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POWER PRODUCERS
OF ONTARIO

Natural Gas Market Review EB-2010-0199

Presented to the Ontario Energy Board
October 7/8, 2010

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President & CEO





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Agenda

- APPrO – who we are
- Background on Ontario's gas-fired generators
- Current Key Issues
- Responses to OEB Questions
- Summary
- Questions?



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Who We Are

- The trade association for Ontario's commercial electricity generators and related businesses
- 20+ generator members produce 98% of Ontario's electricity from nuclear, hydro-electric, fossil, wind, solar, waste wood and other fuels
- Members have built and operate nearly all of Ontario's generation.
 - Represent 90% of the MW of Ontario's gas-fired fleet
 - Total gas generation output was 13.4 GWh or 12.7% of total energy produced as of September 13, 2010
- Our main focus is advocacy; we also produce a bi-monthly magazine, *IPPSO Facto*, and Canada's largest power sector conference (November 16/17)



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Key APPrO generator members

- OPG
- Bruce Power
- Brookfield
- TransAlta
- TransCanada
- Sithe
- Capital Power
- Northland Power
- West Windsor Power
- Cardinal Power
- Brighton Beach
- Greater Toronto Airport Authority
- Regional Power
- International Power
- Toromont Energy
- Pristine Power



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APPRO Mission

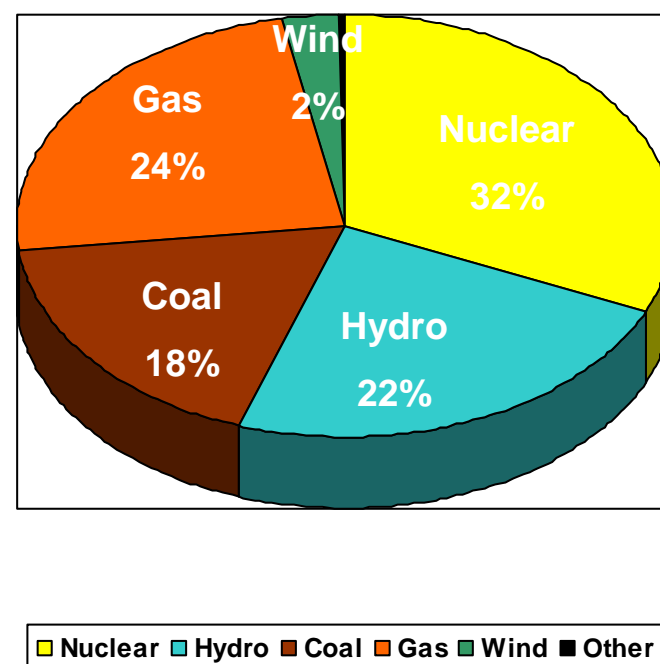
- Mission
 - Achieve a policy & business environment that supports the business interests of commercial electricity generators including a reasonable rate of return.
 - Long-term policy and regulatory framework that provides certainty, fosters investment at most effective cost
 - Competitive and reliable market-based system, recognizing generators' interests in the context of the public good
 - Appropriate consideration of environmental and economic sustainability



Gas Fired Generation in Ontario

- Ontario's existing installed generation capacity is 35,781 MW
- Gas-fired generation represents 24%
 - 31 stations with total capacity of ~8500 MW
 - 1200 MW of OPA contracted capacity not yet in service (York Region, Oakville)
 - Smaller new gas-fired capacity likely in GTA and other areas

