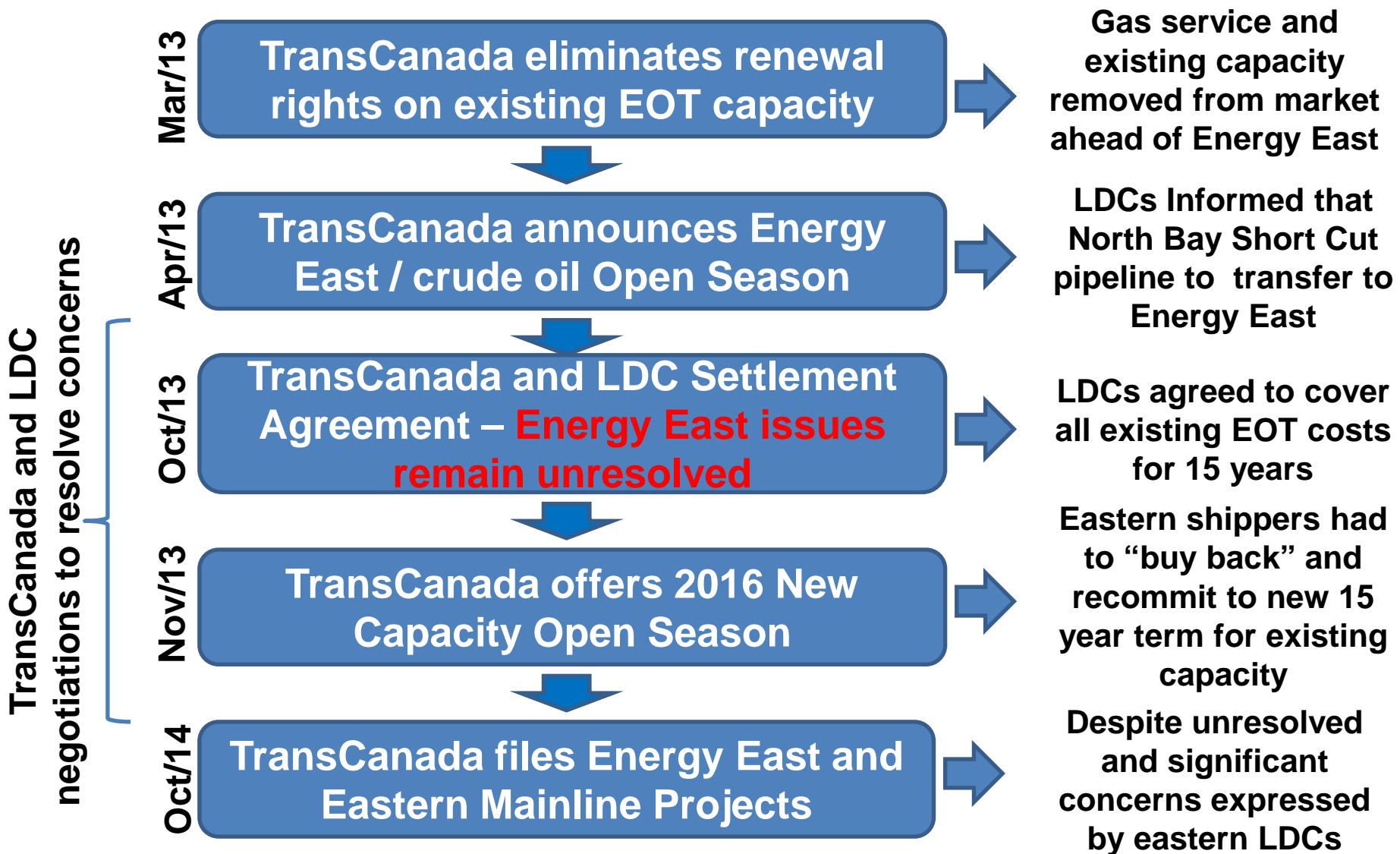


Union and Enbridge expect substantial uptake in Eastern Ontario Triangle capacity

1.2 Capacity Issues



TransCanada Removed Capacity in Favour of Oil Shippers Prior to Market Assessment



1.2 Capacity Issues

2017 TransCanada Open Season

- Union Gas, Enbridge and Gas Métro filed a complaint with the NEB
 - Request for TransCanada to conduct additional market consultation (open season) and include associated cost and capacity in the Energy East Application
 - Direct purchase customers supported complaint through letters to the NEB
- TransCanada issued 2017 NCOS on December 12, 2014
 - Capacity offered by TransCanada replaces existing capacity already allocated to the Energy East Project without NEB approval to do so
 - Assumes that the natural gas customers will pay the cost of new expensive pipeline capacity to replace existing inexpensive, largely depreciated capacity
 - No commitment from TransCanada that the capacity or cost of facilities resulting from this open season will be included in the Energy East Project
- TransCanada 2017 NCOS will result in an additional 8% capacity requirement for Enbridge due to
 - Growth in peak day demand
 - Return to utility firm supply

Additional replacement capacity is required as a result of TransCanada's failure to consult

- Keystone (MH-1-2006)
 - The relevant consideration for determining adequate capacity was the pipeline's ability to meet anticipated requests for firm service and that the remaining capacity post-transfer provided "an acceptable level of discretionary service"
 - TransCanada submitted detailed statistical analysis of potential flow levels under a number of scenarios
 - The Board found that the removal of the pipeline capacity would not disconnect the WCSB from pricing at demand centres
- Southern Lights (OH-3-2007)
 - Assets transferred at replacement cost (not net book value) with the necessary accounting rules exemptions granted

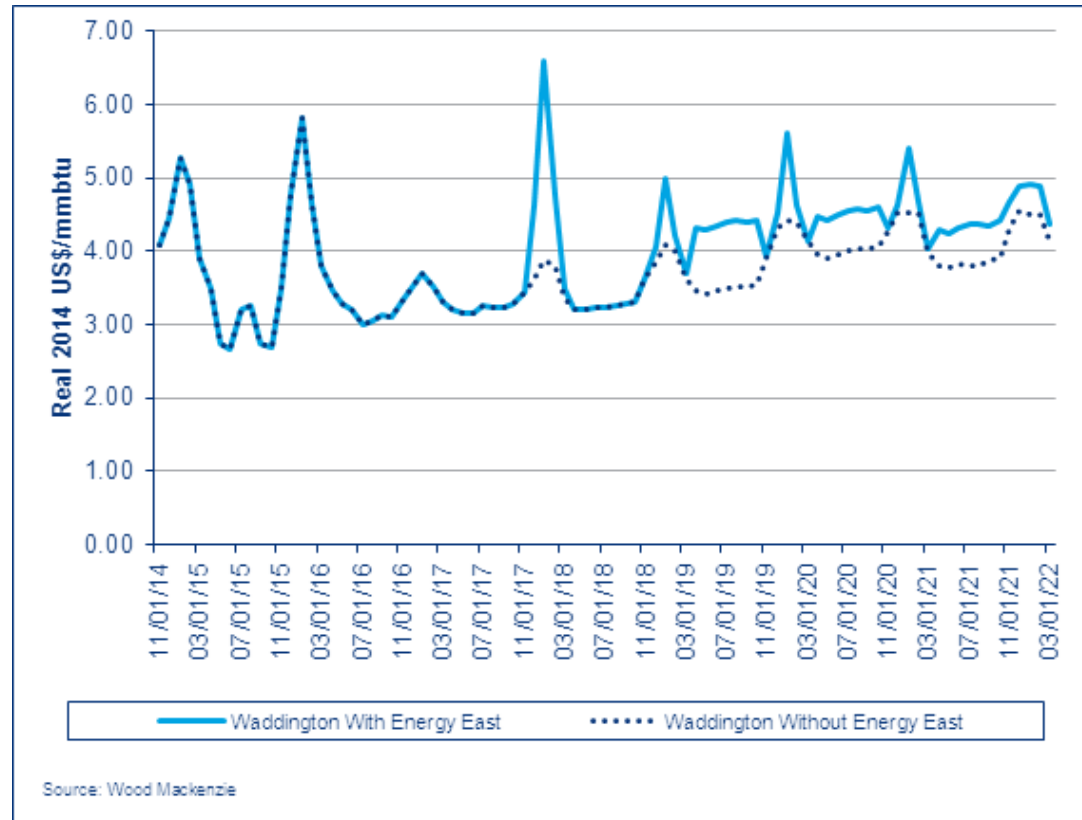
Other redeployment applications have required significantly more market assessment before determining appropriate treatment

