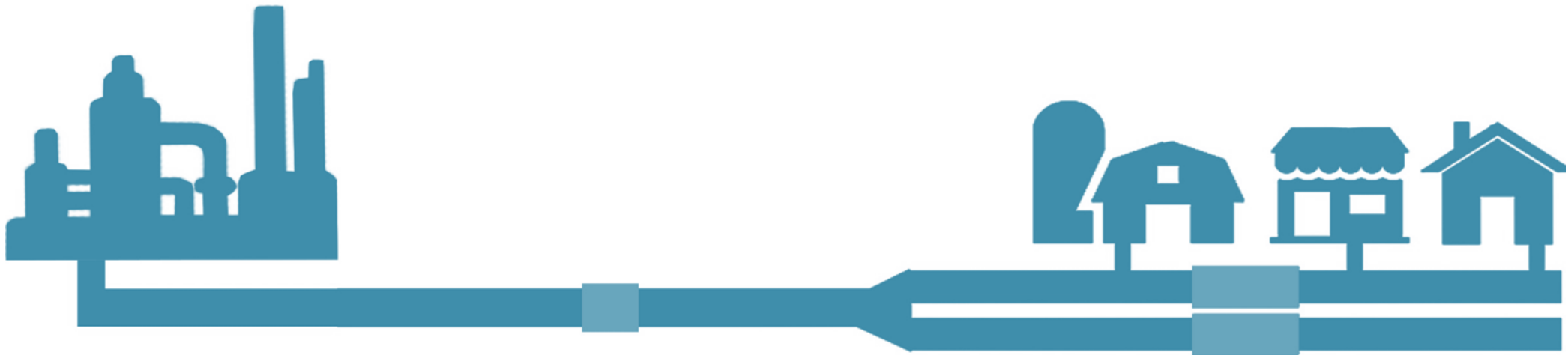


Rate and Pipeline Capital Cost Benchmarking for Gazifère



Prepared by:



Prepared For:



Delivered on: April 21, 2020

Executive Summary

Background and Scope

- Gazifère has been experiencing a modest increase in rates over the last four years while costs per customer have been increasing at a steadily higher rate.
- Rates are projected to decrease further in 2020. This will have the potential to further impact the current revenue/cost balance.
- MNP was engaged by Gazifère to conduct a rate benchmarking study to compare rates with other utilities and a pipeline capital cost benchmarking study.

Key Observations

- 1 Rate Benchmark Ranking** – Across seven utilities reviewed, Gazifère is consistently ranked in top 3 utilities with the lowest rates across most of the rate classes considered as part of our analysis. EPCOR Ontario, with a very small customer base is an outlier with one of the lowest rates across rate classes. Removing it from our analysis would further strengthen Gazifère's rankings.
- 2 Comparison to Average Rates** – Gazifère's rates, in each rate class and across various consumption levels (volumes) are lower than the average rates for that rate class across the utilities by more than 50%.
- 3 Pipeline Cost Benchmarking** – Gazifère maintains the lowest average pipeline costs (on a \$/m unit cost basis) across the utilities reviewed. This is also consistent across different pipeline sizes that we have reviewed.
- 4 Overall**, MNP has observed that Gazifère's rates are among the lowest across utilities and its capital costs on a per unit basis are also consistently the lowest. This is reaffirmed through our \$/customer gained analysis linking how much each utility spends in capital costs to acquire new customers.

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Project Background and Scope

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Project Background

- Gazifère has been experiencing a modest increase in rates over the last four years while the costs per customer have been increasing at a steadily higher rate.
- While Gazifère has been expanding regionally with new developments and volumes, it has become increasingly difficult to develop a business case to add new customers through development/expansion as current costs have outpaced rate growth.
- Rates are projected to decrease further in 2020 which have the potential to further impact the current revenue/cost balance.

Project Scope

Given our understanding of the current situation MNP provided support to Gazifère with the following scope elements:

- **Rate Comparison** – Conduct/validate a comparison of rates of Gazifère to other similar sized gas distribution companies. Include other provincial companies and others in the US (or potentially internationally). Gazifère's rate trend in comparison to CPI and other utilities' trend in their respective jurisdictions.
- **Cost Benchmarking** – Conducted a cost benchmarking analysis to independently confirm Gazifère's alignment with 'market' costs.

Rate Benchmarking

Rate Benchmarked Utilities

- MNP compared rates of the following seven gas distribution utilities across Canada.
- For our analysis, we reviewed multiple rate classes and indicative annual gas volumes to represent the variety of customers Gazifère currently serves.
- The utilities selected also represent a wide range of customer sizes.
- The utilities, their jurisdiction and regulatory body along with total number of customers are provided below.

Utility Name	Jurisdiction	Number of Customers
Enbridge Gas Inc.	Ontario – regulated by the Ontario Energy Board	3,713,000
Enbridge Gas New Brunswick (not part of Liberty Utilities)	New Brunswick – regulated by the New Brunswick Energy and Utilities Board	12,028
AltaGas Utilities	Alberta – regulated by Alberta Utilities Commission	80,498
Energir	Quebec – regulated by Régie de l'énergie	207,000
FortisBC	British Columbia – British Columbia Utilities Commission	1,029,500
EPCOR Ontario	Ontario – regulated by the Ontario Energy Board	9,269
Heritage Gas Limited	Nova Scotia – regulated by Utility and Review Board of Nova Scotia	130,000

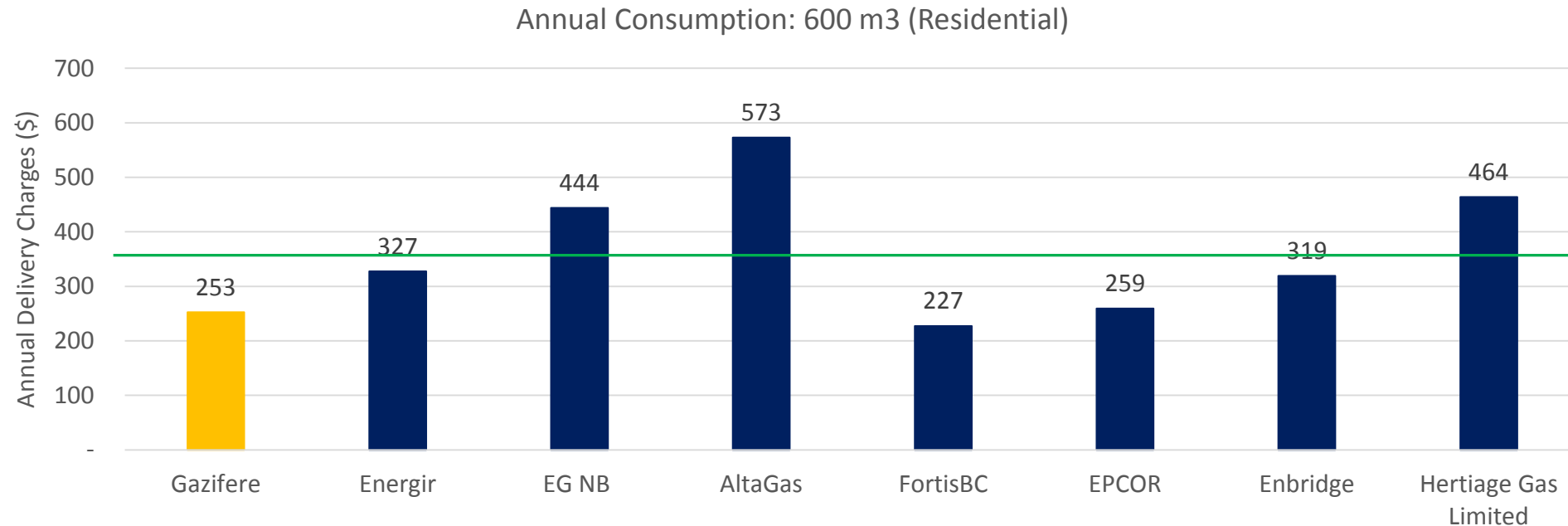
Summary of Rate Comparison

- MNP benchmarked the rates of the utilities across various annual consumption levels and across different rate classes.
- Focus of MNP's rate benchmarking was the delivery charges of each of the gas utilities across different rate classes. Current rates for each utility were used to determine the delivery charges.
- The following table summarises the annual gas delivery charges across the benchmarked utilities.

