



LAS Natural Gas Program Overview

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EdisonEnergy.com



LAS Natural Gas Program Overview

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Agenda

About LAS

LAS is a corporation of the Association of Municipalities of Ontario (AMO)

- Offers competitively-priced and sustainable business services to Ontario municipalities and the broader public sector
- Programs & Services based on the principles of “aggregation” & “group buying power”

Regularly host and/or attend the following:

- Information Sessions & Workshops
- Municipal Conferences

LAS’ Mandate

- Save Money, Make Money & Solve Capacity



Energy & Asset Management

Energy Planning Tool
Energy Training & Workshops
Fleet Management Service
LED Streetlight Service
Recreation Facility Lighting
Roads Assessment Service



Administration

Closed Meeting Investigations
Group Benefits
Home & Auto Insurance
Municipal Risk Management
Sewer & Water Line Warranty



Commodity Procurement

Electricity
Fuel
Natural Gas



Investments

High Interest Savings Account (HISA)
Money Market Bond
Corporate Bond
Equity

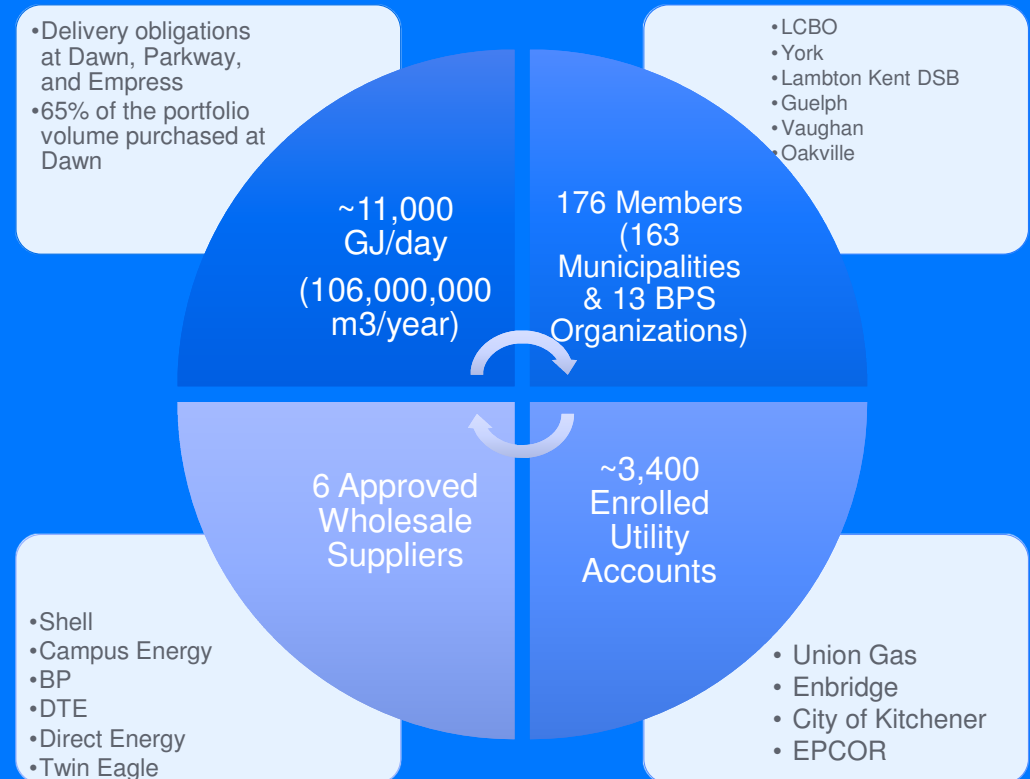
About Edison Energy

- Edison Energy is a leading international provider of customized energy management services for large energy end-users. The team is united by the shared belief that in order to solve complex energy problems, leading companies and institutions must consider procurement, sustainability, capital investment, energy efficiency projects, and renewable energy as one interconnected portfolio.
- Edison's team of experts has been servicing the Ontario and Canadian markets for over 20 years.
- **Edison Energy is not affiliated with any gas marketer, trader or broker, LDC or pipeline, and does not buy or sell energy or assets for its own account. Positioned to perform the asset management and advisor roles, Edison is an independent and objective agent for all its clients.**
- Not to be confused with purchasing facilitators, Edison's energy managers have a strong reputation for providing thorough, accurate service by understanding pricing, contracts and energy markets. By actively communicating with customers, Edison strives to educate and engage all levels of the organization, to assist in making informed decisions regarding their energy portfolio.
- Edison manages close to 100,000 GJ/day of natural gas for customers in all deregulated markets across Canada in a variety of industries. The current client base includes: property management, government, school boards, hotels, restaurants, retail, grocery chain, movie theatres, food production, packaging, refining, steel coating, brick production.
- Edison has been the administrator of the LAS program since 2007. LAS has a Master Services Agreement in place with Edison to continue their role as administrator until 2024.



LAS Natural Gas Program Overview

- The program follows a 4-year natural gas hedging strategy that offers budget stability by making use of aggregated program tenders and a combination of fixed and indexed pricing contracts.