1.3 Commodity Price Issues

Peak Day Price Increases

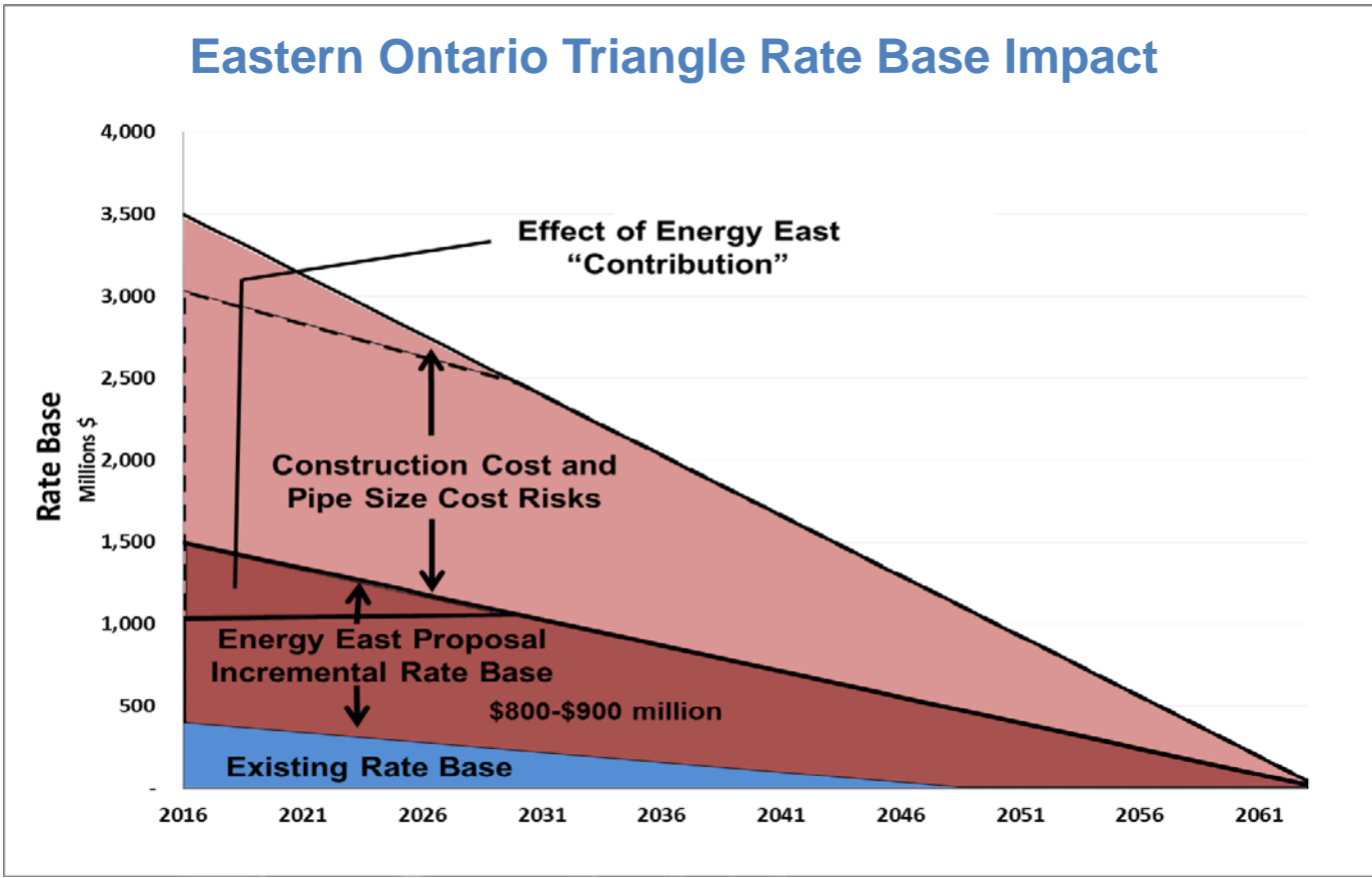
- Winter gas price increases at Waddington under TransCanada's Energy East proposal an average of US\$0.43 / mmbtu from 2017 to 2022
- Peak month gas price increases at Waddington under TransCanada's Energy East proposal an average of US\$1.16 / mmbtu from 2017 to 2022
- Peak day will be even more volatile
- Customers relying on the secondary market or TransCanada's discretionary services in eastern / central Ontario and Québec will be most impacted (industrial, institutional and large commercial customers - NUGs)
- This erodes eastern market competitiveness
- Dawn prices are expected to be more stable

Forecast Monthly Waddington Prices w/ and w/o Energy East
(source Wood Mackenzie)



1.4 Rate Impact Issues

Ontario Will Experience Rate Increases



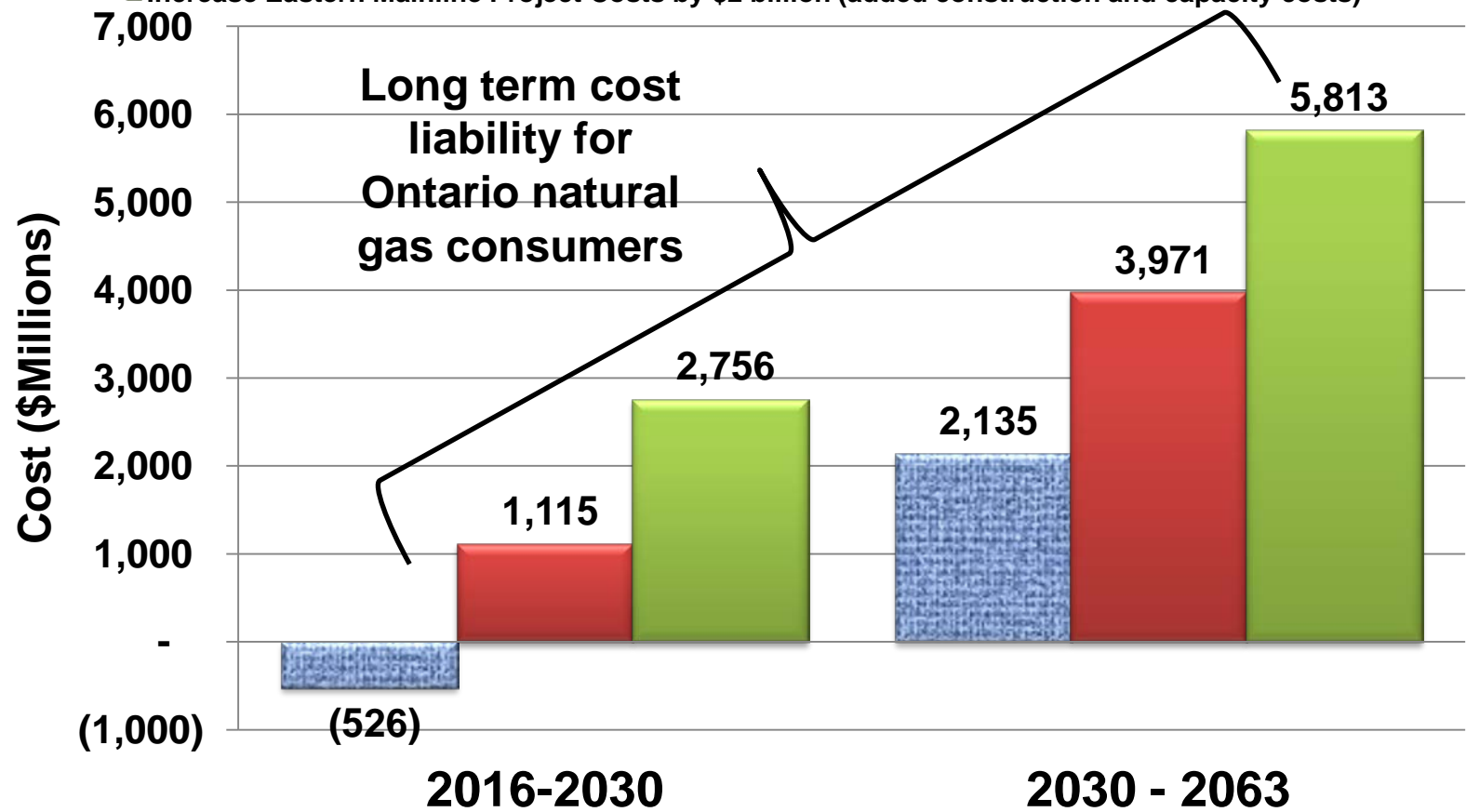
Significant capital cost and toll risk pre and post 2030

1.4 Rate Impact Concerns

Significant Cost Risk for Ontario Consumers



- TransCanada Proposal (only replace half of existing capacity)
- Increase Eastern Mainline Project Costs by \$1 billion (added construction and capacity costs)
- Increase Eastern Mainline Project Costs by \$2 billion (added construction and capacity costs)



Long term cost liability for Ontario natural gas consumers

TransCanada cost estimates and 15 year NPV significantly understates risks to Ontario natural gas consumers

1.4 Rate Impact Issues

Ontario Energy Costs Increase

Residence



Up to \$50 increase/y

School



\$500 - \$1000 increase/y

Hospital



\$3,000 - \$25,000 increase/y

Industry



\$250,000 - \$500,000 increase/y

Cost impacts will be felt by all Ontario customers

1.5 Reliability Issues

Energy East Impacts Natural Gas System Reliability

- Integrity
 - TransCanada must perform maintenance work to achieve satisfactory capacity
- Discretionary Capacity
 - TransCanada proposes to eliminate all discretionary natural gas capacity on its Eastern Mainline Project, though Energy East oil pipeline is designed to provide ~20% discretionary capacity to oil shippers
- Operational Flexibility
 - In an upset condition, interruption of firm service customers will be more frequent due to reduced capacity

- TransCanada should leave the existing natural gas pipeline in the North Bay Short Cut in place and build a new oil pipeline from North Bay to Ottawa, preserving existing cost structure and necessary capacity
- If TransCanada is allowed to convert the existing natural gas pipeline in the North Bay Short Cut to oil as proposed, TransCanada should commit to the following:
 - **Capacity and Commodity Price Neutrality:** Size of “new natural gas replacement pipeline” to be based on results of both the 2016 and 2017 open seasons and a reasonable allowance for future growth and discretionary capacity
 - **Rate Neutrality:** Rate base of “new natural gas replacement pipeline” to be no higher than current North Bay Short Cut pipeline value of \$0.4B
- Allocation of Western Mainline benefits are to be determined independently of the Eastern Ontario Triangle

We are not asking for anything more for our customers than what they already have



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2.1 Background - Details

2.1 Background

TransCanada's Energy East Proposal

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- The Energy East project must not negatively impact Enbridge and Union Gas' statutory obligation to service current natural gas customers that rely on TransCanada's system today
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Unfair for eastern gas customers

Oil shippers shielded from risk while eastern natural gas customers are exposed to significant costs

2.1 Background

Security of Supply is Critical

- Union and Enbridge contract for firm capacity to ensure that supply of natural gas to customers purchasing from the utility is maintained on peak winter days
 - This ensures that customers have natural gas when they need it most
- Union and Enbridge determine firm capacity requirements based on detailed statistical analysis, not last year's weather
- Union and Enbridge are working to ensure customers, including hospitals, schools, industrials and power generators, that contract for their own transportation and supply are protected as well
- Energy costs are critical to the economic growth of Ontario and Québec

Union and Enbridge have a statutory obligation to serve Ontario natural gas customers

2.1 Background

Market Reaction to Energy East Proposal

- Prior to Energy East NEB filing, natural gas customers only heard TransCanada's story
 - Details not publically available to the natural gas market
 - Impacts to natural gas consumers and markets not broadly understood
- Union and Enbridge have spent considerable effort communicating with and educating the market, a task that should be TransCanada's
 - Capacity Impacts – eastern markets short 20% of existing capacity
 - Commodity Price Impacts – Impact on secondary market prices and service availability in eastern Ontario and Québec and other eastern markets
 - Rate Impacts – Long term cost of service increases and commodity cost impacts and risks
- LDCs have asked the NEB to consider TransCanada's applications as deficient, due to the lack of fair market assessment; the market has supported that request

TransCanada consultation inadequate for natural gas market to understand impacts of Energy East Project

2.1 Background

Tolls Settlement Agreement Excluded Energy East

- Positive Decision received from NEB November 28
- Toll Settlement Agreement provides for:
 - Development of energy infrastructure within Ontario, increasing diversity and cost competitiveness by providing northern, central and eastern Ontario consumers with access to Marcellus and Utica production and further access to the Dawn Hub
 - TransCanada Mainline expansion if requested and supported by the market to facilitate market access (best efforts basis)
 - Throughput commitment as the LDCs agreed to utilize the Mainline to 2030 and supported 5 year term up for existing shippers on the path where expansion facilities are proposed
 - Toll stability as LDCs agreed to cost recovery of the Mainline until 2020 and the Eastern Ontario Triangle until 2030 with TransCanada having a reasonable opportunity of recover its costs
 - Recovery of the \$0.4 billion net book value of the North Bay Short Cut assets (Removal of this asset and inadequate replacement as is now proposed was not part of the Settlement Agreement.)

