



APPRO

ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

Natural Gas Market Review
2014
EB-2014-0289

November 23, 2014



Agenda

- Introduction to APPRO
- Overview of the Gas-Fired Power Generation Market in Ontario
- Emerging Issues of Concern to APPRO Members
 - Changes to Utility Services
 - Sufficiency of Upstream Infrastructure
 - Sufficiency of Downstream Infrastructure
 - Energy East



Introduction to APPRO

- 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 co-generation, hydro-electric, gas, coal, nuclear, wind energy, waste wood and other sources. APPRO's members produce most of the electricity made in Ontario.
- APPRO exists to ensure that the market for electrical production is competitive, efficient, open to new entrants, and as fair as possible.



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Overview of the Gas-Fired Power Generation (GFG) Market in Ontario

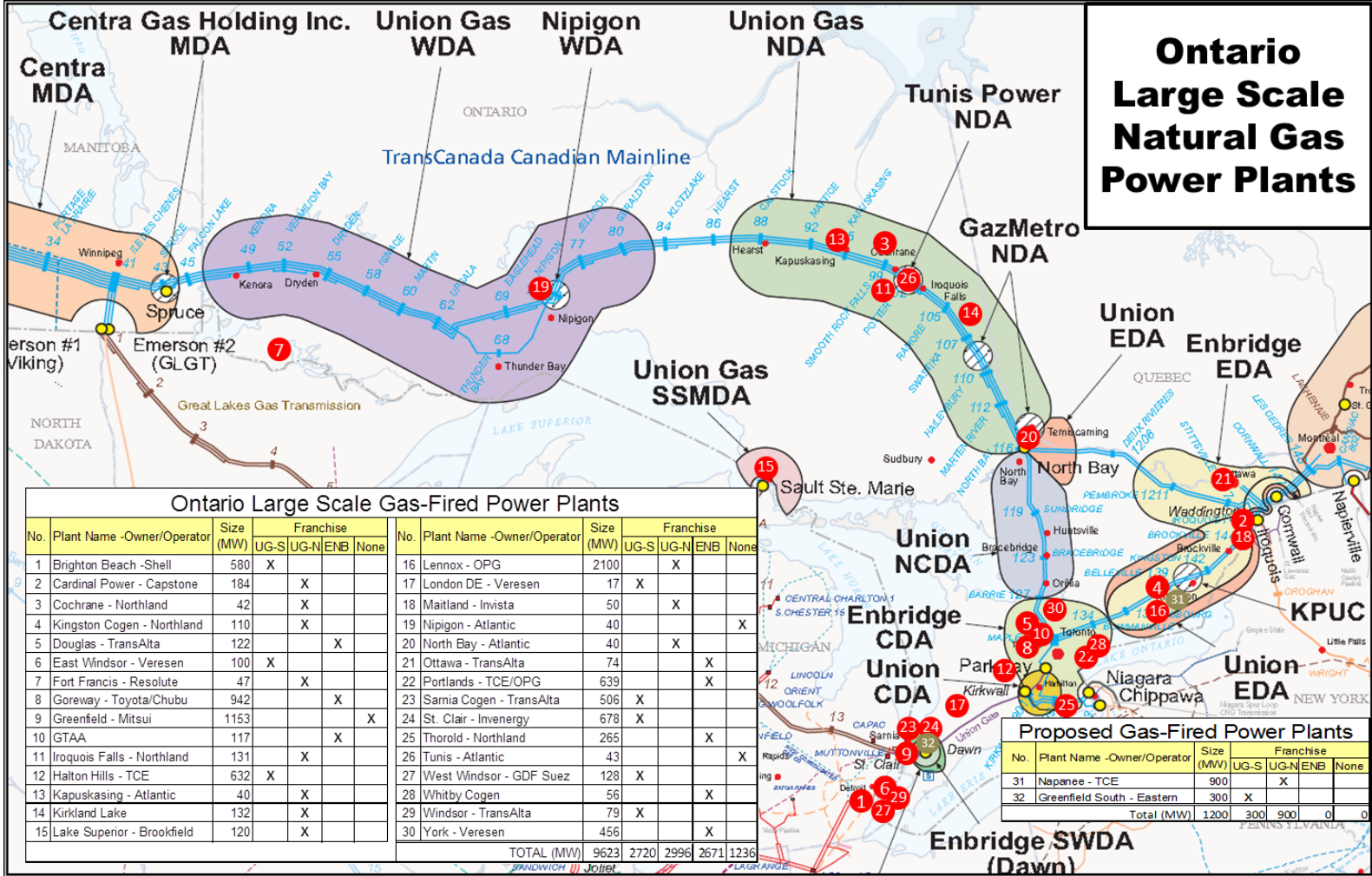


Gas-Fired Generation in Ontario

- Over 9,600 MW of existing GFG power plants
- Over 1,200 MW of new GFG power plants under development (including Napanee and St. Clair Township as well as 14 MW CHP)
- GFG power production essential to:
 - Meet Ontario's power needs in a post coal environment
 - Backstop the variability from renewable energy production



Ontario Large Scale Natural Gas Power Plants