 - 80 to 90% of the program volume for the current year (Nov 2020-Oct 2021)
 - 40 to 60% of the program volume for years 2 and 3 (Nov 2021 and Nov 2022)
 - 10 to 20% for the 4th year (Nov 2023)



LAS Natural Gas Program Overview

- The LAS program has three fundamental objectives:
 - **Cost Certainty** – the LAS program sets prices for a one-year period (November –October); as a result, program members can accurately and confidently budget for natural gas costs each year.
 - **Competitive Prices** – LAS seeks to provide a reliable supply of natural gas using only credit-worthy counterparties and seeks to do so at a price that is competitive with market gas rates and utility gas options.
 - **Maximize Purchasing Power** – LAS leverages economies-of-scale in securing natural gas from credit-worthy counterparties. The program hedges 80-90% of required gas for each program year through aggregated competitive tenders. The remainder gas is procured at typically competitive spot market rates.
- With the expertise of Edison’s strategies and recommendations for forward purchasing, LAS has achieved:
 - Stable pricing for its members
 - Reduction of disconnect from spot market
 - Year over year cost reductions
 - Price protection against potential market volatility

LAS Natural Gas Program - Services

- Review of natural gas requirements.
- Assessment of corporate purchasing objectives and risk tolerance.
- Provide procurement strategies consistent with LAS' risk tolerance and purchasing objective.
- Recommend competitive and credit worthy wholesale suppliers with which to transact.
- Assist with reviewing the supplier's contracts.
- Call tender and choose supplier(s).
- Execute the hedging strategies with the supplier(s).
- Enroll/de-enroll the accounts with the Utilities.
- Monitor gas consumption/deliveries and recommend load balancing strategies.
- Nominate gas deliveries with suppliers, pipelines, and Utilities.
- Verify the monthly invoices from the suppliers and arranging payments.
- Utility distribution rate analysis.
- Maintenance and reconciliation of LAS reserve account.
- Annual consumption reports for program members.
- Budget assistance.
- Keep program members informed as to important market and regulatory developments

Services – Risk Management

Edison provides different variations of hedging strategies to customers based on their individual purchasing goals and risk tolerance. Edison assists customers in reviewing the components below to determine an energy procurement strategy that fits best, ranging from aggressive to conservative:

Risk Appetite and Tolerance

How much usage can be exposed to market fluctuations

How much to lock in at certain price

Over what period to lock in a price

Ability to absorb the fluctuations of energy costs or pass them on to customers

Business Objectives and Priorities

Managing energy consumption and costs

Mitigating market price risks and exposures

Looking for the stability and predictability of a guaranteed price or the flexibility of a variable price