Annual Volume (m3) and Customer Type	Annual Delivery Charges (\$)									
	Gazifere	Energir	EG NB	AltaGas	FortisBC	EPCOR	Enbridge	Hertiage Gas Limited	Average	Gazifere Ranking
600 m3 res	\$ 253	\$ 327	\$ 444	\$ 573	\$ 227	\$ 259	\$ 319	\$ 464	\$ 358	2
2,000 m3 res	\$ 540	\$ 672	\$ 1,116	\$ 686	\$ 442	\$ 433	\$ 456	\$ 934	\$ 660	4
2,600 m3 res	\$ 661	\$ 820	\$ 1,203	\$ 734	\$ 534	\$ 499	\$ 514	\$ 1,136	\$ 763	4
2,600 m3 com	\$ 517	\$ 820	\$ 1,410	\$ 734	\$ 873	\$ 499	\$ 514	\$ 1,136	\$ 813	2
10,000 m3 com	\$ 1,315	\$ 2,439	\$ 5,102	\$ 1,331	\$ 2,094	\$ 1,306	\$ 1,746	\$ 3,622	\$ 2,369	2
30,000 m3 com	\$ 3,241	\$ 6,089	\$ 14,105	\$ 2,944	\$ 5,394	\$ 3,952	\$ 3,135	\$ 8,964	\$ 5,978	3
100,000 m3 com	\$ 8,919	\$ 15,714	\$ 37,496	\$ 8,588	\$ 15,819	\$ 11,125	\$ 7,255	\$ 26,834	\$ 16,469	3
11,130,000 m3 Industrial	\$ 252,652	\$ 365,219	\$ 665,694	\$ 468,959	\$ 553,661	\$ 434,690	\$ 163,496	\$ 235,379	\$ 392,469	3

Observation: Annual Consumption 600 m3 (Residential)

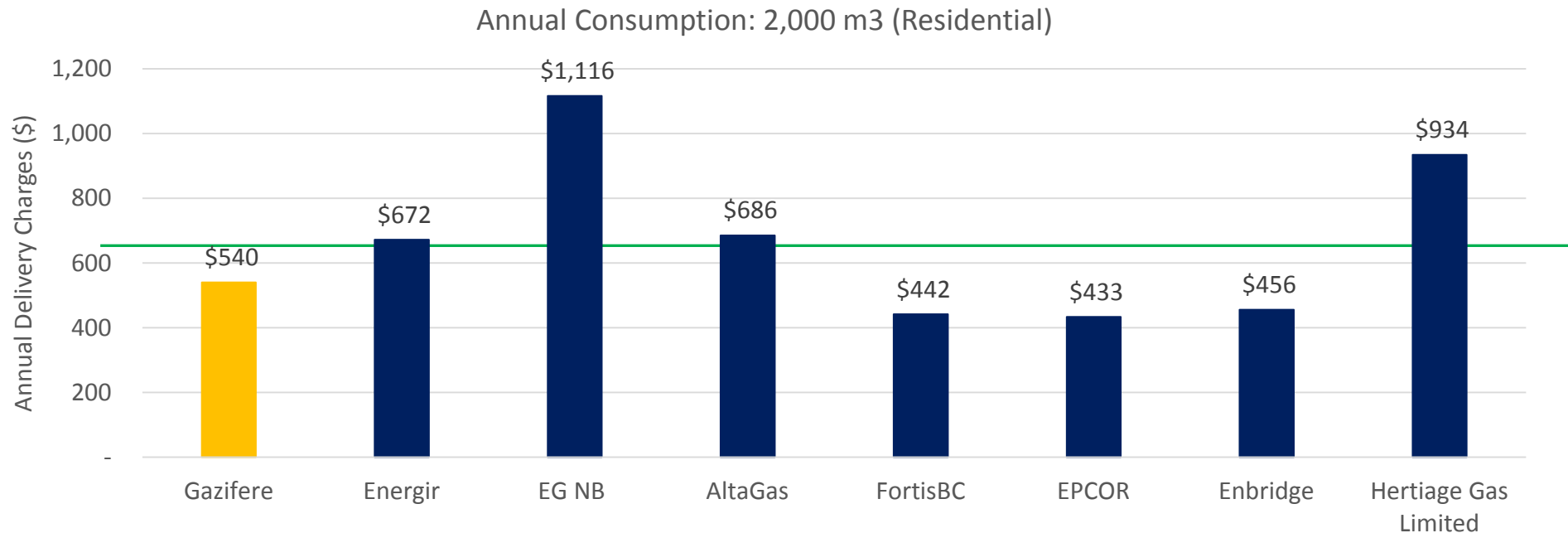
- The following graph summarizes the delivery charges for the Residential customer category with an annual volume of 600 m3.



- Gazifère is below the average annual delivery charge of \$358 for this category by almost 42%.
- Lowest charges for this category are for FortisBC which is one of the largest gas distributors in Canada.

Observation: Annual Consumption 2,000 m³ (Residential)