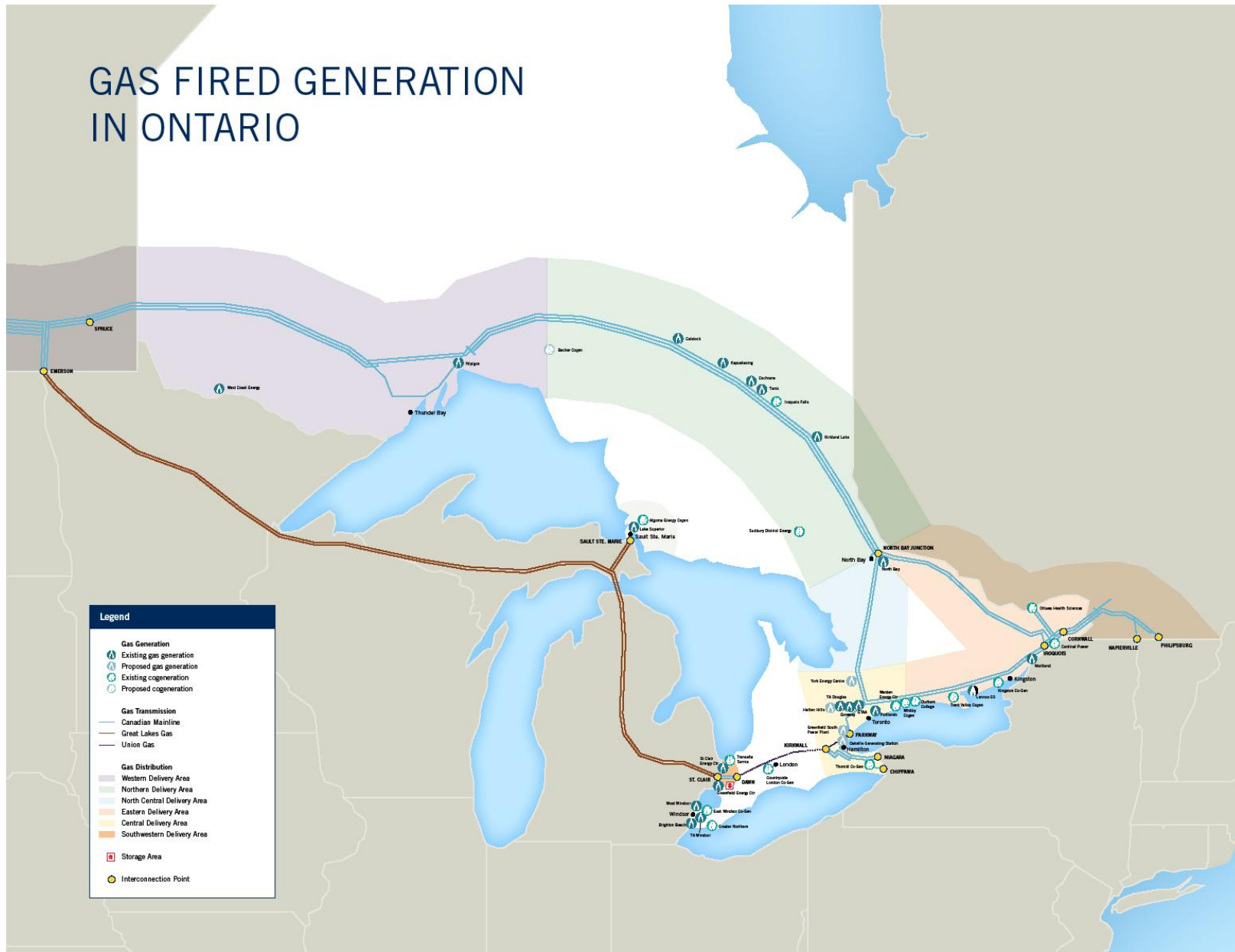
Existing Installed Generation



GAS FIRED GENERATION IN ONTARIO



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September 24, 2010

Newer Dispatchable Gas-Fired Plants

- OPA contracted plants to replace coal, address local reliability needs, support variable renewables
 - Range between 100 and 1000 MW in capacity, and are dispatchable
 - Includes smaller CHP facilities
 - In service from about 2002
 - Newest in full operation in 2010
 - Currently ~5000 MW in service -- 6700 MW by 2014

Exhibit 26: Gas-Fired Capacity Projects



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Energy Source		Project Name	Contracted Capacity (MW)	Commercial Operation Date
Clean Energy Supply Contracts, Clean Energy Standard Offer, CHP RFP, CES Early Movers, Downtown Toronto and Goreway Contracts, Western GTA Supply, Northern York Region, Southwest GTA Supply,	Simple/Combined Cycle	Brighton Beach Power Station	541	Jan-06
		Goreway Station	839	Jun-09
		Greenfield Energy Centre	1,005	Oct-08
		GTAA Cogen	90	Feb-06
		Portlands Energy Centre	550	Apr-09
		Sarnia Regional Cogen	444	Jan-06
		St. Clair Energy Centre	577	Mar-09
		Sudbury District Cogen	5	Jan-06
		Sudbury Hospital Plan	7	Jan-06
		Greenfield South Power	280	Aug-12
		Halton Hills Station	631	Aug-10
		Oakville Station	900	Jan-14
	York Energy Centre	393	Dec-11	
	Combined Heat and Power	Trent Valley Cogen	8	Jan-06
		Algoma Energy Cogen	63	Jun-09
		Durham College Cogen	2	Mar-08
		East Windsor Cogen	84	Nov-09
		Great Northern Tri-Gen	11	Oct-08
		London Cogen	12	Dec-08
		Thorold Cogen	236	Mar-10
Warden Energy Centre		5	Jun-08	
Becker Cogen Plant	15	Aug-11		
Total			6,699	

Source: Ontario Power Authority, A Progress Report on Electricity Supply Q1 2010.