Budget Constraints

Band width that actual costs can go beyond or under the budget

How much time to invest in managing

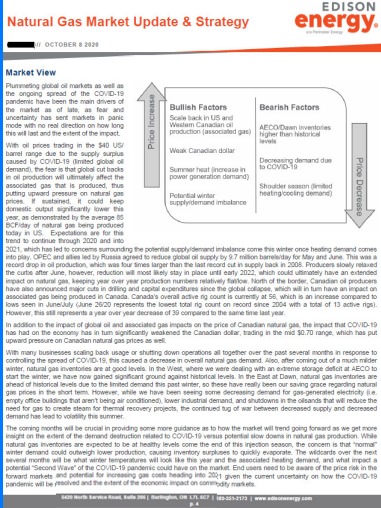
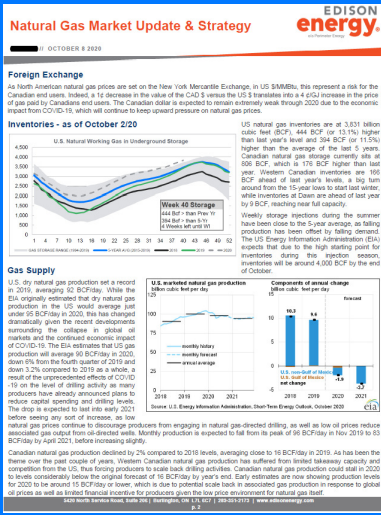
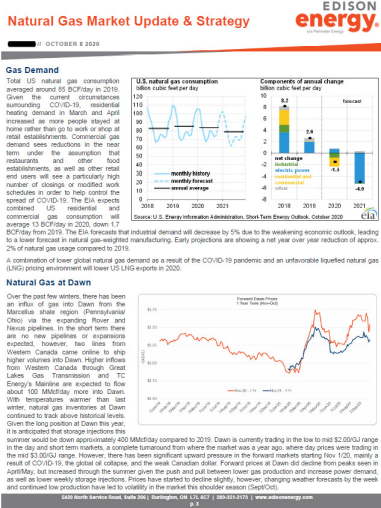
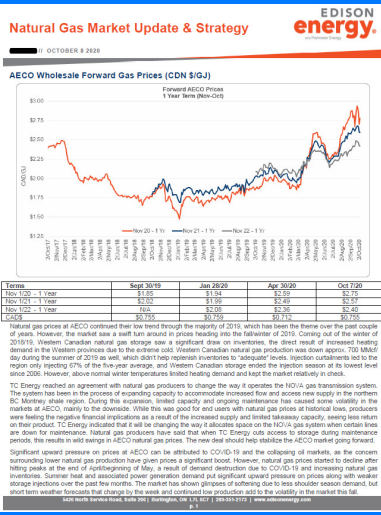
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	Option	Feature	Description	
<div> <div>Low</div> <div>Risk Tolerance</div> <div>High</div> </div>	Fixed	Benefit	- Price certainty, cost predictability - Reduced exposure to market	<div> <div>High</div> <div>Price Certainty</div> <div>Low</div> </div>
		Disadvantage	- Unable to capitalize on downside of the market - Higher product premium	
		Portfolio	- Low risk tolerance - Limited budget flexibility	
	Hybrid (Fixed & Index)	Benefit	- Certainty and flexibility - Layer in different types of blocks	
		Disadvantage	- Active contract and budget management required	
		Portfolio	- Moderate risk tolerance	
	Index	Benefit	- Flexibility to capitalize on price dips	
		Disadvantage	- Exposure to spikes in the volatile market - Little budget certainty - Active contract and budget management	
		Portfolio	- Business with higher risk tolerance	

- The LAS natural gas program follows a 4-year natural gas hedging strategy that offers budget stability by making use of aggregated program tenders and a combination of fixed and indexed pricing contracts.
- LAS purchases incremental gas contracts at various points each year with a goal of building a total hedge portfolio of 80-90% of program requirements for the current gas year, with remaining consumption settling at prevailing market rates.

Services – Risk Management

- Natural gas strategies provide LAS with recommendations and targets regarding volumes, terms, and prices for both the commodity and deregulated transportation by delivery point.
- Once prices are within target, Edison calls tender between all LAS' approved suppliers. Results of the tender are provided to LAS for record keeping purposes and to provide full transparency. Edison will only receive quotes from suppliers that are actively contracted with LAS. This is to ensure that received quotes can be transacted at the time of the tender, as natural gas prices move on a minute-by-minute basis, removing the potential of losing a possible purchasing opportunity due to the necessary contracts not being in place.
- As an independent consultant, Edison works with, but is not affiliated with, multiple suppliers for natural gas. Edison Energy does not have any direct supply agreements in place nor take title to any energy commodities. Customers are therefore set up with credit-worthy and price competitive suppliers.
- If a target cannot be met due to market conditions, Edison then provides LAS with an updated strategy with revised targets. The number of strategies sent per year is determined by the market conditions and potential buying opportunities, these are also influenced by the forward purchases that LAS already has in place.