Settlement reduces TransCanada's cost recovery risk on EOT assets proposed to be removed from natural gas service



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2.2 Capacity Issues - Details

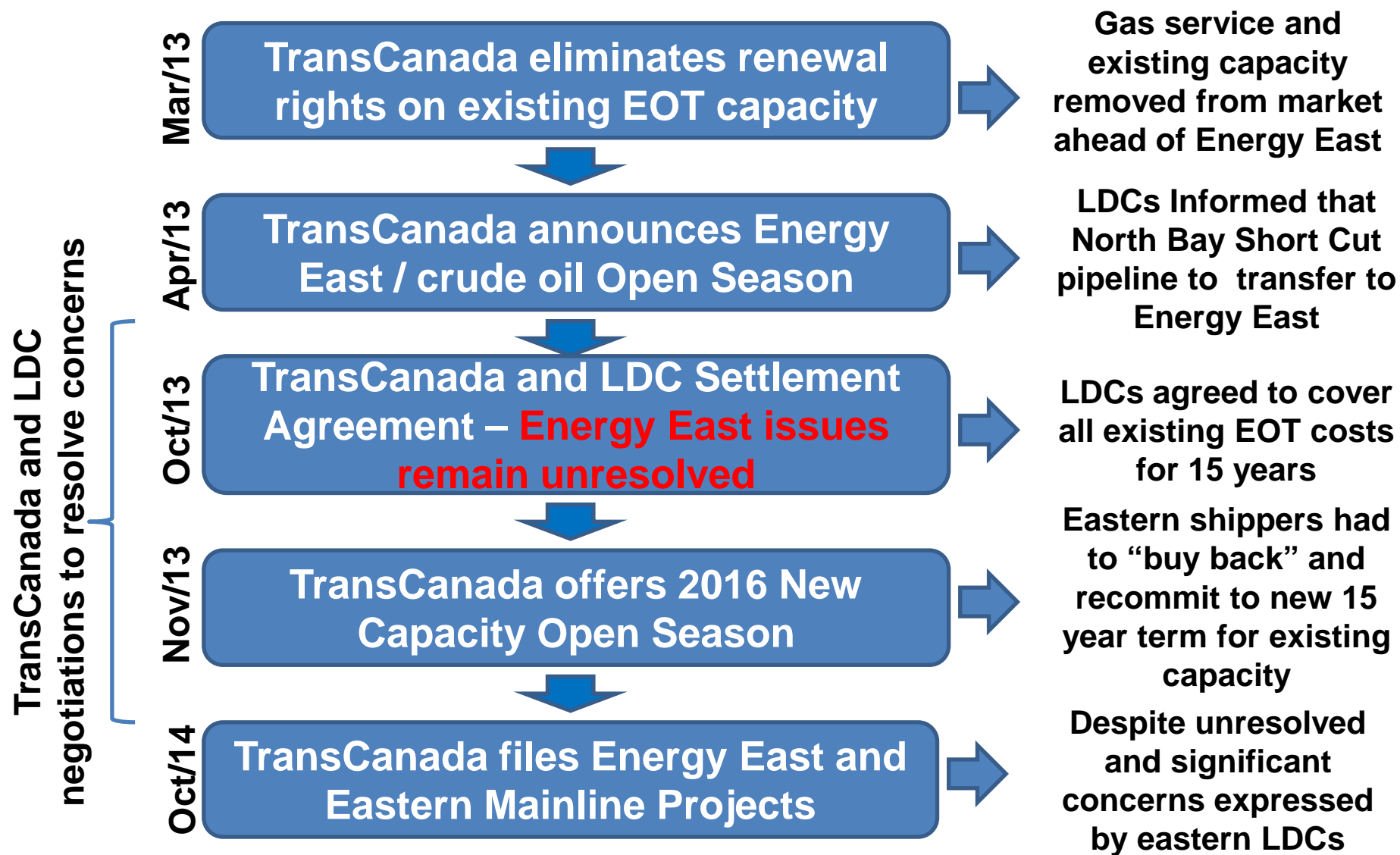
2.2 Capacity Issues

Impact of Energy East on Capacity

1. Repurposing pipelines across the Prairies and Northern Ontario that are not fully utilized makes sense
2. TransCanada is removing 1.2 PJ/d from North Bay to Ottawa and replacing less than half the capacity, leaving natural gas markets short 0.6 PJ/d, enough to heat 500,000 homes
3. Existing capacity in the Eastern Ontario Triangle meets Ontario, Québec and US Northeast market needs and is fully utilized on cold winter days when natural gas capacity is needed most
4. US Northeast is expected to continue to rely on Canadian exports in the Eastern Ontario Triangle to meet peak winter demand for the foreseeable future
5. TransCanada significantly underestimates natural gas market needs, impacting availability of supply and resulting in higher energy costs for eastern Ontario customers who cannot commit to long term transportation contracts

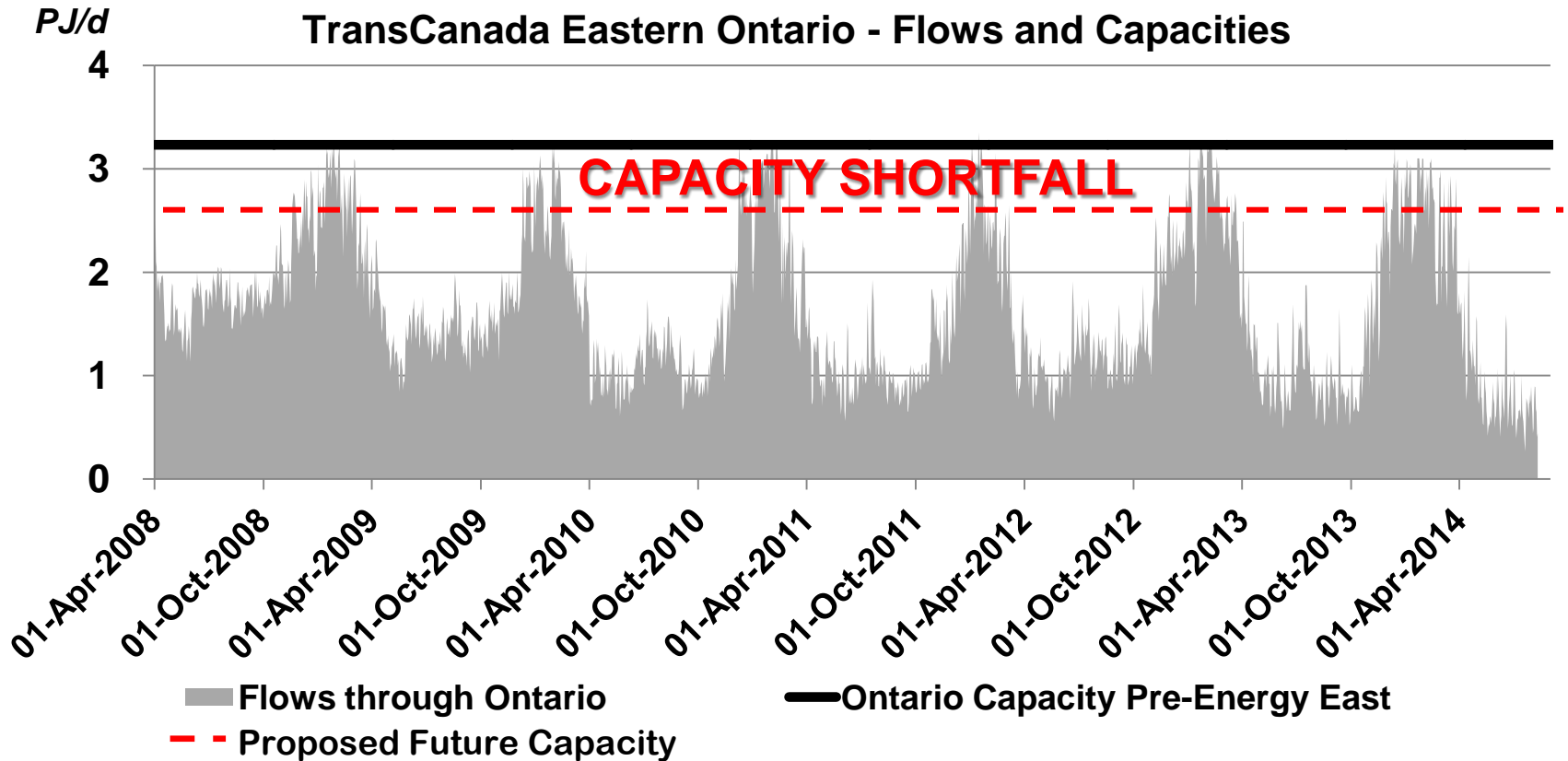
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TransCanada Removed Capacity in Favour of Oil Shippers Prior to Market Assessment