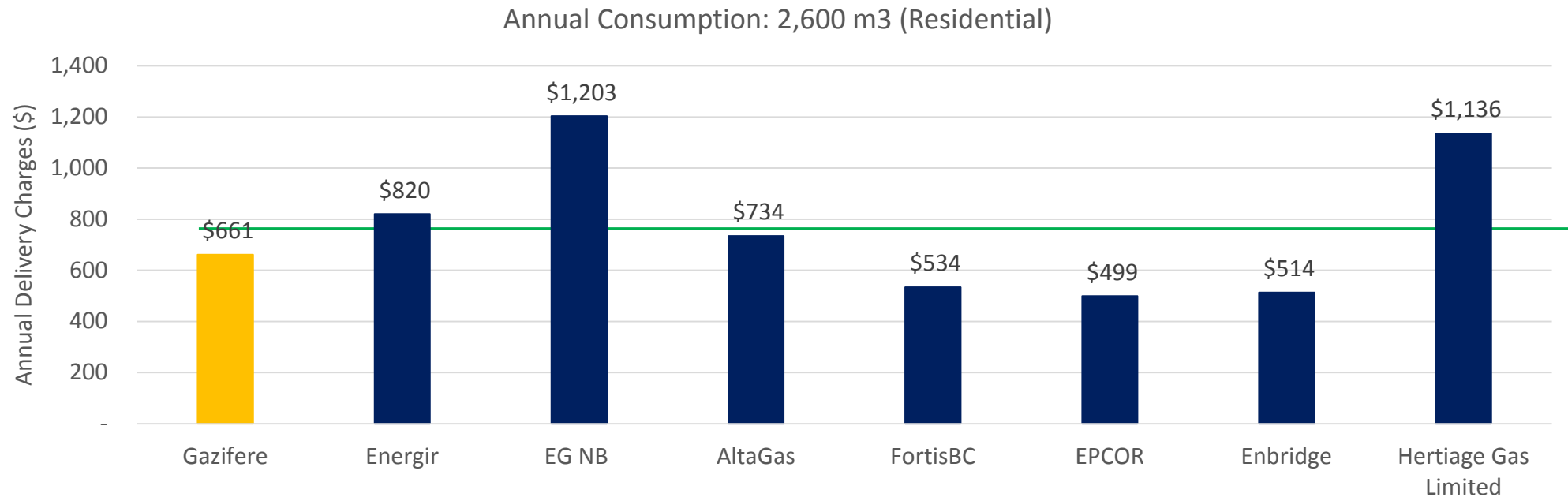
- The following graph summarizes the delivery charges for the Residential customer category with an annual volume of 2,000 m³.



- Gazifère is below the average annual delivery charge of \$660 for this category by almost 22%.
- Lowest charges for this category are for EPCOR Ontario.

Observation: Annual Consumption 2,600 m³ (Residential)

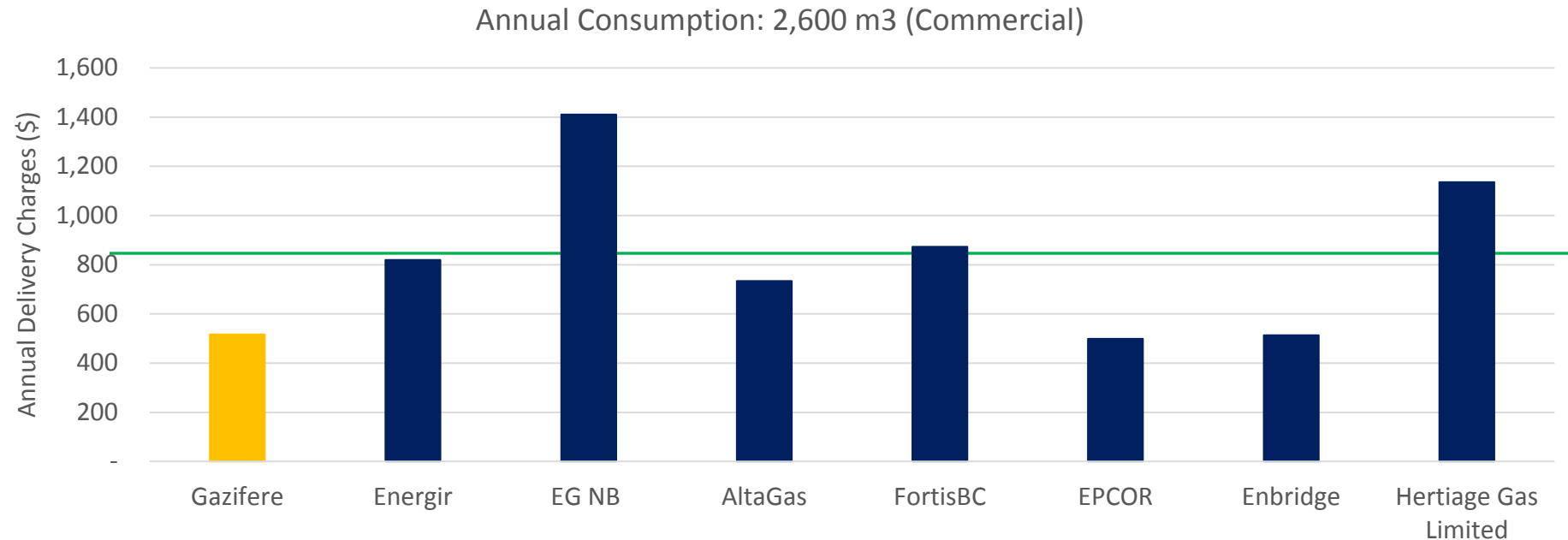
- The following graph summarizes the delivery charges for the Residential customer category with an annual volume of 2,600 m³.



- Gazifère is below the average delivery charge of \$763 for this category by almost 15%.
- Lowest charges for this category are for EPCOR Ontario.

Observation: Annual Consumption 2,600 m³ (Commercial)

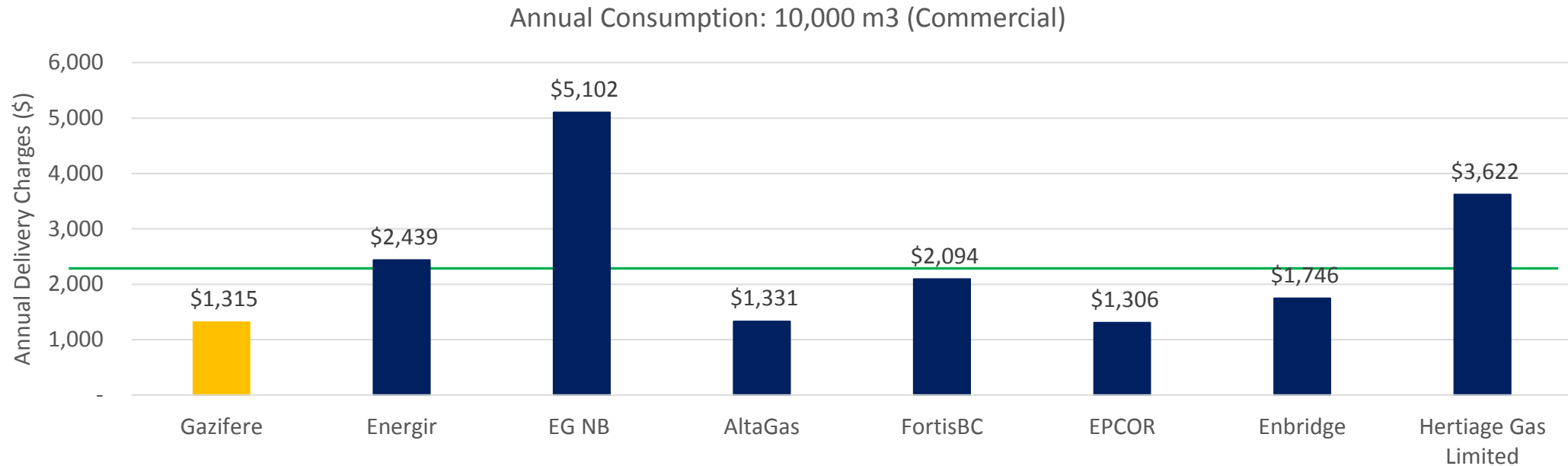
- The following graph summarizes the delivery charges for the Commercial customer category with an annual volume of 2,600 m³.



- Gazifère is below the average delivery charge of \$813 for this category by almost 57%.
- Lowest charges for this category are for EPCOR Ontario.