Services – Financial Services

Natural Gas Price Components

Commodity

(Managed through the LAS program)

- The price of the gas itself
- Deregulated in all provinces
- North American continental market with prices set on NYMEX in US\$/MMBtu
- AECO (in Alberta) is the major reference price point in Canada
- Represents approx. 35% of gas costs.

Transportation

(Managed through the LAS program)

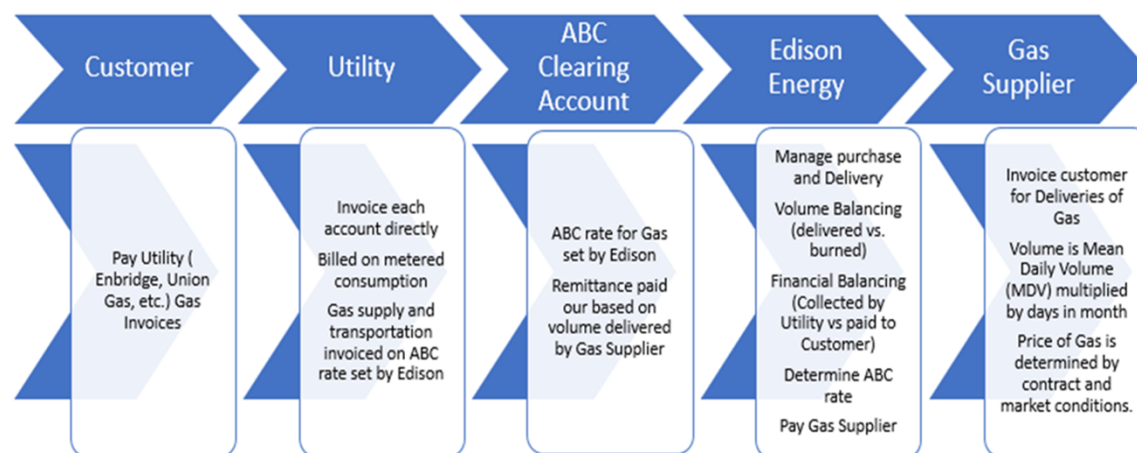
- The price to move the gas from the supplier to the local utility
- Partially deregulated
- In some cases, there is a regulated transportation cost, which is billed by the utility to move the gas into the franchise area
- Represents approx. 20% of gas costs (15% deregulated, 5% regulated).

Distribution

- The price to move the gas from the local utility to the end use site/meter.
- Regulated in all provinces
- Distribution cost also includes the carbon tax as of Apr 1/19
- Represents approx. 45% of gas costs.

Services – Financial Services

- The LAS program is currently on an Agent Billing & Collection (ABC) billing methodology with the various utilities. Through this billing method, program members pay their utility (Enbridge) invoices as normal for commodity, transportation and distribution charges. Funds are then collected by the utility and remitted to an LAS reserve account which is managed by Edison. The utility remits funds based on deliveries and collects funds based on actual consumption. Remitted funds are used to pay the supplier (i.e. Shell, BP, etc.) invoice for the commodity and deregulated transportation, which is facilitated by Edison.
- The commodity and transportation prices on the individual utility invoices for the sites are set annually by Edison, with approval from LAS, and stay in place for the term of the gas year (Nov-Oct). The prices set are a reflection of the commodity and transportation deals in place with the various suppliers, as well as incorporating the program fees and contingency to cover any potential volatility in the market or financial impacts from load balancing.
- Financial reconciliation of funds collected and disbursed is tracked monthly, and financial true ups with the utility are completed at contract year end. Following an annual review of the program and based on the health of the program's reserve fund, LAS will often provide rebates to program members based on the difference of the forecast price at the beginning of a program year and the actual price at the end of the year. Rebates are based on an individual member's usage as a percent of the total program volume.
- All services are provided to program members at a very competitive price, due to the large volume and number of members in the LAS program. All fees collected through the LAS program will be based on account-level consumption and will be collected via the ABC method using an all-inclusive per m3 fee. The current program fee of \$0.10/GJ (or \$0.0038/m3) is incorporated into the annual program commodity price that appears on member's end use utility invoices. By using this approach there are no additional invoices for program members.