2.2 Capacity Issues

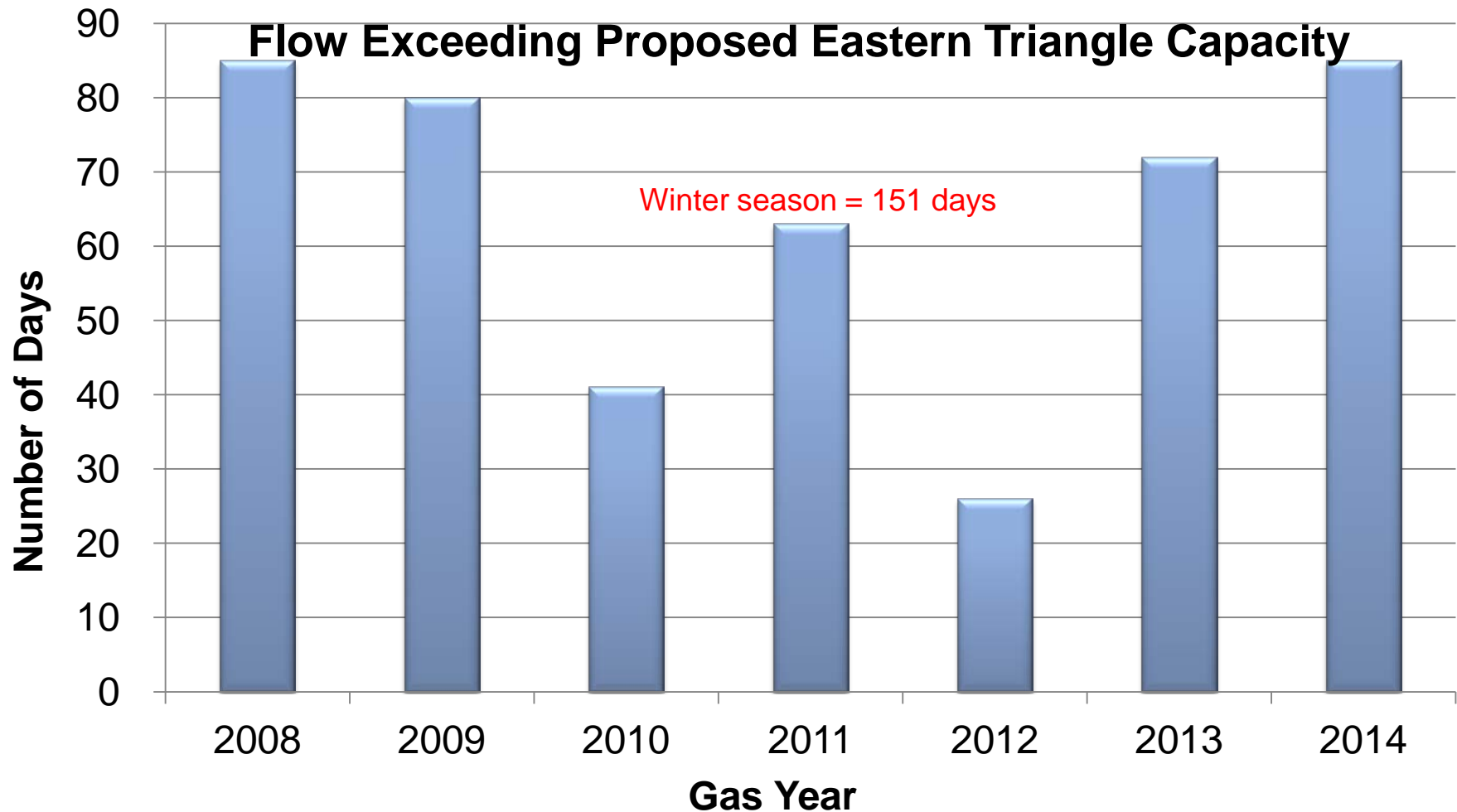
Eastern Triangle Capacity and Flows



Energy East will result in a capacity shortfall in the Eastern Ontario Triangle impacting Ontario and Québec and east natural gas markets

2.2 Capacity Issues

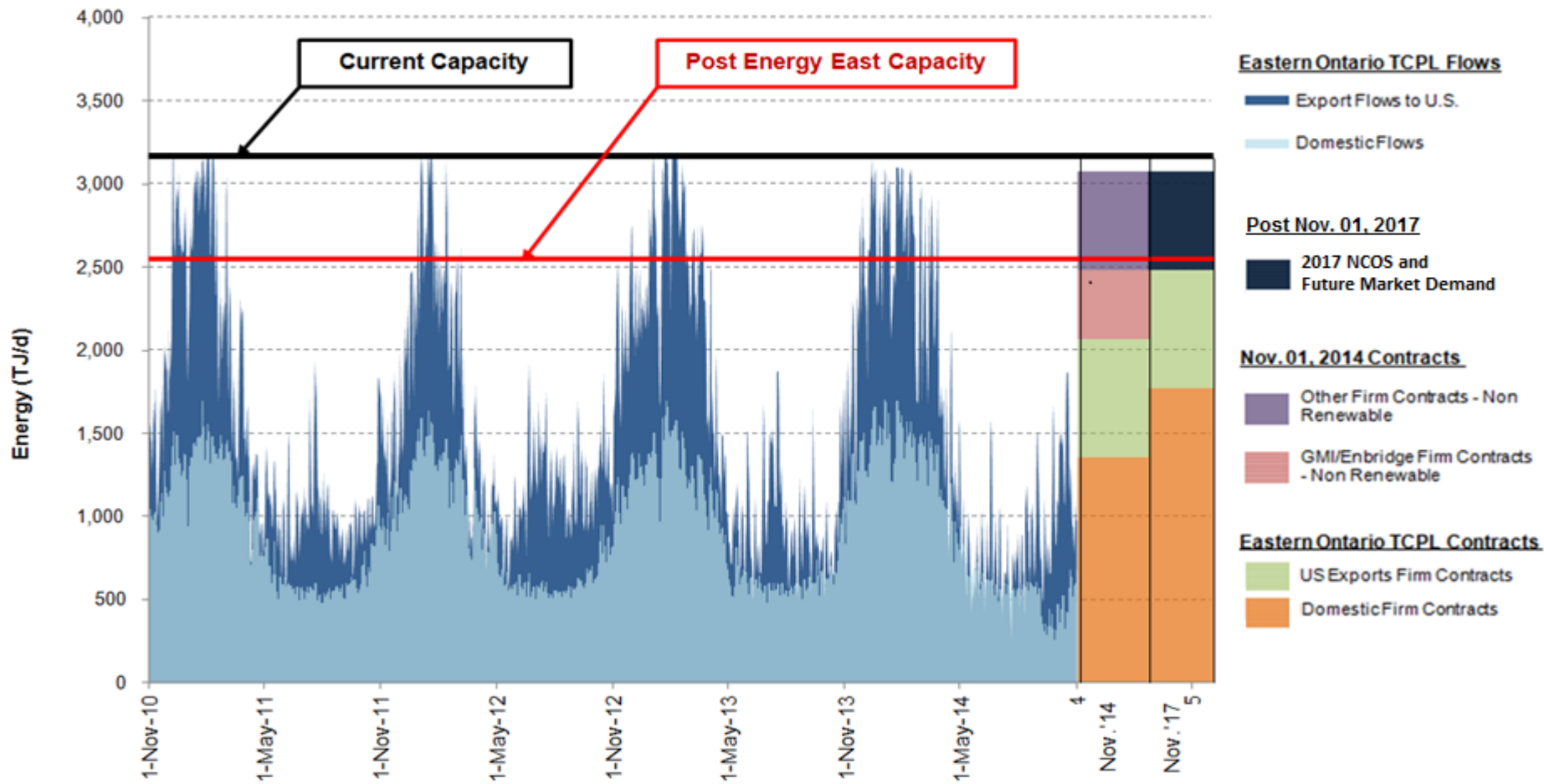
Eastern Ontario Triangle Peak Needs



Capacity shortfall will affect competitiveness of industrial and institutional markets which cannot commit to long term firm contracts

2.2 Capacity Issues

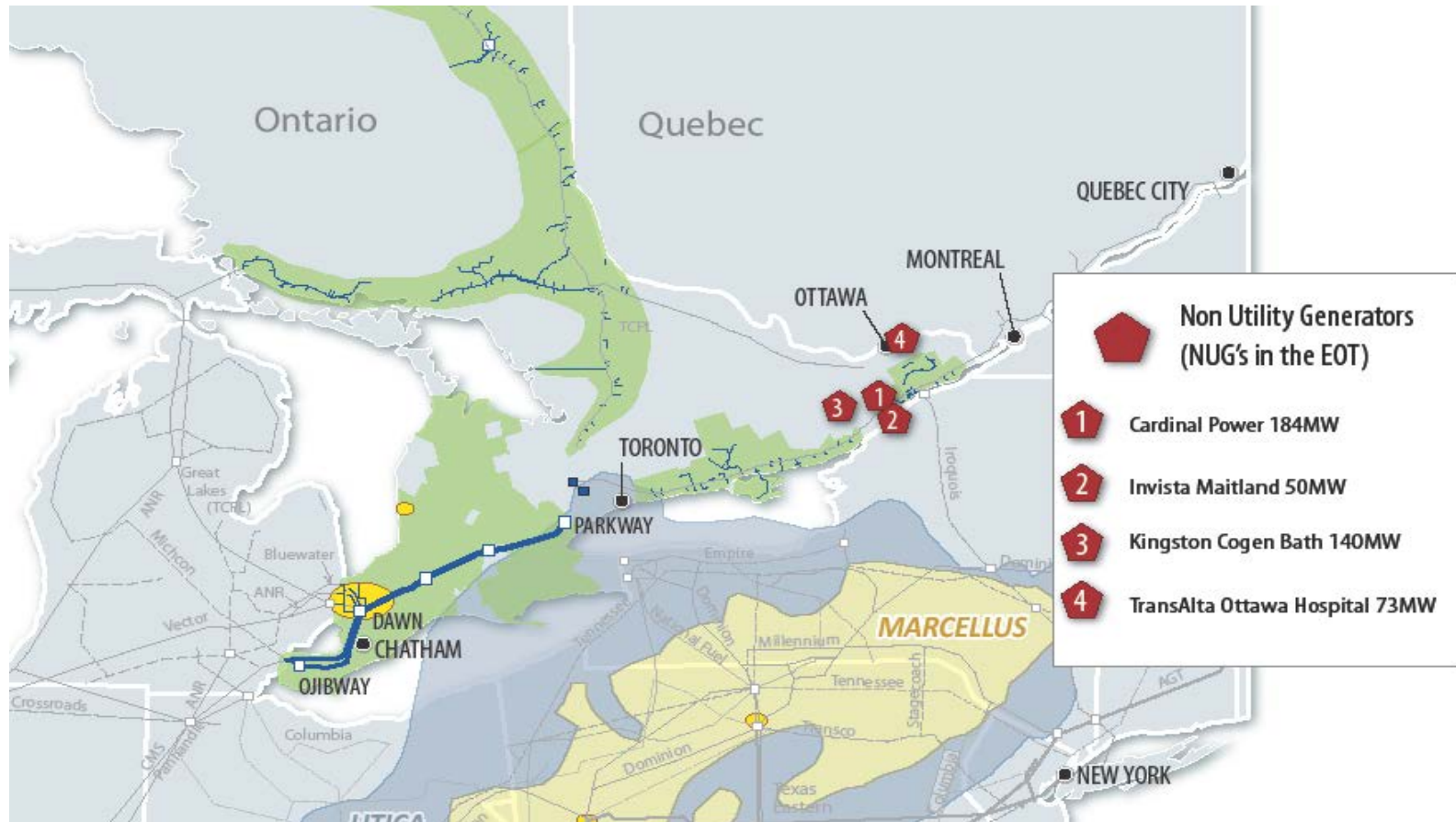
Eastern Ontario Triangle Utilization



Union and Enbridge expect substantial uptake in Eastern Ontario Triangle capacity