Observation: Annual Consumption 10,000 m³ (Commercial)

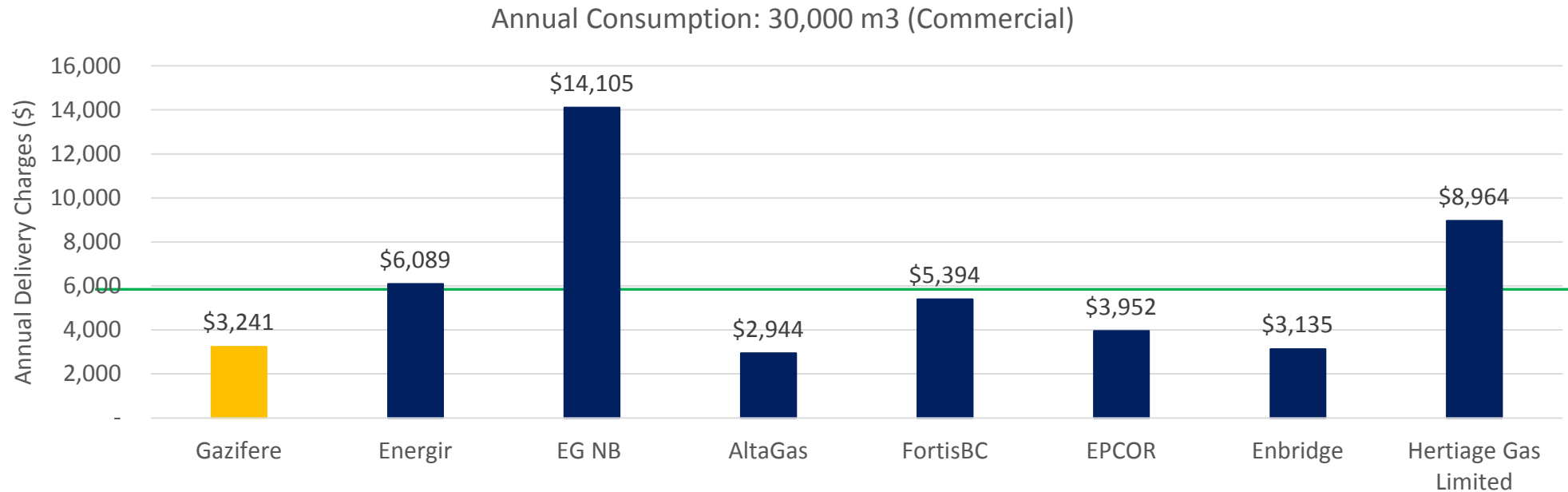
- The following graph summarizes the delivery charges for the Commercial customer category with an annual volume of 10,000 m³.



- Gazifère is below the annual average delivery charge of \$2,369 for this category by almost 80%.
- Lowest charges for this category are for EPCOR Ontario.

Observation: Annual Consumption 30,000 m3 (Commercial)

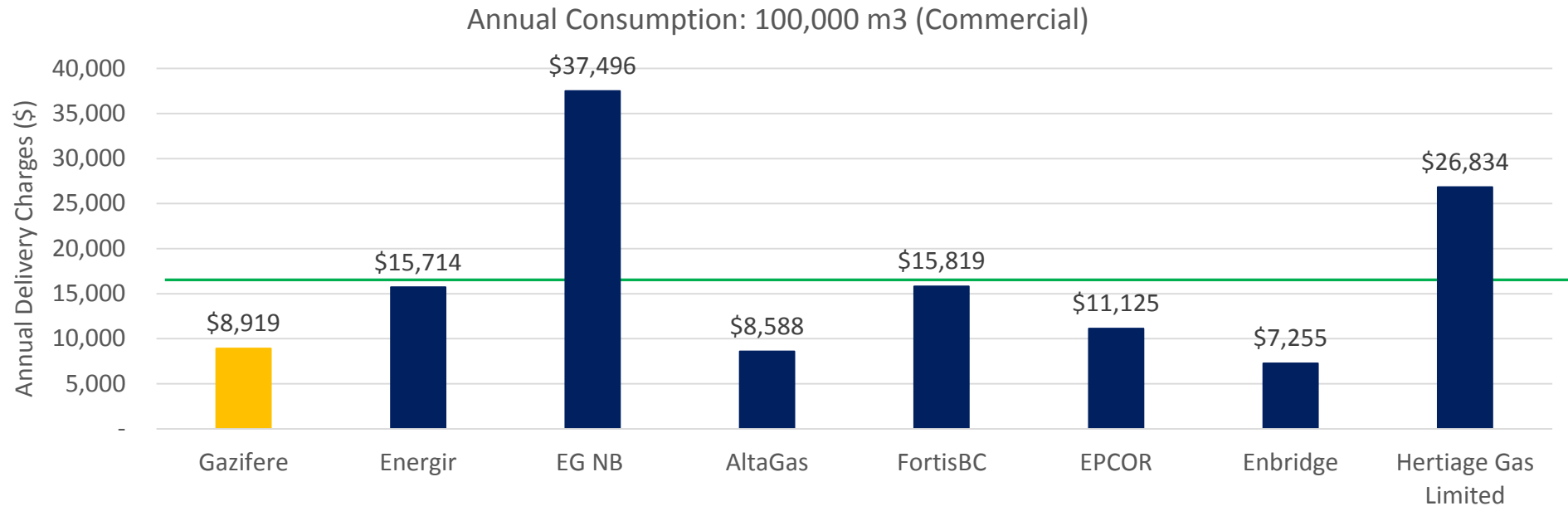
- The following graph summarizes the delivery charges for the Commercial customer category with an annual volume of 30,000 m3.



- Gazifère is below the annual average delivery charge of \$5,978 for this category by almost 84%.
- Lowest charges for this category are for AltaGas.

Observation: Annual Consumption 100,000 m³ (Commercial)

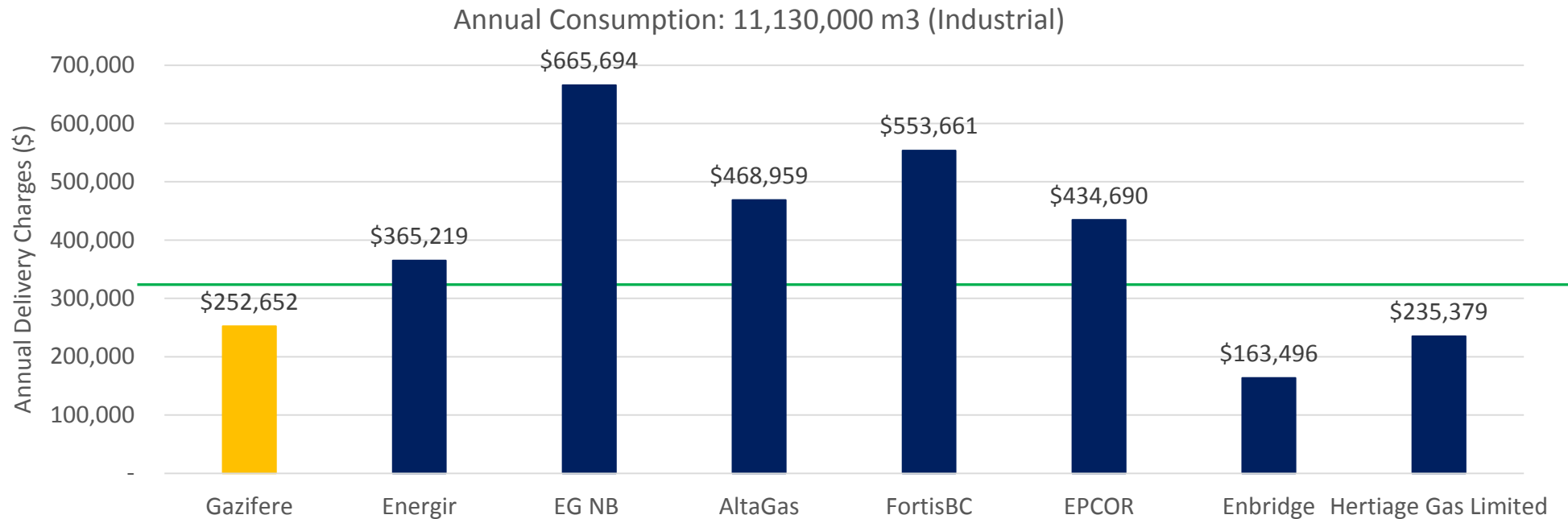
- The following graph summarizes the delivery charges for the Commercial customer category with an annual volume of 100,000 m³.