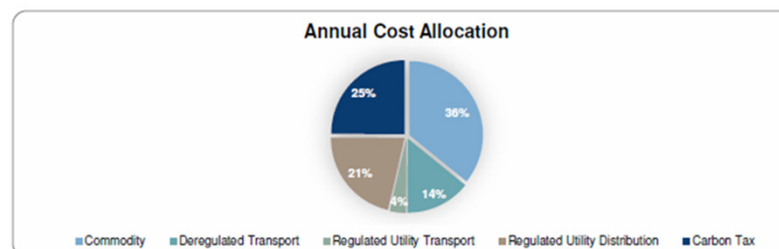
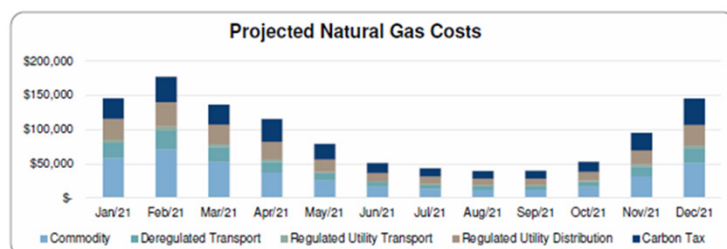


Services – Budgeting

- Edison can provide annual budget assistance for customers. The price forecast encompasses all elements influencing the forward price for natural gas, including:
 - Forward NYMEX
 - Forward basis (AECO, Dawn, etc.)
 - Forward exchange rates
 - Any forward commodity hedges in place
 - Any forward deregulated transportation deals in place
 - Regulated utility transportation charges
 - Regulated utility distribution charges
 - Applicable carbon tax
 - GST/HST
- The budget is customized to meet the requirements of the customer and includes elements such as volumes, hedges, and total cost calculations. The report is updated as required by the customer, depending on volatility, and any major changes are communicated to the customer immediately in order to plan accordingly for budget purposes.

Services – Budgeting

2021 Natural Gas Cost Projection - Enbridge



Price Component	Jan/21	Feb/21	Mar/21	Apr/21	May/21	Jun/21	Jul/21	Aug/21	Sep/21	Oct/21	Nov/21	Dec/21	Average
Commodity (Hedge)													
Commodity (Spot)	\$ 3.00	\$ 2.96	\$ 2.82	\$ 2.35	\$ 2.31	\$ 2.35	\$ 2.40	\$ 2.41	\$ 2.39	\$ 2.40	\$ 2.59	\$ 2.75	\$ 2.56
Deregulated Transport	\$ 1.15	\$ 1.15	\$ 1.15	\$ 0.95	\$ 0.95	\$ 0.95	\$ 0.95	\$ 0.95	\$ 0.95	\$ 0.95	\$ 1.10	\$ 1.10	\$ 1.03
Regulated Utility Transport	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.25	\$ 0.30	\$ 0.30	\$ 0.26
Regulated Utility Distribution	\$ 1.54	\$ 1.48	\$ 1.51	\$ 1.54	\$ 1.61	\$ 1.71	\$ 1.96	\$ 1.87	\$ 1.83	\$ 1.76	\$ 1.62	\$ 1.54	\$ 1.66
Carbon Tax	\$ 1.55	\$ 1.55	\$ 1.55	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 2.07	\$ 1.94
Total Burner Tip (CAD/GJ)	\$ 7.49	\$ 7.39	\$ 7.29	\$ 7.17	\$ 7.19	\$ 7.33	\$ 7.63	\$ 7.55	\$ 7.48	\$ 7.44	\$ 7.68	\$ 7.76	\$ 7.45
Total Burner Tip (CAD/M3)	\$ 0.28	\$ 0.28	\$ 0.28	\$ 0.27	\$ 0.27	\$ 0.28	\$ 0.29	\$ 0.29	\$ 0.28	\$ 0.28	\$ 0.29	\$ 0.29	\$ 0.28