2.2 Capacity Issues

NUGS Impacted in the Eastern Ontario Triangle

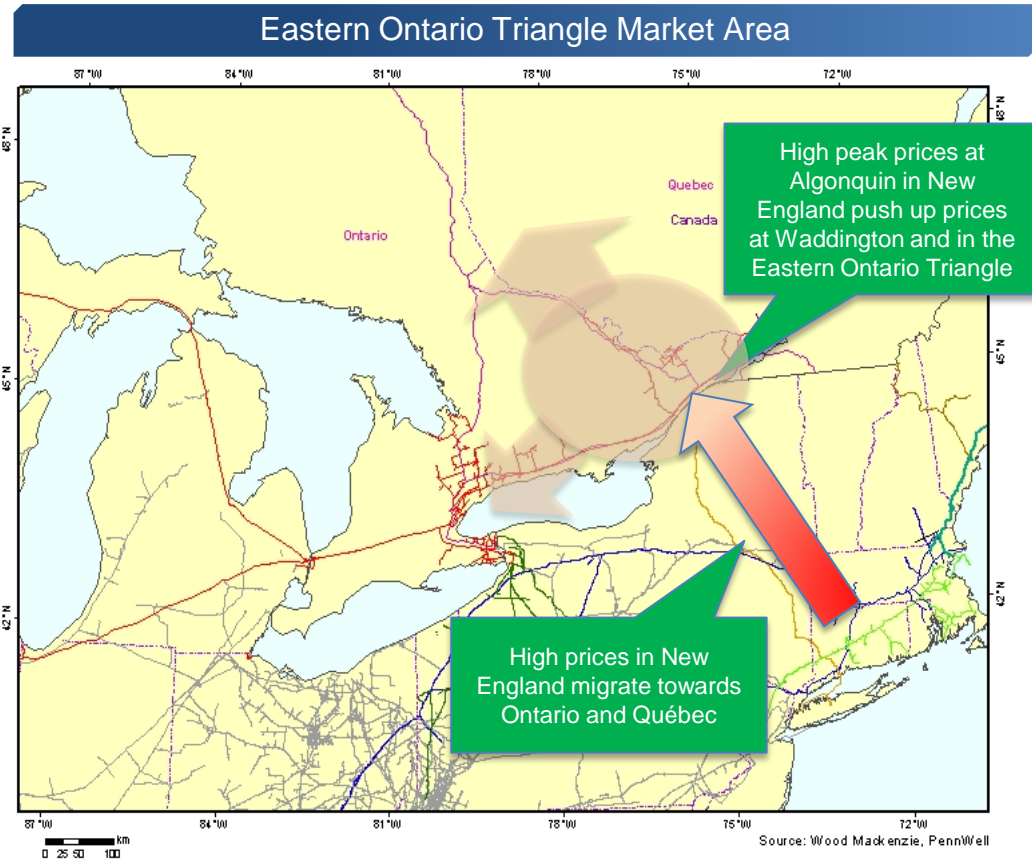


Over 400 MW of generation that purchase services in the secondary market or TransCanada discretionary services are at risk

2.2 Capacity Issues

Export Market Expectations – Wood Mackenzie

- New pipeline infrastructure in the U.S. Northeast is not expected to completely alleviate New England's dependence on supply from Waddington in peak winter periods with growing regional demand
- Wood Mackenzie expects that peak day flow at Waddington to the U.S. Northeast will remain strong for the foreseeable future
- The historic relationship where New England competes with Ontario and Québec for Eastern Ontario Triangle supply will continue

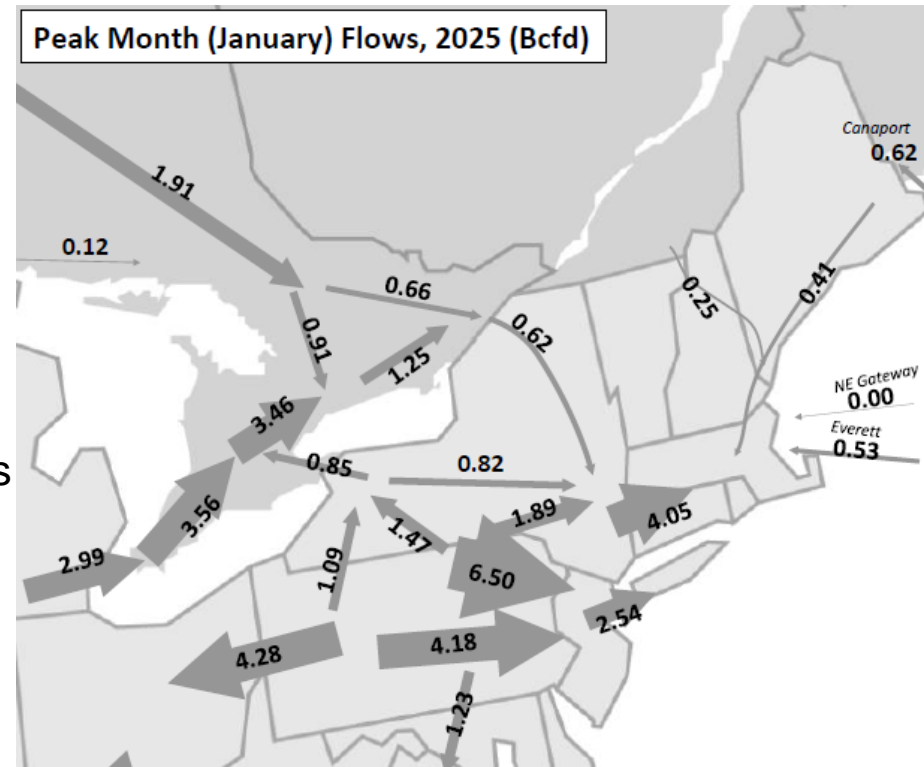


Peak day prices rise in the Eastern Ontario Triangle towards New England market price

2.2 Capacity Issues

Export Market Expectations – ICF

- TransCanada forecasts imports at Waddington from the U.S. Northeast due to large regional pipeline build out
- ICF forecasts continued exports to the U.S. Northeast during peak months
 - U.S. Northeast demand will continue to outpace addition of pipeline capacity
 - Peak day exports are expected to decline on an annual basis
- LDC discussions with U.S. Northeast customers supports expectation of continued exports
 - All LDCs value diversity of supply
 - Dawn has access to storage and a liquid market
- Export markets transacting at Dawn increase liquidity to the benefit of Ontario and Québec consumers



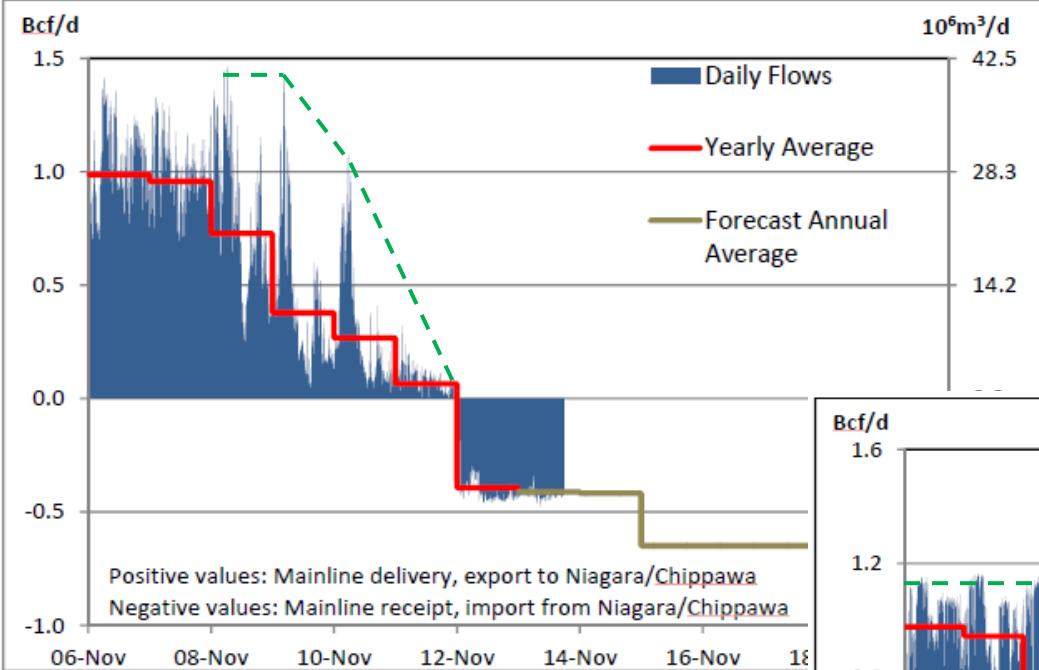
With reduced capacity in the Eastern Triangle, Ontario and Québec will compete with U.S. Northeast for supply

2.2 Capacity Issues

TransCanada View of Flow to the US Northeast

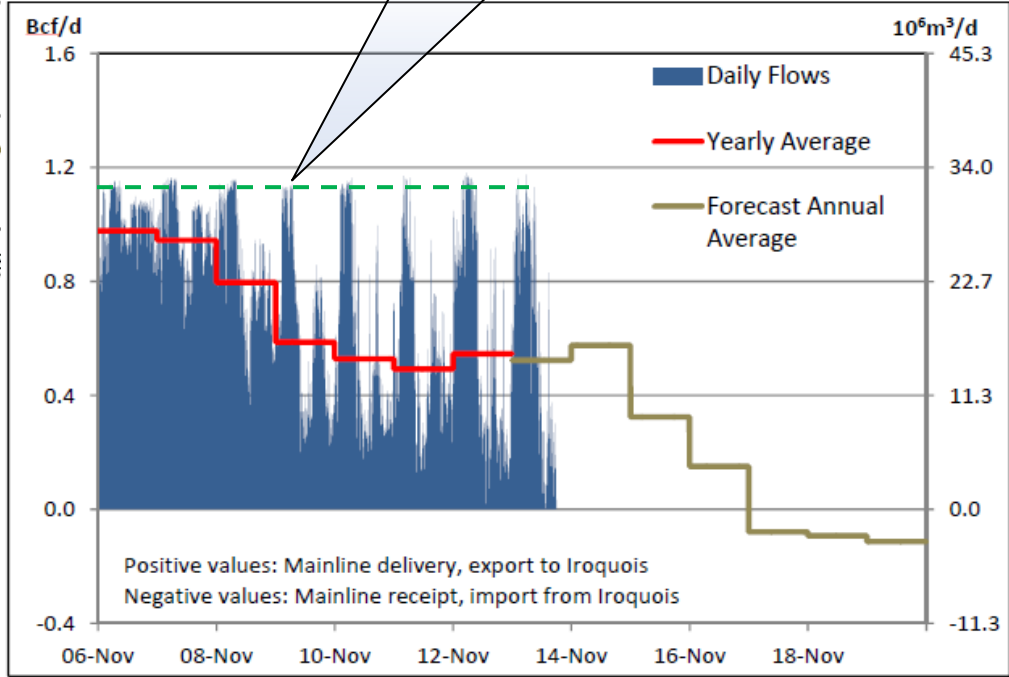


Niagara/Chippawa Historic and Forecast Deliveries (source TransCanada)