- Gazifère is below the annual average delivery charge of \$16,469 for this category by almost 85%.
- Lowest charges for this category are for Enbridge.

Observation: Annual Consumption 11,130,000 m³ (Industrial)

- The following graph summarizes the delivery charges for the Industrial customer category with an annual volume of 11,130,000 m³.



- Gazifère is below the annual average delivery charge of \$392,469 for this category by almost 55%.
- Lowest charges for this category are for Enbridge.

Pipeline Capital Cost Benchmarking

Pipeline Cost Benchmarked Utilities

- MNP considered the following pipeline capital construction costs:
 - Cost of Contractor services
 - Cost of meters
 - Cost of pipes and mains
 - Contingencies
- MNP compared pipeline construction capital costs (of the following two gas distribution utilities in Canada and the Town of Marathon that is in the process of forming a gas distribution company with neighbouring townships).
- Only plastic and polyethylene NPS 2, NPS 4, NPS 6, and NPS 8 were used in the analysis from 2016-2020.

Utility Name	Jurisdiction	Number of Customers
Enbridge Gas Inc.	Ontario – regulated by the Ontario Energy Board	3,713,000
Energir	Quebec – regulated by régie de l'énergie	207,000
Gazifère	Quebec – regulated by régie de l'énergie	43,500
Corporation of the Town of Marathon	Ontario – regulated by the Ontario Energy Board	5,540

Summary of Observations: Cost Comparison

- MNP benchmarked the \$/meters of the utilities across various pipeline construction projects and across different regulatory environments.
- Given the limitation of publicly available data to provide detailed costs for each NPS type, MNP used two separate approaches for estimating \$/meter unit costs. However, MNP settled with the following approach to assess unit costs across different pipeline categories.
 - Using Gazifère's own average unit costs across categories as a ratio to determine the unit costs across the comparable utilities for the different pipeline categories (described in more details in the following slide)
- The following table summarizes the average \$/m for each company in relation to pipe diameter:

Pipe Diameter (Inches)	Average \$/m, 2016 - 2020 ¹				
	Enbridge	Energir	Gazifere	Town of Marathon	Industry Average ²
NPS 2	118	-	58	207	128
NPS 4	389	274	123	453	310
NPS 6	502	977	266	-	582
NPS 8	-	1,392	878	3,103	1,791

1) All values were escalated to 2019 values based on infrastructure annual CPI

2) Gazifere is included in the industry average calculation

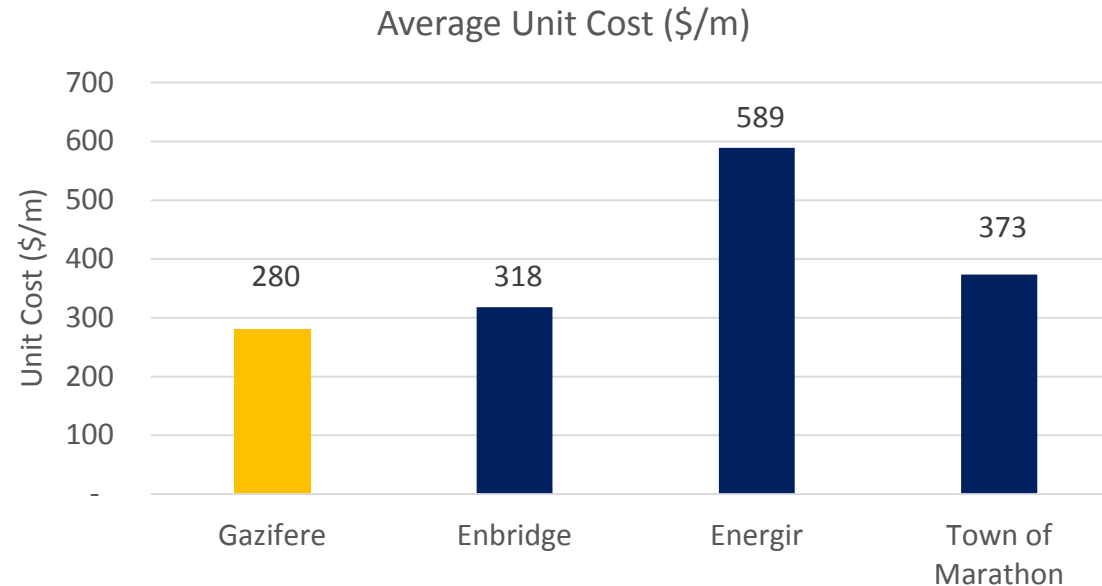
Unit Cost Calculation Methodology

- To calculate the unit costs for comparable utilities for different NPS categories, we utilized the unit costs provided by Gazifère to establish consistent relationship between unit costs (\$/meter) for each NPS category.
- Costs were adjusted for CPI depending on the year of the project.
- For instance, if Gazifère's NPS 2 unit cost is 5 \$/m, NPS 4 is 7.5 \$/m and for NPS 6 is \$ 15/m, we used these costs to establish a relationship between the unit costs for each NPS category (NPS 4 unit costs = 1.5*NPS 2 units costs and NPS 6 = 3* NPS 2 unit costs).
- This relationship is then used for each comparable utility's project cost to calculate the NPS 2 unit cost.
- Once the NPS 2 unit cost has been calculated, the relationship is used to calculate the unit costs for the remaining NPS categories using the relationship established earlier.
- The chart below summarizes our approach using the example discussed. This example is only for demonstration purposes and does not indicate actual costs.