Source: ICF 2010 Natural Gas Market Review Report

Newer Dispatchable Gas-Fired Plants

- Large projects – up to \$1 billion
 - Rely heavily on debt markets to finance projects
 - Lenders scrutinize fuel procurement practices for risk exposure – these follow revenue flow to ensure lenders are supportive
 - OPA contracts seek to provide effective hedge between Ontario electricity price and Dawn day-ahead gas index
 - Gas delivery and management costs generally covered by fixed portion of OPA contract price

Gas Fired Non-Utility Generators (NUGs)

- Developed by various Independent Power Producers (“IPPs”) in the 1990s with Power Purchase Agreements (“PPAs”) from Ontario Hydro
 - About 1300 MW of capacity in the North, SW and Eastern Ontario
 - Most are CHP, and self-scheduling
 - Gas supply and transportation arrangements entered into in order to finance plants
 - Gas is generally supplied under high load factor, firm long haul arrangements
 - Transportation usually not indexed
 - 20 year PPA’s expire 2012 and on



APPRO NUG Plants

Plant Name	Owner	Location	MW	PPA expires
Lake Superior Power	Brookfield Power	Sault Ste. Marie	110	2014
North Bay	Capital Power	North Bay	48	2017
Calstock (Hearst)	Capital Power	Hearst	35	2020
Tunis	Capital Power	Tunis	48	2010
Nipigon	Capital Power	Nipigon	40	2012
Kapuskasing	Capital Power	Kapuskasing	48	2017
Cardinal Power	Macquarie Infrastructure Fund	Cardinal	156	2018
Cochrane	Northland Power	Cochrane	38	2015
Northland - Kirkland Lake	Northland Power	Kirkland Lake	103	2015
Northland - Kingston	Northland Power	Bath	110	2017
Iroquois Falls	Northland Power	Iroquois Falls	126	2022
West Windsor	Suez	Windsor	112	2016
TransAlta - Ottawa	TransAlta	Ottawa	66	2012
TransAlta - Windsor	TransAlta	Windsor	65	2016
TransAlta - Mississauga	TransAlta	Mississauga	110	2017