Capacity is required for winter peak load not yearly average

TransCanada's capacity assessment fails to consider winter peaks and is contrary to Wood Mackenzie and ICF



Iroquois Historic and Forecast Deliveries (source TransCanada)

2.2 Capacity Issues

Consultation with Market

- TransCanada's assessment of the natural gas market needs were solely based on existing long term firm contracting (FT) and 2016 new capacity open season (2016 NCOS)
 - 2016 NCOS conducted with onerous terms, including 15 year contract commitment to "buy back" existing capacity
 - Impact of TransCanada Energy East proposal not fully communicated
- TransCanada significantly understated market capacity needs
 - No assessment of near term growth (TCE Napanee, LDCs and others pay for "existing" capacity at increased cost)
 - No assessment of discretionary capacity requirements (NUGS; industrial, institutional and large commercial customers)
 - Concerns of Union and Enbridge expressed through Tolls and Tariff working group (TTF) neither disclosed nor addressed

Fundamental changes in the Eastern Ontario Triangle cannot proceed until the market is properly assessed

2.2 Capacity Issues

2017 TransCanada Open Season

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 - Request for TransCanada to conduct additional market consultation (open season) and include associated cost and capacity in Energy East Application
 - Direct purchase customers supported complaint through letters to the NEB
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 - Growth in peak day demand
 - Return to utility firm supply

Additional replacement capacity is required as a result of TransCanada's failure to consult

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- Southern Lights (OH-3-2007)
 - Assets transferred at replacement cost (not net book value) with the necessary accounting rules exemptions granted

Other redeployment applications have required significantly more market assessment before determining appropriate treatment

For Energy East to be right for Ontario:

- Capacity post-Energy East must meet Ontario, Québec and U.S. Northeast needs
 - Leave existing natural gas pipeline in North Bay Short Cut in place
- No negative capacity exposure for natural gas consumers and markets
- If a new natural gas pipeline is built to replace existing capacity, TransCanada must complete a proper market assessment and include results in its Energy East applications, with capacity expected to include:
 - Firm capacity shortfall resulting from Energy East (200-300 TJ/d); plus
 - 2016 NCOS and 2017 NCOS results; plus
 - Reasonable amount for potential near term growth; plus
 - Reasonable amount of discretionary capacity, less
 - Market not willing to term up to support expansion projects



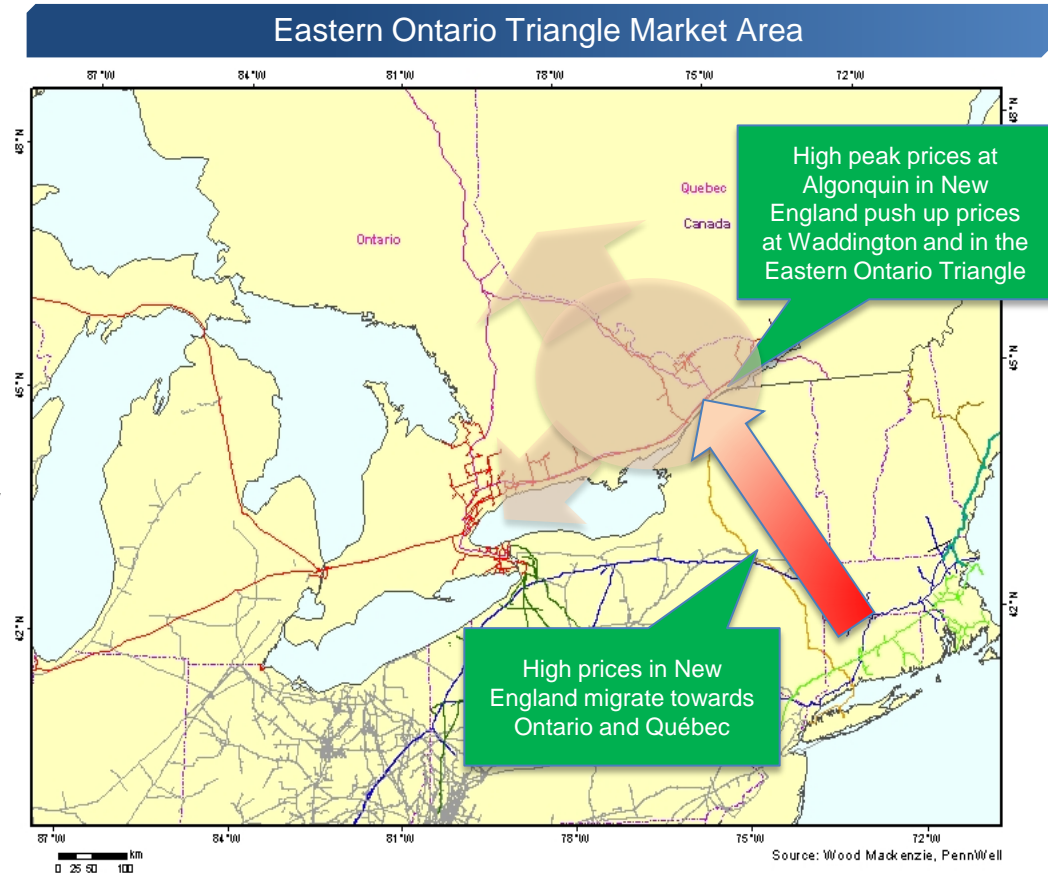
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2.3 Commodity Price Issues - Details

2.3 Commodity Price Issues

New England Influence on Commodity Prices

- New England will continue to compete with Ontario and Québec for Eastern Ontario Triangle supply
- The Energy East capacity reduction will increase competitive pressure on pricing in the Eastern Ontario Triangle during the peak winter period
- New England pricing will increasingly migrate towards Waddington and the Eastern Ontario Triangle
- U.S. Northeast infrastructure delays prop up exports to the U.S. Northeast at Waddington, impacting flow through the Eastern Ontario Triangle



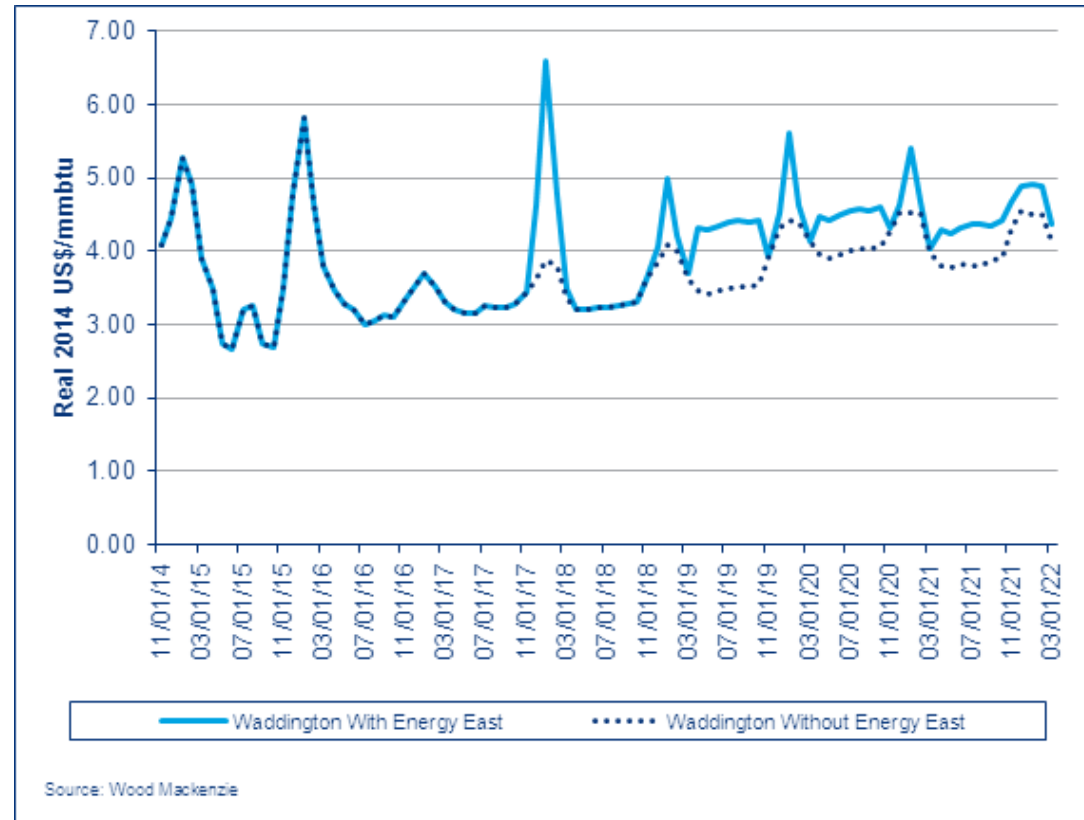
TransCanada ignores the impact of higher commodity costs to those customers unable to contract for long term firm transportation

2.3 Commodity Price Issues

Peak Day Price Increases

- Winter gas price increases at Waddington under TransCanada's Energy East proposal average US\$0.43 / mmbtu from 2017 to 2022
- Peak month gas price increases at Waddington under TransCanada's Energy East proposal average US\$1.16 / mmbtu from 2017 to 2022
- Peak day will be even more volatile
- Customers relying on the secondary market or TransCanada's discretionary services in eastern / central Ontario and Québec will be most impacted (industrial, institutional and large commercial customers - NUGs)
- This erodes eastern market competitiveness
- Dawn prices are expected to be more stable

Forecast Monthly Waddington Prices w/ and w/o Energy East
(source Wood Mackenzie)



For Energy East to be right for Ontario:

- TransCanada must include and account for natural gas commodity cost impacts based on the proposed capacity shortfalls resulting from its Energy East applications



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2.4 Rate Impact Issues - Details