Variables	Length of Pipeline for each Size	Relationship between NPS Unit Costs	Solving for X	Calculated Values of Variables	Unit Costs \$/meter)
X = Unit Cost of 2" Pipe	NPS 2" = 4,000m	X	$4,000X + 4,000(1.5X) + 2,000(3X) = \$10,000,000$	X = 625	NPS 2 Unit Cost = \$625
Y = Unit Cost of 4" Pipe	NPS 4" = 4,000m	Y = 1.5X, based on ratio calculated using Gazifère's unit costs		Y = 625 * 1.5	NPS 4 Unit Cost = \$938
Z = Unit Cost of 6" Pipe	NPS 6" = 2,000m	Z = 3x, based on ratio calculated using Gazifère's unit costs		Z = 625 * 3	NPS 6 Unit Cost = \$1,875
	Total Length: 10,000m		Total Project Cost = \$ 10, million		

Summary of Observations: Average Unit Costs

- As part of the benchmarking review, MNP also analyzed the average unit costs across all comparable utilities.
- This analysis is based on publicly available data of multiple pipeline construction projects between 2016 and 2020.
- The average unit costs does not differentiate between the different pipeline sizes.
- Average unit costs are compared below.



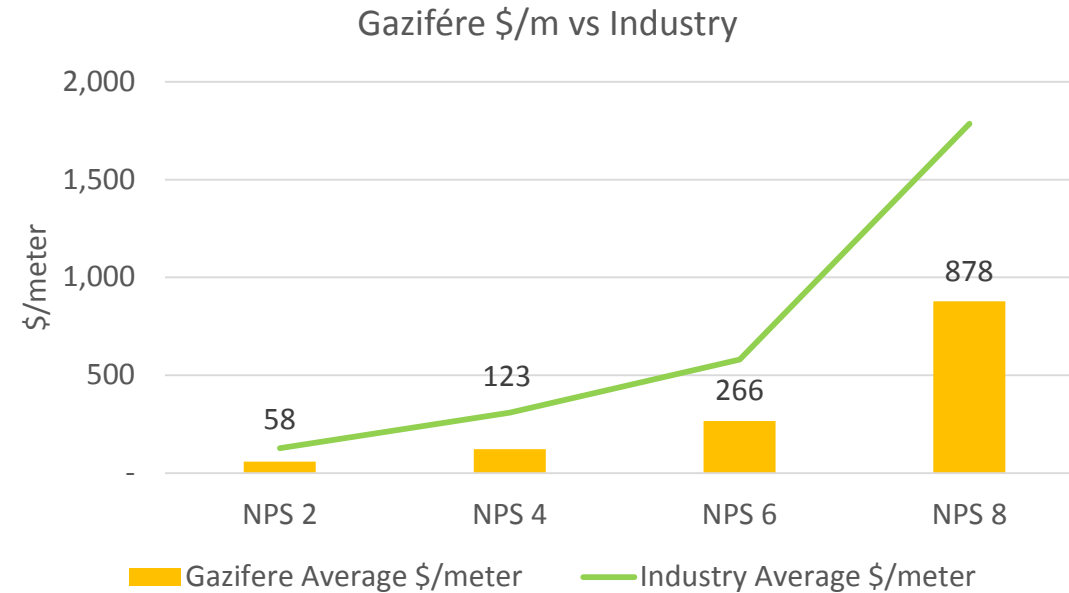
- Gazifère has the lowest average cost across the utilities.

Note: The steel pipeline portions of the total cost and length have been excluded from this calculation

Observation: Gazifère Costs vs Industry

- The following graph summarizes how Gazifère's average \$/m for every diameter compared to the industry average using Approach 2.

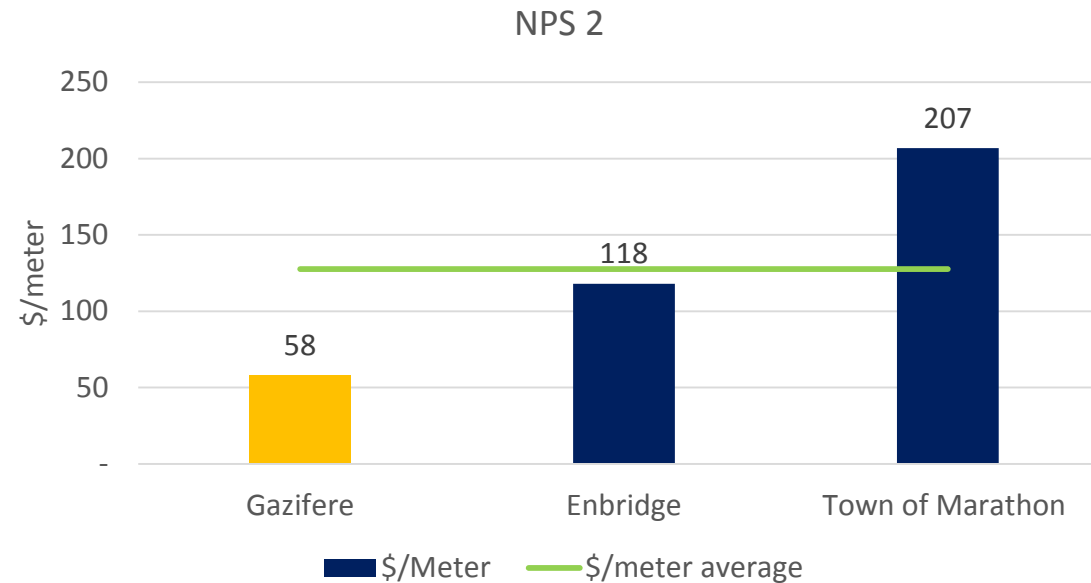
	Industry Average
NPS 2	128
NPS 4	310
NPS 6	582
NPS 8	1,791



- Gazifère's average \$/m falls below the industry by an average of 59% across all pipeline diameters.
- Using this approach, cost increases with the size of the pipeline.

Observation: Average NPS 2 Pipeline Costs

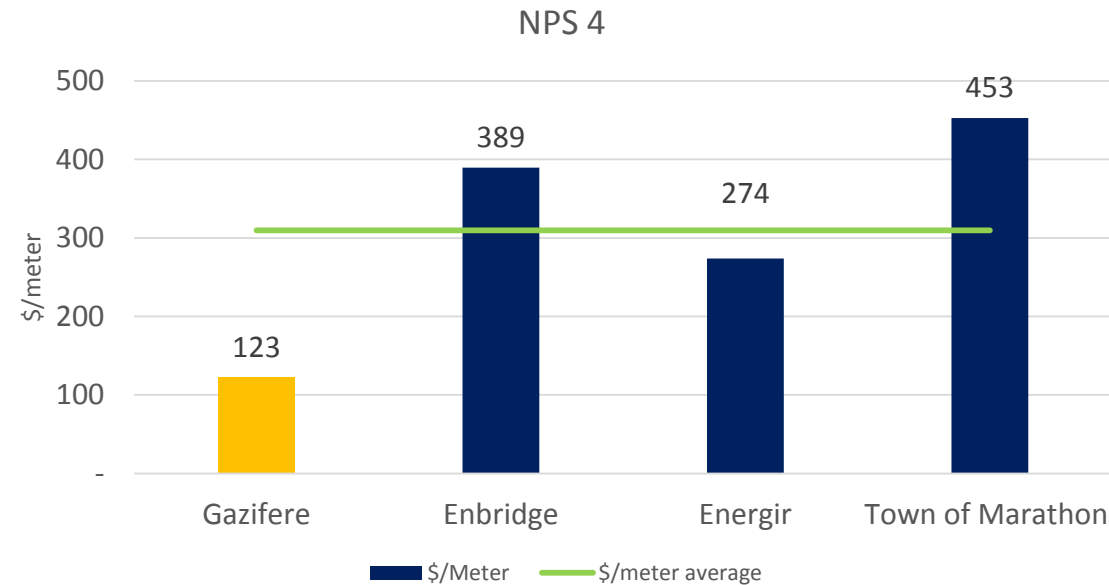
- The following graph summarizes the average \$/m for Gazifère and comparator companies when using NPS 2 piping. *Note: Energir was excluded because no information was found in relation to NPS 2 for 2016-2020.*



- Gazifère is the lowest utility for NPS 2.
- Gazifère is 55% and 51% lower than the industry average and Enbridge, respectively.