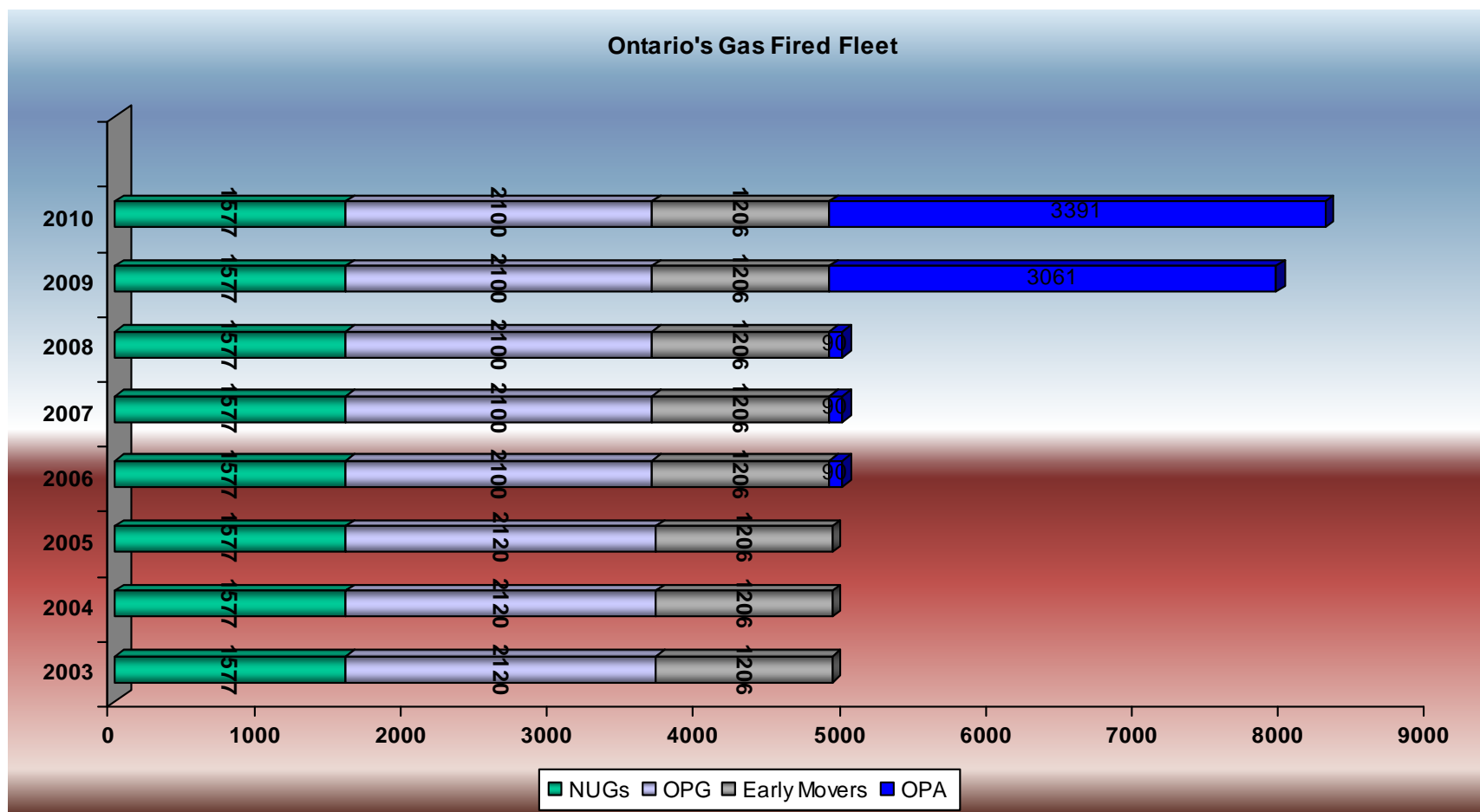


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Non-Utility Generators (NUGs)

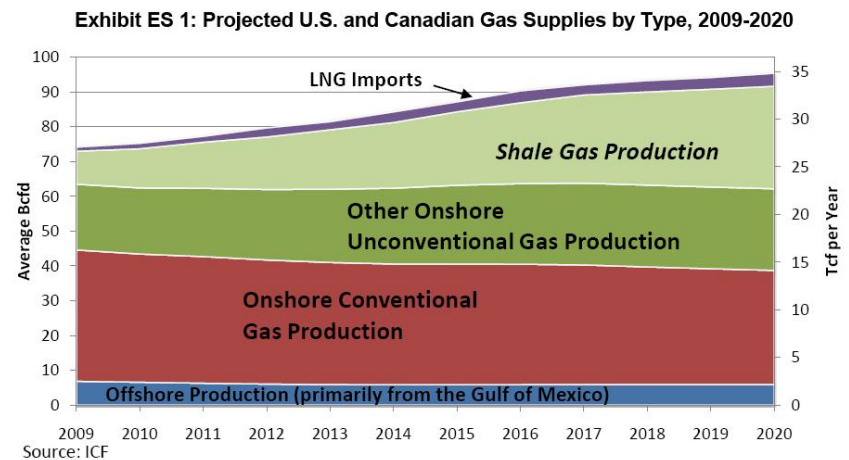
- Some will continue under new OPA contracts which will require enhanced flexibility (dispatchability)
- Under such arrangements likely need
 - Access to more balancing services to accommodate generation during peak periods (vs. current very high load factor gas consumption)
 - Access to local (i.e. Dawn) competitive supplies (vs. current Alberta based supply)
 - Distribution services that recognize new operating mode (e.g., NGEIR type services targeted towards new large generation)

Ontario's Growing Gas-fired Fleet



Current Issues for Ontario's Gas-fired Generators

- As the ICF Report points out, Ontario is in the midst of a transition from mostly Western Canadian gas to a “new model”
 - Shale gas is projected to account for nearly 30 percent of Ontario's total gas supply by 2020.
 - TCPL flows are decreasing