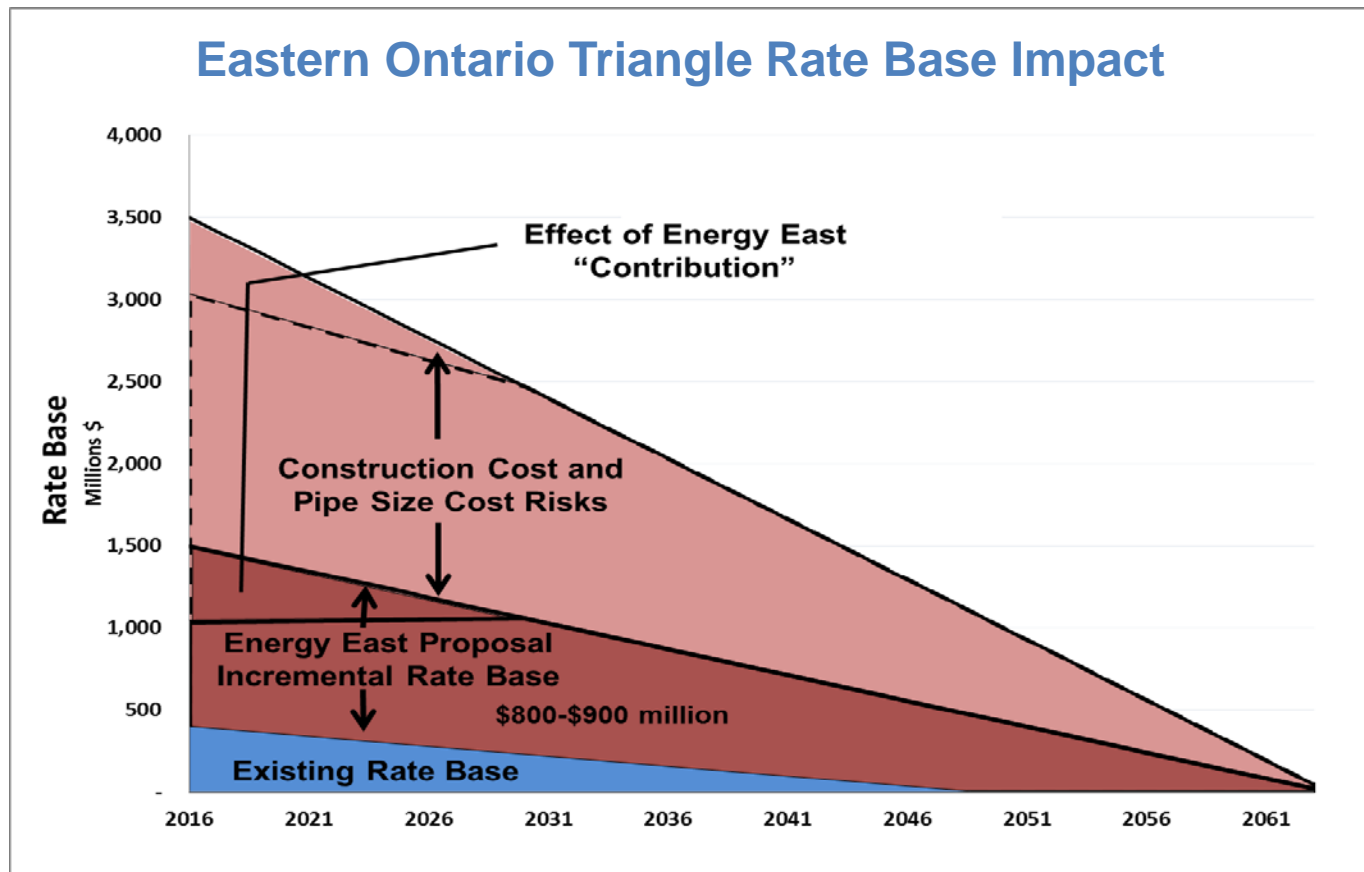
2.4 Rate Impact Issues

1. Removing underutilized assets in the Prairies and across Northern Ontario makes sense
2. TransCanada's use of NPV calculated to 2030 is too short and not an appropriate measure of cost impact to eastern natural gas consumers - toll and rate impacts should be assessed to 2063
3. TransCanada selling fully utilized assets in the Eastern Ontario Triangle at net book value (\$0.4 Billion) to oil shippers and replacing less than half the capacity at an estimated \$1.5 Billion – long term negative rate impact
4. TransCanada proposes that natural gas consumers accept full construction cost risk for overruns
5. TransCanada proposes that natural gas customers accept rate hikes for pipe capacity replacement that exists today, including 2017 NCOS and beyond
6. TransCanada / Energy East \$0.5 Billion “contribution” is amortized over 15 years, effectively a 15 year rate reprieve

Natural gas consumers should not be subsidizing the cost of the oil pipeline project

2.4 Rate Impact Issues

Ontario Will Experience Rate Increases



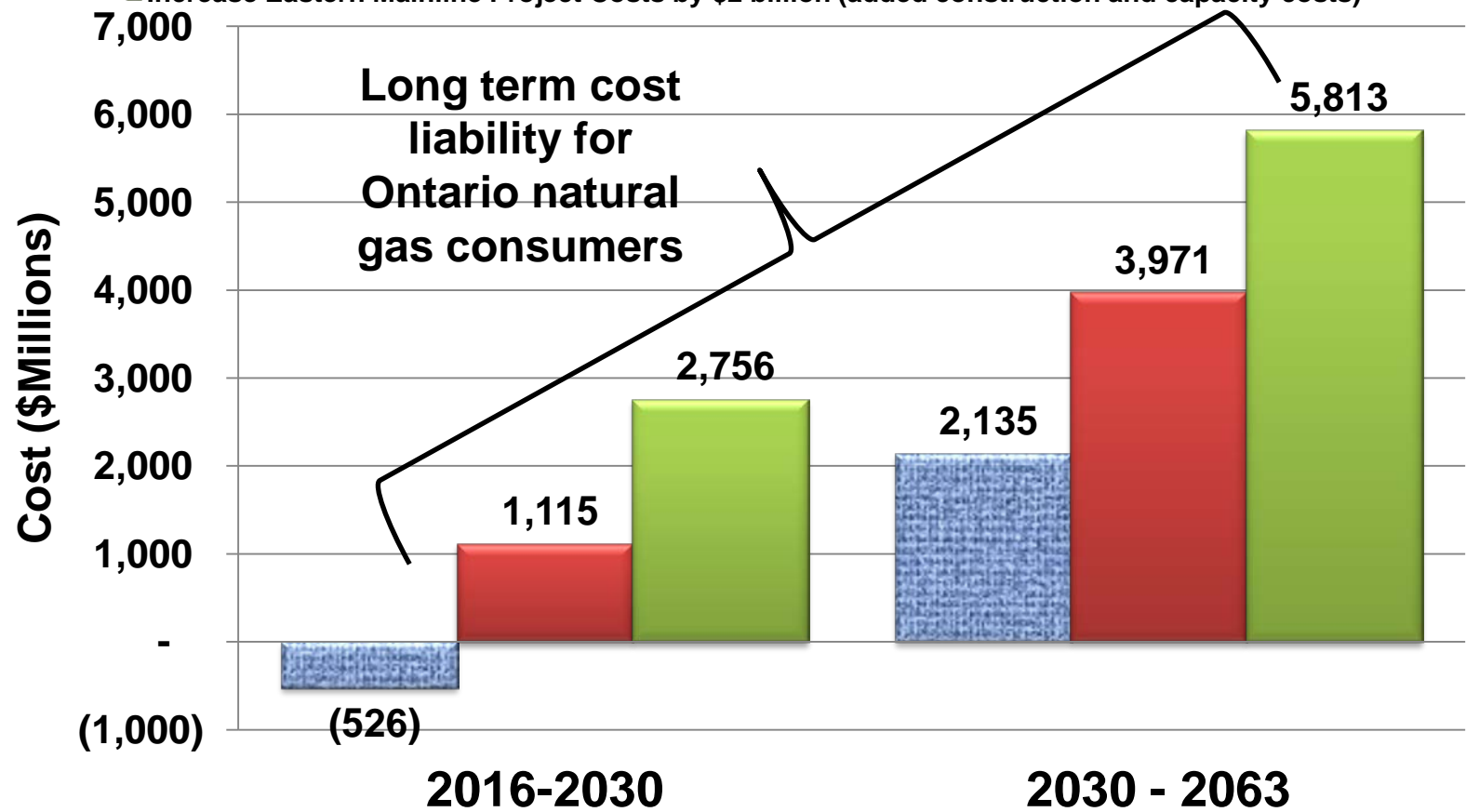
Significant capital cost and toll risk pre and post 2030