Ontario Large Scale Gas-Fired Power Plants

No.	Plant Name -Owner/Operator	Size (MW)	Franchise				No.	Plant Name -Owner/Operator	Size (MW)	Franchise			
			UG-S	UG-N	ENB	None				UG-S	UG-N	ENB	None
1	Brighton Beach - Shell	580	X				16	Lennox - OPG	2100		X		
2	Cardinal Power - Capstone	184		X			17	London DE - Veresen	17	X			
3	Cochrane - Northland	42		X			18	Maitland - Invista	50		X		
4	Kingston Cogen - Northland	110		X			19	Nipigon - Atlantic	40				X
5	Douglas - TransAlta	122			X		20	North Bay - Atlantic	40		X		
6	East Windsor - Veresen	100	X				21	Ottawa - TransAlta	74			X	
7	Fort Francis - Resolute	47		X			22	Portlands - TCE/OPG	639			X	
8	Goreway - Toyota/Chubu	942			X		23	Samia Cogen - TransAlta	506	X			
9	Greenfield - Mitsui	1153				X	24	St. Clair - Invenergy	678	X			
10	GTA	117			X		25	Thorold - Northland	265			X	
11	Iroquois Falls - Northland	131		X			26	Tunis - Atlantic	43				X
12	Halton Hills - TCE	632	X				27	West Windsor - GDF Suez	128	X			
13	Kapuskasing - Atlantic	40		X			28	Whitby Cogen	56			X	
14	Kirkland Lake	132		X			29	Windsor - TransAlta	79	X			
15	Lake Superior - Brookfield	120		X			30	York - Veresen	456			X	
TOTAL (MW)		9623	2720	2996	2671	1236							

Proposed Gas-Fired Power Plants

No.	Plant Name -Owner/Operator	Size (MW)	Franchise			
			UG-S	UG-N	ENB	None
31	Napanee - TCE	900		X		
32	Greenfield South - Eastern	300	X			
Total (MW)		1200	300	900	0	0