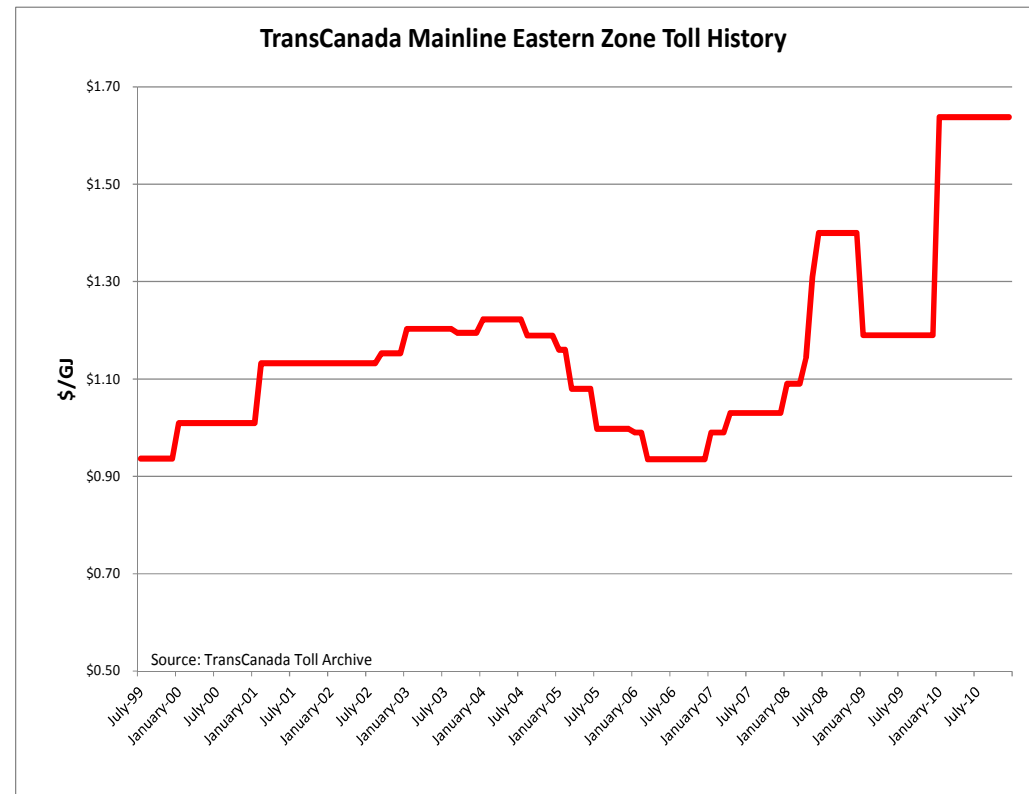
Source: ICF 2010 Natural Gas Market Review Report