2.4 Rate Impact Concerns

Significant Cost Risk for Ontario Consumers



- TransCanada Proposal (only replace half of existing capacity)
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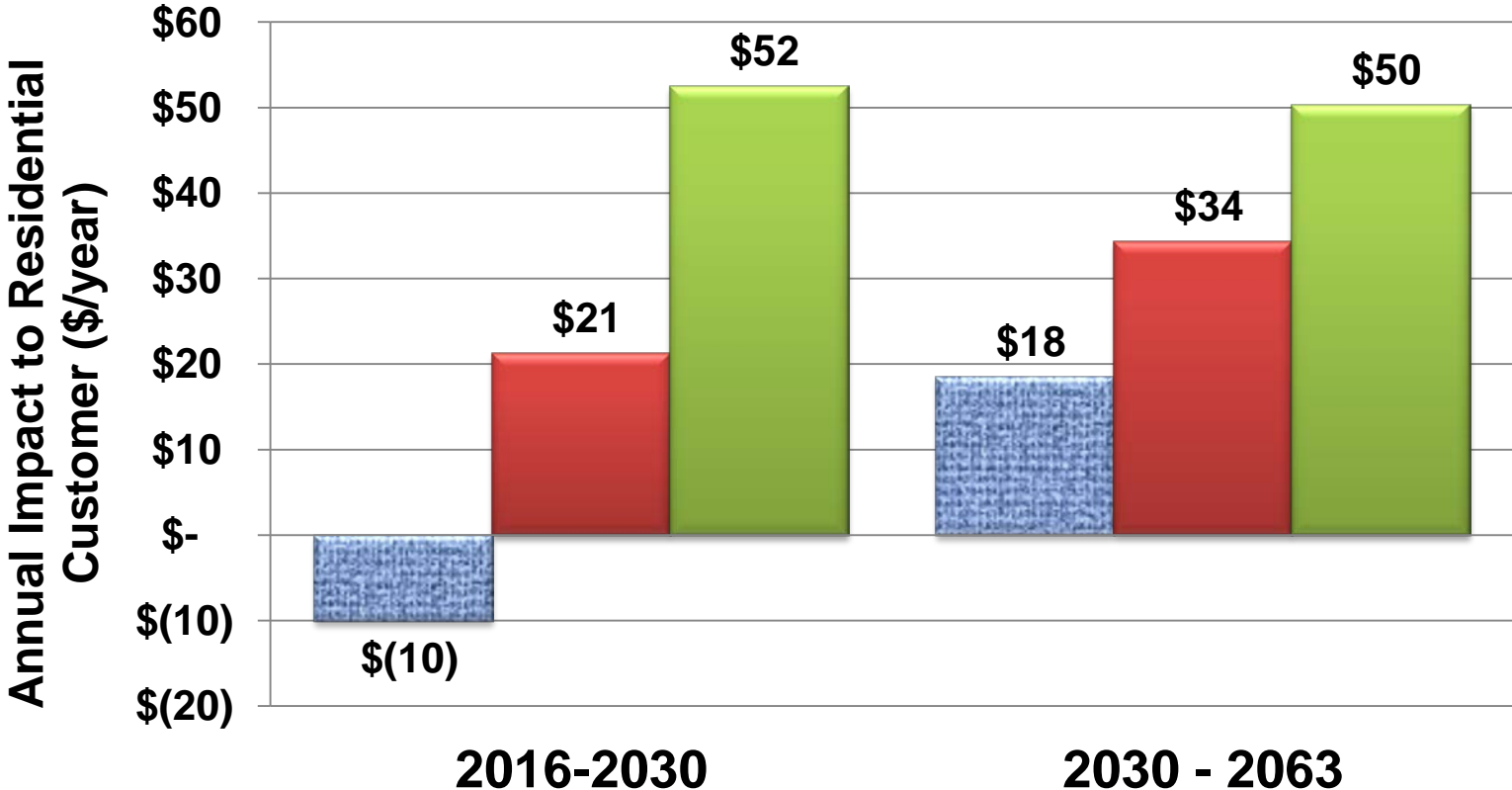


TransCanada cost estimates and 15 year NPV significantly understates risks to Ontario natural gas consumers

2.4 Rate Impact Issues

Cost Risks for Ontario Residential Consumers

- TransCanada Proposal (only replace half of existing capacity)
- Increase Eastern Mainline Project Costs by \$1 billion (added construction and capacity costs)
- Increase Eastern Mainline Project Costs by \$2 billion (added construction and capacity costs)



As currently structured, Energy East will increase long term costs to Ontario and Québec natural gas customers

2.4 Rate Impact Issues

Ontario Energy Costs Increase

Residence



Up to \$50 increase/y

School



\$500 - \$1000 increase/y

Hospital



\$3,000 - \$25,000 increase/y

Industry



\$250,000 - \$500,000 increase/y

Cost impacts will be felt by all Ontario customers

2.4 Rate Impact Issues

Net Present Value Not Appropriate Measure

- TransCanada calculates that natural gas Mainline shippers will benefit ~\$950 million on an NPV basis
 - This is calculated to 2030; but there are significant cost increases beyond 2030, so the application ignores longer term cost impacts
 - Eastern Ontario Triangle gas shipper's share is ~\$500 million on an NPV basis
- Every year Energy East is delayed reduces the benefit to natural gas Mainline shippers by ~\$200 million on an NPV basis
 - Majority of benefit occurs in 2015-2020 time period
- Every \$1 in capital cost to build pipe capacity beyond TransCanada's proposal and / or for construction cost overruns decreases benefit \$1 on an NPV basis
 - An additional \$500 million in capital costs for the Eastern Mainline Project eliminates the benefit to Eastern Ontario Triangle gas shippers on an NPV basis
 - An additional \$1 billion in capital costs for the Eastern Mainline Project eliminates the benefit to all Mainline natural gas shippers on an NPV basis

Sufficient low cost capacity exists today that adequately serves Ontario, Québec and U.S. Northeast markets

For Energy East to be Right for Ontario:

- No negative cost exposure for natural gas consumers
 - Leave existing natural gas pipeline in North Bay Short Cut in place
 - If existing pipe is replaced, cost to natural gas consumers to replace existing capacity should be no higher than existing rate base of \$0.4 billion, with oil shippers assuming replacement cost risk
 - Allocation of Western Mainline benefits should be assessed independently of the Eastern Ontario Triangle
- Eliminate subsidization of oil pipeline by natural gas consumers
- Eliminate long term cost recovery risk for natural gas consumers

Leave Ontario natural gas customers whole



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2.5 Reliability Issues - Details

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Energy East Impacts Natural Gas System Reliability

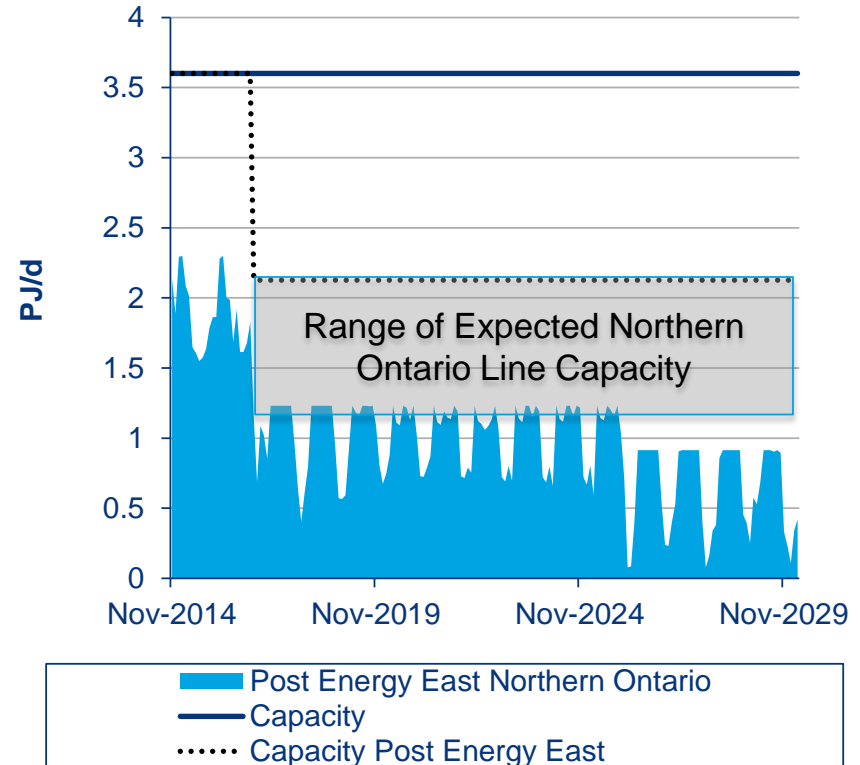
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- Discretionary Capacity
 - TransCanada proposes to eliminate all discretionary natural gas capacity on its Eastern Mainline Project, though Energy East oil pipeline is designed to provide ~20% discretionary capacity to oil shippers
- Operational Flexibility
 - In an upset condition, interruption of firm service customers will be more frequent due to reduced capacity

2.5 Reliability Issues

Northern Ontario Line Capacity

- Northern Ontario Line capacity post-Energy East requires TransCanada to perform maintenance to restore capacity
- Current capacity less than design capacity of 2.1 PJ/d
- Capacity needs to be greater than November 1, 2016 firm contract capacity of 1.1 PJ/d and should consider discretionary market needs
- Energy East funding gas pipeline integrity work in the short term, but scope and long term implications are not clear

Capacity and Flows on Northern Ontario Line



TransCanada proposal for Northern Ontario Line capacity needs to be included in Energy East applications

2.5 Reliability Issues

Discretionary Capacity

- TransCanada's Energy East application proposes to convert for oil use existing natural gas capacity that has been and continues to be fully used and contracted on the coldest days
 - Some of the capacity is used under discretionary contracts
- The oil capacity of Energy East is designed with an excess, discretionary capacity of approximately 20%
- Yet TransCanada proposes to eliminate all discretionary natural gas capacity on its Eastern Mainline Project
- This is not fair to current natural gas customers and does not make sense

Why does TransCanada think it is okay to eliminate discretionary capacity available to natural gas customers today?

2.5 Reliability Issues

Operational Flexibility

- Today, if the natural gas system experiences an upset condition, TransCanada cuts discretionary service before a prorata cut to firm service
- Because of the way TCPL is interpreting their right to retain facilities for gas transportation service, this discretionary capacity is disappearing
- Along with it, utility flexibility to deal with emergencies is diminished, which could lead to interruption of firm customers more often in the future

Energy East increases risk of interruption to firm natural gas customers



ENBRIDGE GAS DISTRIBUTION

2.6 Closing - Details

2.6 Closing

Principles to Evaluate Energy East

- Union Gas and Enbridge support most of TransCanada's Energy East application, however, we are concerned about negative impacts to natural gas markets and consumers in the Eastern Ontario Triangle
- Principles include:
 1. Capacity Neutrality: Energy East reduces natural gas capacity on a fully utilized system. Some of EGD and Union's customers rely on delivered supply instead of firm contracts
 2. Commodity Price Neutrality: Energy East will result in natural gas commodity price spikes in the eastern Ontario market area due to scarcity of supply when demand is highest, during the coldest periods
 3. Natural Gas Rate Neutrality: Energy East will increase natural gas rates to customers due to the attribution of higher replacement cost for low cost capacity that exists today
 4. Continued Reliability: Energy East increases risk from a reliability perspective due to diminished discretionary capacity which has served to provide flexibility in upset conditions
- The Energy East project must not negatively impact Enbridge and Union Gas' statutory obligation to service current natural gas customers that rely on TransCanada's system today
- Oil shippers that get the benefits of the project should pay the costs. We are not asking for anything more for our customers than what they already have. No more, and certainly no less

- TransCanada should leave the existing natural gas pipeline in the North Bay Short Cut in place and build a new oil pipeline from North Bay to Ottawa, preserving existing cost structure and necessary capacity
- If TransCanada is allowed to convert the existing natural gas pipeline in the North Bay Short Cut to oil, as proposed, TransCanada should commit to the following:
 - **Capacity and Commodity Price Neutrality:** Size of “new natural gas replacement pipeline” to be based on results of both the 2016 and 2017 open seasons and a reasonable allowance for future growth and discretionary capacity
 - **Rate Neutrality:** Rate base of “new natural gas replacement pipeline” to be no higher than current North Bay Short Cut pipeline value of \$0.4B
- Allocation of Western Mainline benefits to be determined independently of the Eastern Ontario Triangle

We are not asking for anything more for our customers than what they already have