Observation: Average NPS 4 Pipeline Costs

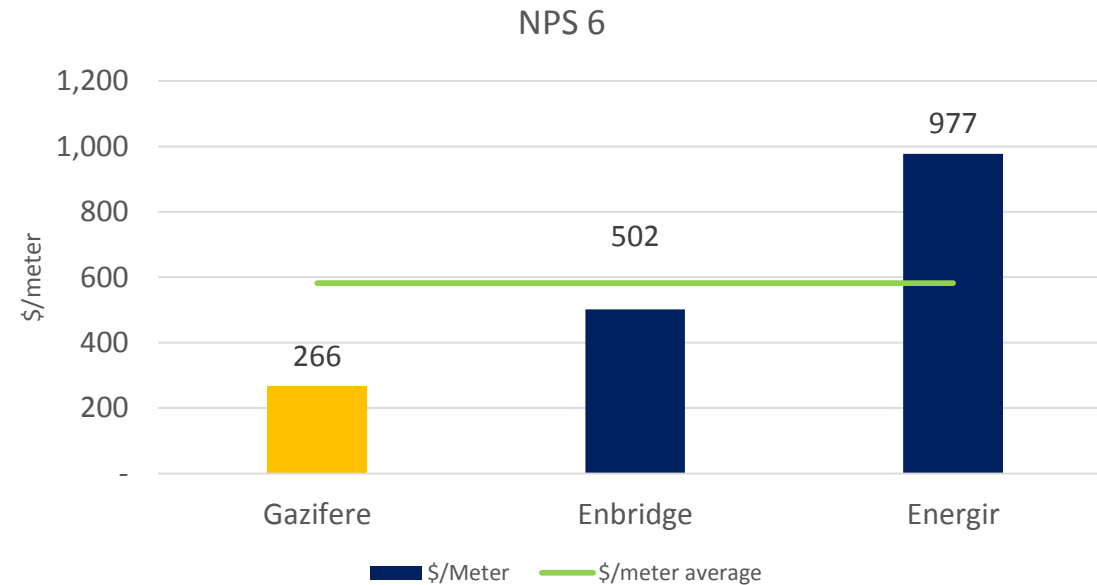
- The following graph summarizes the average \$/m for Gazifère and comparator companies when using NPS 4 piping.



- Gazifère is the lowest utility for NPS 4.
- Gazifère falls 60% and 55% below the industry average and Energir, respectively.

Observation: Average NPS 6 Pipeline Costs

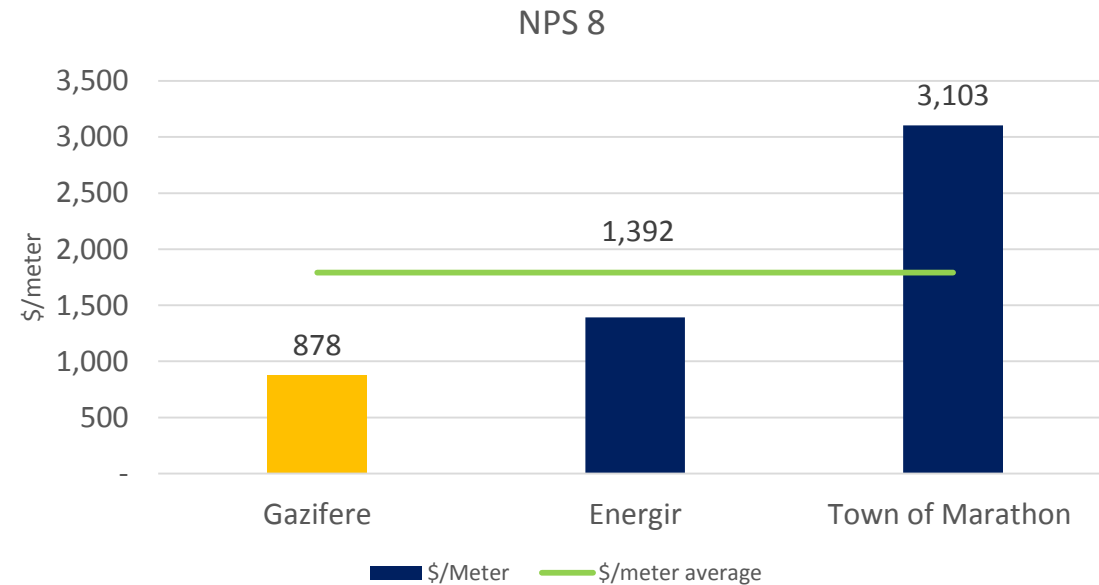
- The following graph summarizes the average \$/m for Gazifère and comparator companies when using NPS 6 piping.



- Gazifère is the lowest utility for NPS 6.
- Gazifère is 54% and 47% below the industry average and Enbridge, respectively.

Observation: Average NPS 8 Pipeline Costs

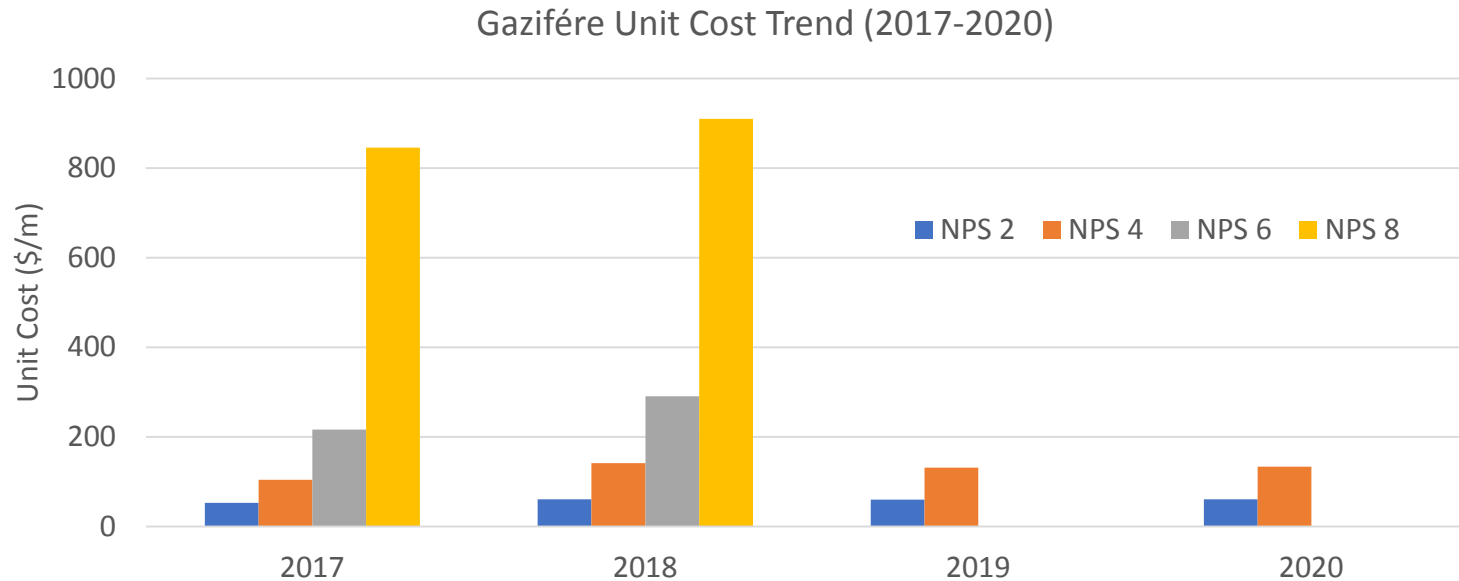
- The following graph summarizes the average \$/m for Gazifère and comparator companies when using NPS 8 piping.