Revised November 2014



Long Term Energy Plan

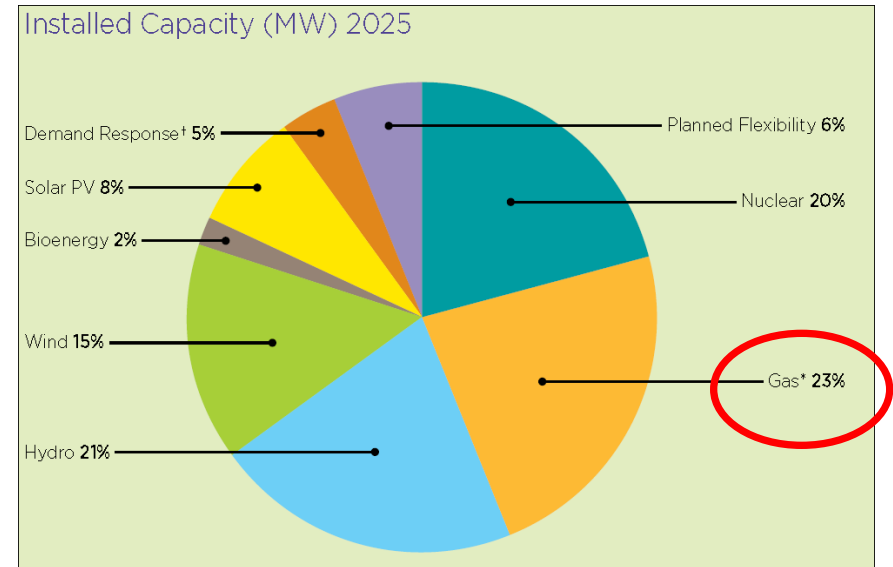
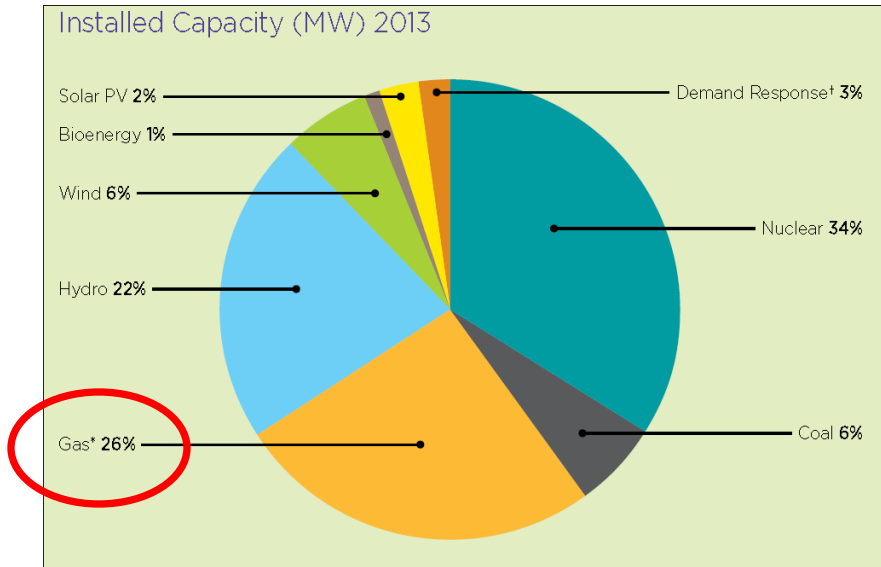
- Natural Gas and Combined Heat and Power
 - Natural gas-fired generation will be used flexibly to respond to changes in provincial supply and demand and to support the operation of the system
 - The OPA will undertake targeted procurements for Combined Heat and Power (CHP) projects that focus on efficiency or regional capacity needs, including a new program targeting greenhouse operations, agri-food and district energy



