

# Natural Gas and DER Considerations

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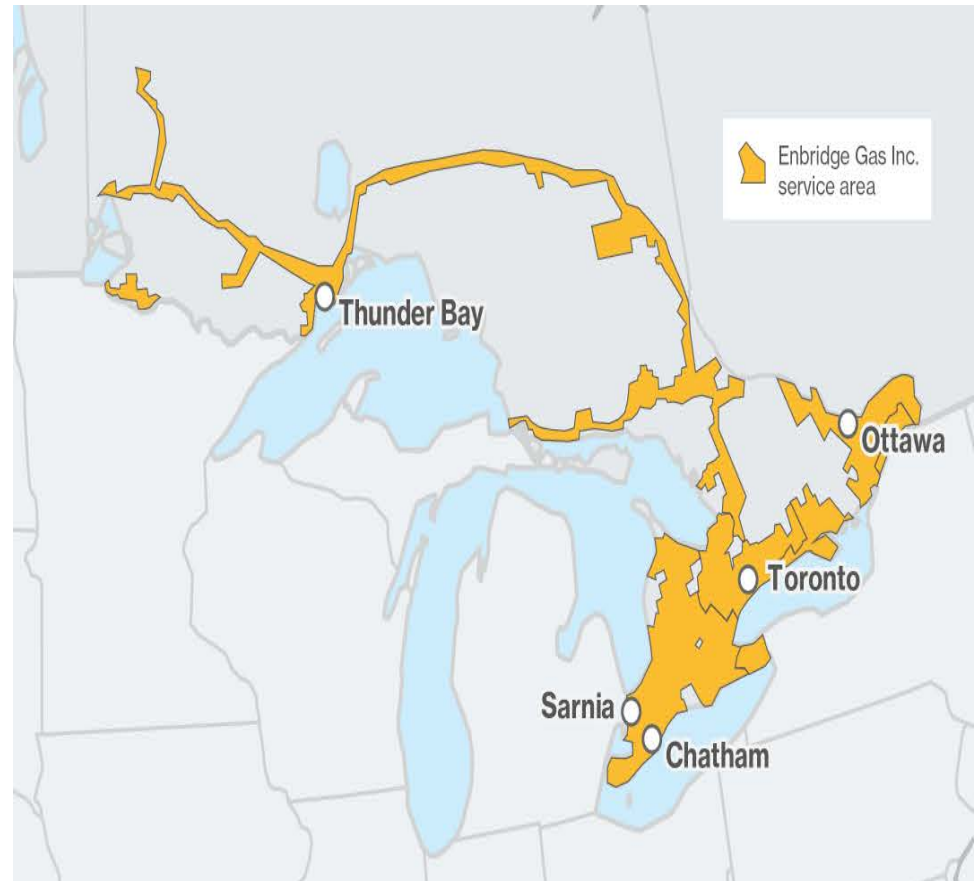
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# Enbridge in Ontario

**We deliver the energy that enhances peoples quality of life.**

- **Values**  
Safety, Integrity, Respect.
- **Experience**  
170+ years of experience in safe and reliable service.
- **Distribution Business**  
3.7M customers, heating >75% of Ontario homes.
- **Dawn Storage Hub**  
Canada's largest and one of the top-5 natural gas trading hubs in North America.
- **DSM Programs**  
Saved customers ~19 billion cubic metres of natural gas.



Formed Jan. 1, 2019 from the amalgamation of Union Gas Limited and Enbridge Gas Distribution.

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# Key Considerations for DER Planning from the NG Viewpoint



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- Safe and reliable energy service to customers must remain paramount.
- DER solutions should be fuel agnostic if they meet required criteria/goals and should consider natural gas options.
- DER solutions may intersect all energy sources, and the best options may cross across various regulated entities.
- Utilities should be incentivized to consider non-traditional solutions should they be as reliable and the same or less expensive for customers.
- Consideration of DERs is more complex and takes time and resources for the Utility.
- The natural gas utilities like the electricity utilities require control and monitoring technologies, including specifically Advanced Metering Infrastructure (“AMI”).

# Natural Gas System and Electricity Systems Similarities and Differences

Consideration	Natural Gas	Electricity	Implication
Facilities Planning Requirement	Plan on peak hour or peak day requirements.	Plan on instantaneous peak requirements.	Makes targeted DSM or DR programs more valuable in electricity sector.
DER Availability	DSM, DR, Electricity technologies (hybrid heating options), NG based technologies (mCHP, etc.)	DSM, DR, NG & related technologies (mCHP, P2G), Electricity based technologies (solar, battery storage, etc.)	More options available for DERs on the electricity side but crossovers exist and NG as a DER option may be less expensive than electricity. TOU pricing in electricity drives increased business case for DER.
Cost Structure	Typically less expensive than electricity infrastructure per GJ delivered.	Typically more expensive than NG infrastructure per GJ delivered	Therefore, savings associated with NG infrastructure reductions tend to be lower.

# Natural Gas System and Electricity Systems Similarities and Differences



Consideration	Natural Gas	Electricity	Implication
System Outage Risk & Cost	NG build with much lower level of acceptable risk.	Electric systems built with some outage risk.	The risk is built as such because the cost to restore energy and the implications of loss of energy are much greater.
Peak Hour Data Availability	Meters are typically read once every other month.	Smart Meters in place which allows for more detailed information on peak hour demand.	Without smart metering in place certainty of DER efforts is difficult to track.
Resource Planning	Gas utilities only acquire resources from the market.	Electric utilities acquire power and capacity from the market or produce their own.	Electricity IRP has more opportunity to assess trade-offs between generation and electricity purchase options.

# Natural Gas System and Planning for DERs



Issue	Impact on Planning for DERs
Risk Tolerance	The natural gas system is planned with a very low tolerance of risk and a risk tolerance for DERs needs to be considered.
Lack of Metered Data	The natural gas system has limited meter reads (every other month). For DERs to be monitored for actual performance to meet risk needs of system, AMI is required.
Lead Times for Projects	Any system planning requires adequate lead times. In planning the natural gas system, the lead times for projects can change and be difficult to complete any timely assessment or implementation of DER solutions.
Principle of Universality and Related Assignment of Costs/Benefits	The natural gas utility offers initiatives equally to all customers. In some cases the costs and benefits for DERs may accrue differently to different customers.

# Thank you

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# Questions from the OEB

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1. What objectives should the Utility Remuneration and Responding to DERs initiatives aim to achieve?
2. What specific problems or issues should each initiative address?
3. What principles should guide the development and selection of policy options?



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# The OEB Staff's Proposed Principles

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- **1. Economic Efficiency and Performance:** The regulatory framework promotes economic efficiency, cost-effectiveness and long-term value for consumers.
- **2. Customer Focus:** The regulatory framework encourages cost containment, demonstrable value to customers, greater customer choice and control, and customer confidence in the sector. It also encourages efficient choices.
- **3. Stable yet Evolving Sector:** The regulatory framework maintains the opportunity for utilities to earn a fair return; it neither precludes alternative business models that may be desirable nor impedes the entry of new entities.
- **4. Regulatory Simplicity:** The regulatory framework is practical to administer in terms of cost and complexity while enabling appropriate oversight; it is predictable insofar as its rules and requirements are applied consistently in similar circumstances; it is also resilient, adaptable, flexible and sustainable.