Projected Costs	Jan/21	Feb/21	Mar/21	Apr/21	May/21	Jun/21	Jul/21	Aug/21	Sep/21	Oct/21	Nov/21	Dec/21	Total
Estimated Consumption (GJ/s)	19,424	23,919	18,695	16,137	10,983	6,990	5,732	5,243	5,350	7,120	12,384	18,683	150,661
Commodity	\$ 58,358	\$ 70,862	\$ 52,773	\$ 37,968	\$ 25,368	\$ 16,428	\$ 13,764	\$ 12,622	\$ 12,766	\$ 17,105	\$ 32,018	\$ 51,363	\$ 401,395
Deregulated Transport	\$ 22,337	\$ 27,507	\$ 21,499	\$ 15,330	\$ 10,434	\$ 6,640	\$ 5,446	\$ 4,981	\$ 5,083	\$ 6,764	\$ 13,623	\$ 20,551	\$ 160,195
Regulated Utility Transport	\$ 4,856	\$ 5,980	\$ 4,674	\$ 4,034	\$ 2,746	\$ 1,747	\$ 1,433	\$ 1,311	\$ 1,338	\$ 1,780	\$ 3,715	\$ 5,605	\$ 39,219
Regulated Utility Distribution	\$ 29,816	\$ 35,432	\$ 28,323	\$ 24,892	\$ 17,636	\$ 11,938	\$ 11,222	\$ 9,818	\$ 9,768	\$ 12,558	\$ 20,074	\$ 28,849	\$ 240,325
Carbon Tax	\$ 30,107	\$ 37,075	\$ 28,977	\$ 33,403	\$ 22,735	\$ 14,469	\$ 11,866	\$ 10,853	\$ 11,075	\$ 14,738	\$ 25,636	\$ 38,674	\$ 279,607
Cost	\$ 145,474	\$ 176,856	\$ 136,246	\$ 115,628	\$ 78,918	\$ 51,222	\$ 43,732	\$ 39,584	\$ 40,030	\$ 52,945	\$ 95,066	\$ 145,042	\$ 1,120,742
HST	\$ 18,912	\$ 22,991	\$ 17,712	\$ 15,032	\$ 10,259	\$ 6,659	\$ 5,685	\$ 5,146	\$ 5,204	\$ 6,883	\$ 12,359	\$ 18,855	\$ 145,696
Total Cost	\$ 164,386	\$ 199,847	\$ 153,958	\$ 130,659	\$ 89,177	\$ 57,881	\$ 49,417	\$ 44,730	\$ 45,234	\$ 59,828	\$ 107,424	\$ 163,897	\$ 1,266,439

Assumptions

- 1) For the commodity, no hedge in place for 2021, 100% spot market. Prices for the commodity itself are based on the current forward curve for 2021 plus approx. \$0.35/GJ to account for any potential upward movement in the market.
- 2) For the deregulated transportation, prices are based on the current forward market for Dawn. No hedge in place, purchasing month to month.
- 3) For the regulated utility distribution charges, estimated based on current utility rates plus approx. 3%.
- 4) Assumes federal carbon tax will still be in place for 2021 (\$0.0587/m3 for Jan 21-Mar 21, \$0.0783/m3 for Apr 21-Dec 21).
- 5) Volumes are estimated based on historical consumption.
- 6) Prices in CAD/GJ.

Services – Summary

- Financial strength, resources, and expertise makes LAS/Edison an ideal partner for the delivery of high-quality, high-value energy management services such as:
 - analysis and advice for structuring optimum natural gas supply arrangements
 - assessing risk tolerance and corporate purchasing objectives, ensuring strategies are aligned
 - supplier portfolio development and contracting
 - evaluating pipeline and utility contract parameters
 - contract administration and facility management
 - buying or selling natural gas, and coordinating the scheduling of gas deliveries with suppliers
 - monitoring imbalances relative to tolerances and mitigating those, as well as providing 24/7 on-call support
 - reporting of costs and cost allocation, invoice verification, and reporting of actual cost vs budget, performance tracking, etc.
- Edison provides the full suite of services for both advisory and operational management of a customer's natural gas portfolio.