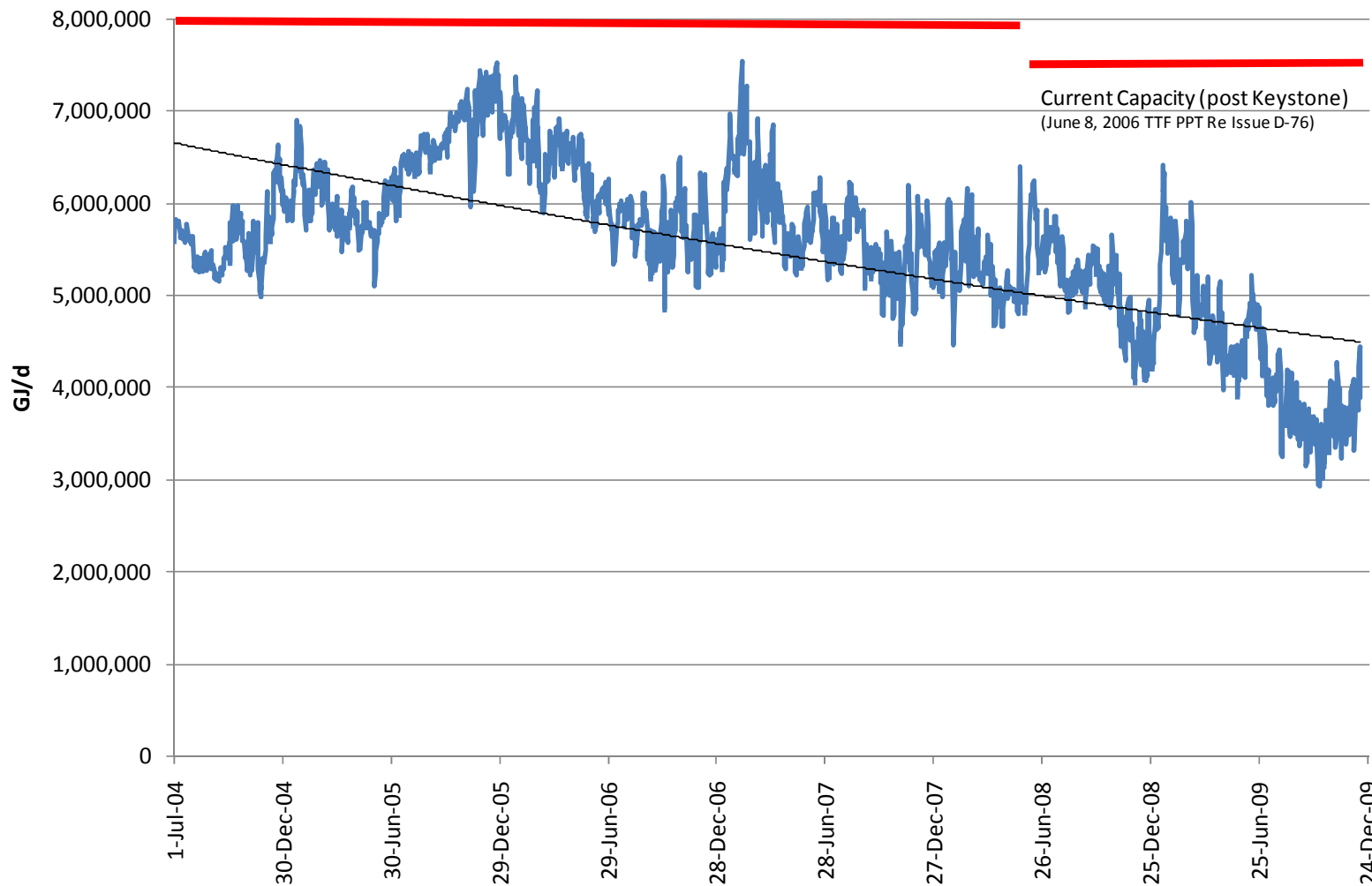
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Current Issues for Ontario's Gas-fired Generators Tolls

- TCPL tolls have significantly increased over the last 3 years
- Increase of over 60% since inception of Settlement Agreement



Flows in From Western Canada (Bayhurst 1&2, Herbert, Liebenthal, Richmond, Shackleton, Steelman, Success, Suffield)