NUGs

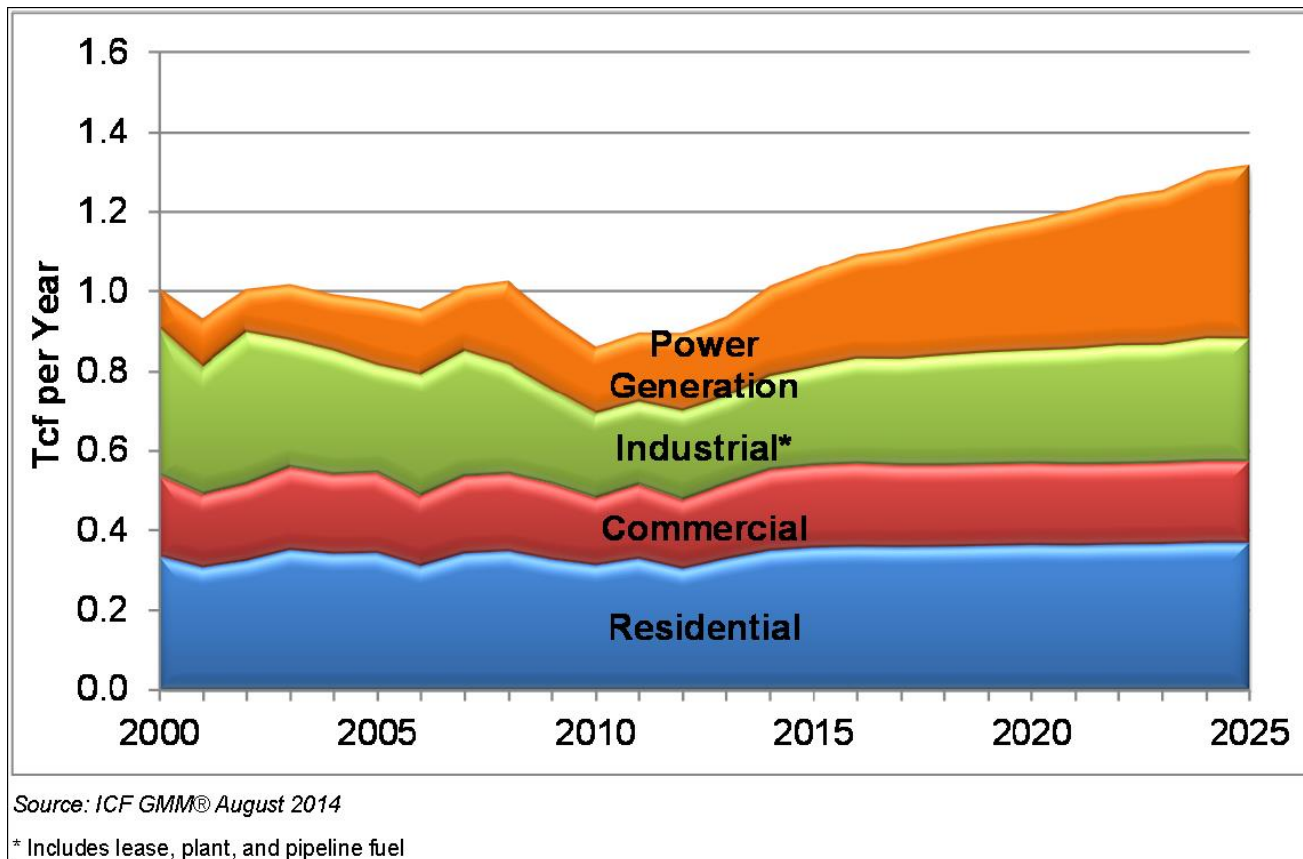
- On November 23, 2010, the Ontario Power Authority (OPA) received a Directive from the Ministry of Energy to negotiate for new contracts with the owners or operators of the non-utility generators (NUGs) where these would have cost and reliability benefits to Ontario electricity consumers
- These new contracts are essentially contracts for capacity only.
 - NUGs will be dispatchable and use gas differently in the future than they have in the past and require different services

Percentage of Installed Capacity of GFG Expect to Remain Constant at about 25%



Source: Ontario LTEP

New Plants and Higher Capacity Factors will Result in the GFG Load Being the Fastest Growing Natural Gas Sector in Ontario (0.32 TCF by 2020)





Summary of the GFG Market

- Demand for gas for GFG is increasing
 - New plants
 - Higher capacity factors (nuclear refurbishments)
 - Capacity auctions?
- The way GFGs will use gas is changing
- The existing utility services do not fully meet the needs of generators



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Emerging Issues of Concern to APPRO Members