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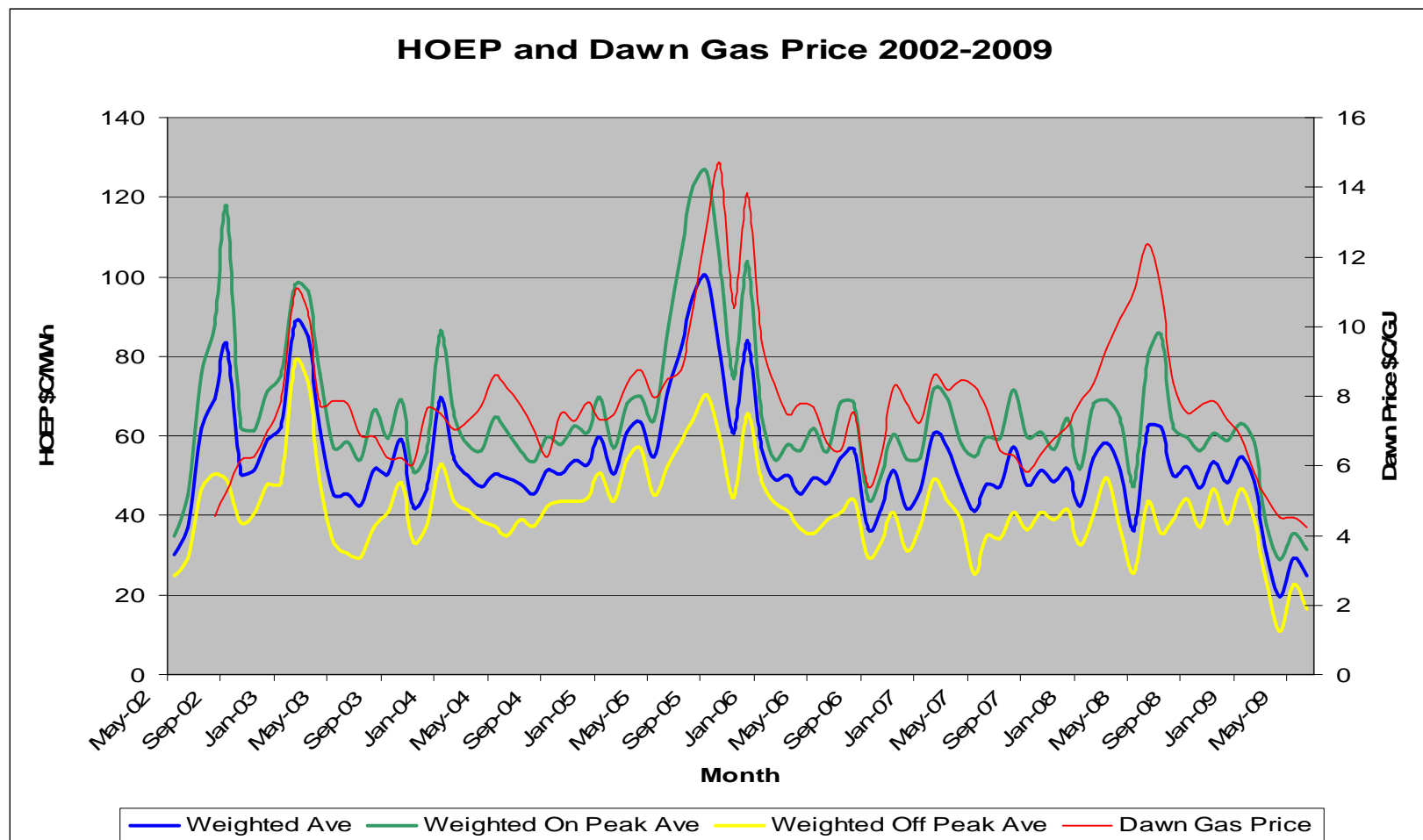


Challenges

- The change in supply sources results in transitional costs which are distributed inequitably as compared to the benefits
 - NUG contracts do not cover transportation escalations: these must come from the IPP
 - Over \$60 million in toll increases off bottom-lines since 2007
 - OPA CES-type contracts do not cover full cost of recent toll escalations either
 - These increases are also material (if smaller than NUGs')
 - But, electricity ratepayers benefit from lower gas prices/lower Ontario electricity prices



HOEP and Dawn Price





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Question 1

- *Given the changes identified in the ICF Market Report, what might the opportunities for Ontario gas market participants (i.e. producers, storage providers, transmitters, distributors, wholesale and retail gas marketers, gas generators, and industrial, commercial and retail users)?*



Response

- Gas flow patterns in North America migrating towards a north-south flow pattern.
- The Ontario market is a natural market for US supply sources
- Ontario has high quality storage that can be used to enhance the value of shale gas supplies
- Generators and other Ontario customers will want to access to these US supplies
- Access to US supplies also increases the overall security of supply for Ontario by providing greater supply diversity and less reliance on any single pipeline company
- Pipelines directly or indirectly accessing the US supply sources (Union, Niagara Gas, MHP, TransCanada, and potentially new market entrants) should be encouraged to develop competitive services
- More US production will naturally be available in summer months than winter, driving storage development
- Many Ontario customers, including many generators are captive, in the short to medium term to the TransCanada system.
- The role of the TransCanada system is however changing from primary long haul supply function for Ontario to a more regional transmission function.



Question 2

- *What might be the challenges for Ontario gas market participants? For example, the ICF Market Report identifies that “one of the principal concerns about declining throughput is whether the resulting higher per unit cost of transportation would lead to continued decontracting of TCPL capacity...”*
- *What are the possible consequences of this? Such as:*
 - *to Ontario customers in terms of adequacy and quality of service and price;*
 - *to Ontario storage providers, transmitters and distributors in terms of the cost of and access to equity and debt capital; and*
 - *to others?*
- *Are there other issues and/or concerns that might pose challenges for Ontario energy sector participants?*



Response

- TransCanada tolls have rapidly escalated due to lower throughputs
 - Under the current tolling methodology, additional load loss will result in excess capacity on the TransCanada system and higher tolls which in turn will further reduce their competitiveness
 - TransCanada requires a substantial redesign of their tolling methodology to be competitive and regain market share
- Board policies should continue to promote access to competitive supply options and not create artificial barriers to limit access to competitive supplies as this will in the medium to long run cost Ontario customers more which could negatively impact the economy
- APPrO sees that the access to additional US supplies will increase the diversity of supply and therefore increase the overall security of supply. It will also increase competition among supply sources
- In terms of access to capital markets for Ontario storage providers, transmitters and distributors APPrO generally sees little or no impact



Response

- There may be a lower throughput on TransCanada, however, as pointed out by ICF as flows on TCPL are more supply driven
 - Exhibit 45 indicates that flows on the TransCanada system will reduce by 1,244 mmcf/d between 2009 and 2020. This results from increased Alberta demand for gas and access in Ontario to more competitive supplies
 - APPRO believes that there are a variety of ways that TransCanada can mitigate the effects of this decline, including such things as:
 - Reduced TBO costs while Canadian facilities are underutilized
 - Temporary deactivation of underutilized assets
 - Finding other value propositions for shippers to re-contract on their system
- APPRO does not believe that there will be a material impact on upstream producers from Ontario accessing other supply sources.



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Question 3

- *In the Board's last natural gas review, the Board identified a need to offer utilities the opportunity to apply for pre-approval of long-term supply and/or transportation contracts. On April 23, 2009, the Board issued its Filing Guidelines for the Pre-Approval of Long-Term Natural Gas Supply and/or Upstream Transportation Contracts (Board File No.: EB-2008-0280). In those guidelines, one of the Board's requests is that applicants provide "[a]n assessment of retail competition impacts and potential impacts on existing transportation pipeline facilities in the market (in terms of Ontario customers)".*
 - *If, as a result of new gas supply from the Marcellus, new or an expansion of Ontario natural gas pipelines under the jurisdiction of the OEB are proposed, should potential impacts on existing pipeline facilities in the market (in terms of Ontario customers) be considered? If so, why, and what are the implications and/or risks of doing so? If not, why, and what are the implications and/or risks of not doing so?*



Response

- APPRO recognizes the need for the rational and efficient development of the natural gas infrastructure.
- If new infrastructure is being developed that potentially results in other infrastructure being underutilized:
 - Is the new infrastructure as a result of supply shifts?
 - Will more competitive supplies becoming available?
 - Is there lack of competition from other supply routes?
 - Is there growth in markets?
- If the Board considers the effects of new supply routes and new supply sources on existing infrastructure, what criteria would the Board consider for such evaluation?
 - What infrastructure would be considered?
 - The impact on market mechanisms
 - The long run costs of natural gas
 - Does the concept of such a review reduce the requirement for alternative supply sources and routes to operate efficiently and competitively



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Response, continued

- APPrO is of the view that the Board should encourage market mechanisms to work, but:
 - The Board does need to keep in mind that many customers will be captive to TCPL or other systems by geography or contract for some time.
 - These customers will not have any alternative supply options and will require some form of rate protection to ensure rates are just and reasonable.
 - The Board should therefore carefully consider the possibilities for unintended consequences in approving new supply sources – but such reviews should not discourage the need for pipeline systems to operate efficiently



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Question 4

- *What further action, if any, might the Board undertake on its own or in conjunction with others? Are there areas in which there is need for alignment between the work of the Board and other regulatory agencies? If so, how might that alignment be achieved?*



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Response

- Minimize artificial barriers for access to competitive gas supplies
- Help ensure that pipeline routes accessing Ontario markets operate efficiently



Summary

- Gas-fired generators could be 1/3 of the total Ontario gas consumption by 2020
 - Looking for the lowest all-in landed cost at the burner tip
- Balance needed between market mechanisms for rational development of upstream infrastructure and public interest in assessing new long term supply arrangements
 - Access to adequate competitively priced supply critical for the success of this market and Ontario's power requirements
 - Ongoing evolution of storage, distribution and transmission services will be necessary to meet generator needs
 - Consider potential unintended consequences of approving new supply sources
- Transition in supply sources results in costs which are distributed inequitably as compared to the benefits



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Questions





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APPrO is a non-profit organization representing more than 100 companies involved in the generation of electricity in Ontario, including generators and suppliers of services, equipment and consulting services. APPrO members produce power from nuclear, fossil, hydro-electric, wind, solar, waste wood and other fuels. APPrO's members currently produce over 95% of the electricity made in Ontario.

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