Changes to Utility Services

- Moving to Unobligated DCQ (“UDCQ”) for all Dispatchable Generators
 - Union South Obligated DCQ (ODCQ) deliveries were established at the onset of deregulation for customers that had relatively well known consumption characteristics
 - Historically all obligated deliveries were at Parkway (or other pipelines), Parkway obligations being phased out which eliminates the ‘transportation’ need for ODCQ
 - Dispatchable generators only run when the power price is high enough to recover the current commodity cost of gas.
 - Dispatchable plants may not run even on days that are peak for the rest of the industry, and typically run 10-40% load factor. They can be idle for many days at a time
 - ODCQ gas brought in, that is in excess of current needs, are deemed injected into storage and withdrawn at a later time, creating a financial liability (e.g. Late Feb/Mar prices were \$30-\$45/GJ when injected into storage and withdrawn in April when prices were \$5/GJ)



Changes to Utility Services (continued)

- Current DCQ Policy for T1/T2/T3 (<1.2 million m³/d or otherwise not eligible for Firm Billing Contract Demand)
 - New customers east of Dawn ODCQ at Parkway
 - New large customers (> 1.2 million m³/d) west of Dawn can choose an UDCQ
 - New customers (< 1.2 million m³/d) west of Dawn ODCQ at Dawn or Parkway
- Existing generators (at the time of the NGEIR policy change) not eligible for UDCQ
- Storage allocation methodology may need updating
 - Aggregate Excess methodology may not result in any storage being allocated
 - Large volume customers have additional storage options
- APPrO proposes all dispatchable generators be eligible for UDCQ
 - Union has commenced consultation with customers on an UDCQ



Changes to Utility Services (continued)

- Union North Service
 - Existing plants operating under Union's large volume rate must switch to a medium volume, more expensive rate when they become dispatchable even though no new facilities required
 - New large GFG plants not eligible for Union's large volume rate, due to low LF
 - No firm balancing services available in the North
 - Consultations with Union to look at potential options
 - Propose to continue to work with Union to seek out reasonable solutions

Changes to Utility Services (continued)

Changes to the Gas Day

- FERC issued an order Nov 15/12 dealing with potential improved scheduling between gas and electric markets
- OEB NGEIR proceeding implemented improved scheduling between these markets in Ontario in EB-2005-0551
- Any changes to US gas nomination windows will affect Canadian markets
- FERC proposed certain changes to gas nomination windows in NOPR Mar 20/14
- In FERC Staff Sept 14 quarterly update, they indicated that there was industry support for the following nomination window changes (all times Central Clock Time CCT):
 - Timely 1:00 pm (currently)
 - Evening 6:00 pm (currently)
 - Intraday 1 10:00 am (currently)
 - Intraday 2 2:30 pm (currently)
 - Intraday 3 7:00 pm (new window)
 - Intraday 4 did not agree with NOPR that it was required
- Changes subject to a final FERC order
- In addition to the 4 standard NAESB windows, TransCanada offers a service with 96 nomination windows and Union offers a service with 13 nomination windows for F24-T



Sufficiency of Upstream Infrastructure

- There is ongoing migration of Ontario markets to Dawn
- Union, Enbridge and TransCanada are proposing certain builds to accommodate the shift to Dawn/Niagara
- TCPL is also proposing to repurpose certain Mainline facilities for oil service
- APPrO believes that the OEB should ensure that there is sufficient upstream resources to ensure security of supply and to minimize price volatility



Sufficiency of Downstream Infrastructure

- While Union, Enbridge and TransCanada are proposing to build certain facilities to accommodate this shift in supply basin, cost recovery of some of these facilities is subject to approval of the TransCanada RH-1-2014 rate case (Settlement Agreement)
- This NEB decision is expected by the end of 2014
- The ability to access further US shale supplies downstream of Parkway may be restricted, thus creating higher prices and additional price volatility in the event that additional facilities are not constructed
- The minimum commercial contracting requirements on TransCanada for new facilities no longer match the business needs of many Ontario customers

Energy East

- APPrO does not currently have a position on Energy East at this time, but is considering the following:
 - Potential for subsidies between gas and oil
 - Ensuring gas markets have had sufficient opportunity to express interest in firm capacity
 - Eastern Triangle (ET) Mainline tolls should not rise as a result of Energy East
 - The impact that long term US Northeast markets and supplies may have on the flows into, on and out of the TransCanada system



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