- Gazifère is the lowest utility for NPS 8.
- Gazifère is 51% and 36% lower than the industry average and Energir, respectively.

Observation: Gazifère Unit Costs Trend

- The following graph summarizes the average \$/m cost for Gazifère across all pipeline sizes observed in this study.



Pipeline Size	Cumulative Average Growth Rate
NPS 2	4.8%
NPS 4	8.6%
NPS 6	34.4%
NPS 8	7.5%

- Average unit costs increase consistently as seen in the cumulative average growth rate.
- Due to the weak underlying assumption of Approach 1, assuming costs of each pipeline category is equal, we are more confident using Approach 2 for our review.

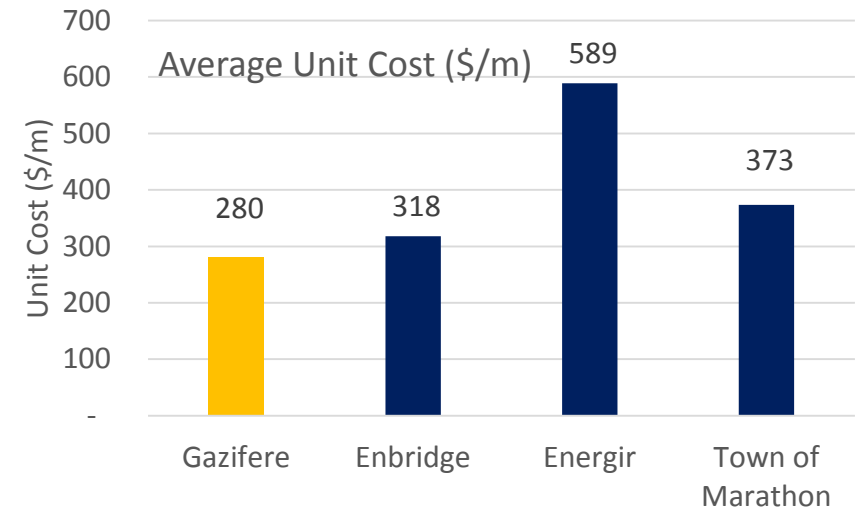
Note: Unit costs extracted from information provided by Gazifère.

Summary of Observations

Key Observations

- 1 Rate Benchmark Ranking** – Across seven utilities reviewed, Gazifère is consistently ranked in top 3 utilities with the lowest rates across most of the rate classes considered as part of our analysis. EPCOR Ontario, with a very small customer base is an outlier with one of the lowest rates across rate classes. Removing it from our analysis would further strengthen Gazifère's rankings. (The table on the left summarizes these rankings with lowest rate getting a rank of 1 and so forth).
- 2 Comparison to Average Rates** – Gazifère's rates, in each rate class and across various consumption levels (volumes) are lower than the average rates for that rate class across the utilities by more than 50%.
- 3 Pipeline Cost Benchmarking** – Gazifère is the lowest utility in terms of average pipeline costs (on a \$/m unit cost basis) across the utilities reviewed. This is also consistent across different pipeline sizes that we have reviewed.
- 4 Overall**, MNP has observed that Gazifère's rates are one of the lowest across utilities and its capital costs on a per unit basis are also consistently the lowest

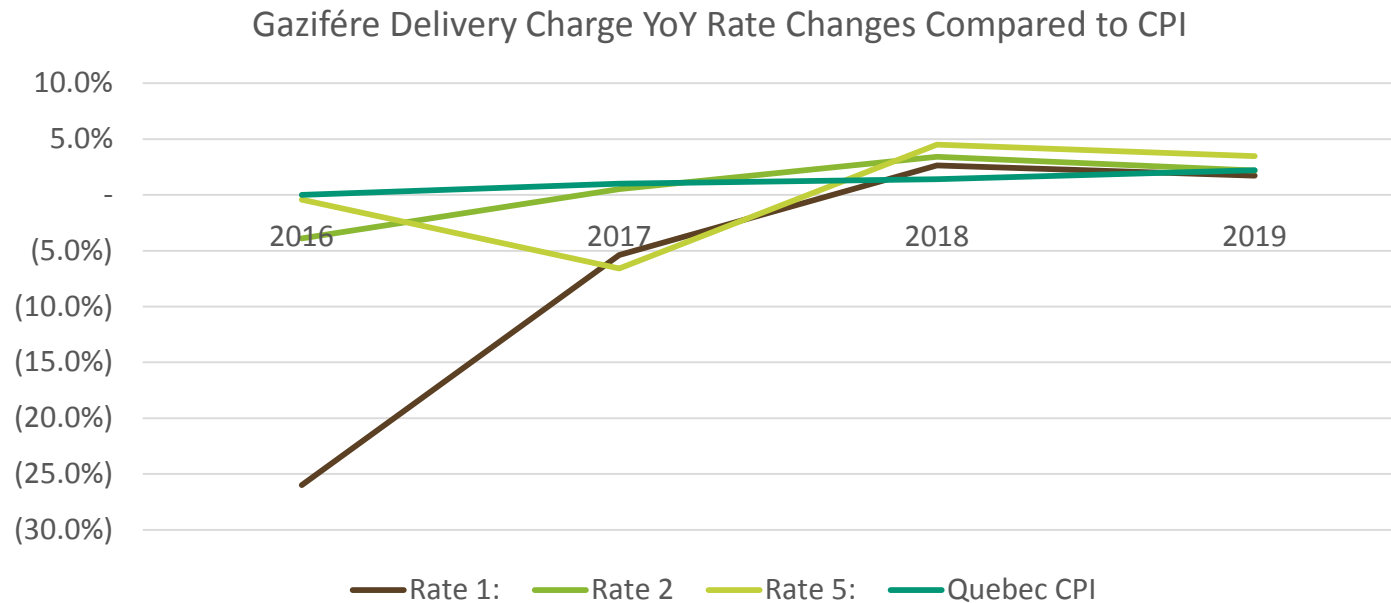
Annual Volume (m3) and Customer Type	Gazifere Ranking
600 m3 res	2
2,000 m3 res	4
2,600 m3 res	4
2,600 m3 com	2
10,000 m3 com	2
30,000 m3 com	3
100,000 m3 com	3
11,130,000 m3 Industrial	3



Appendix

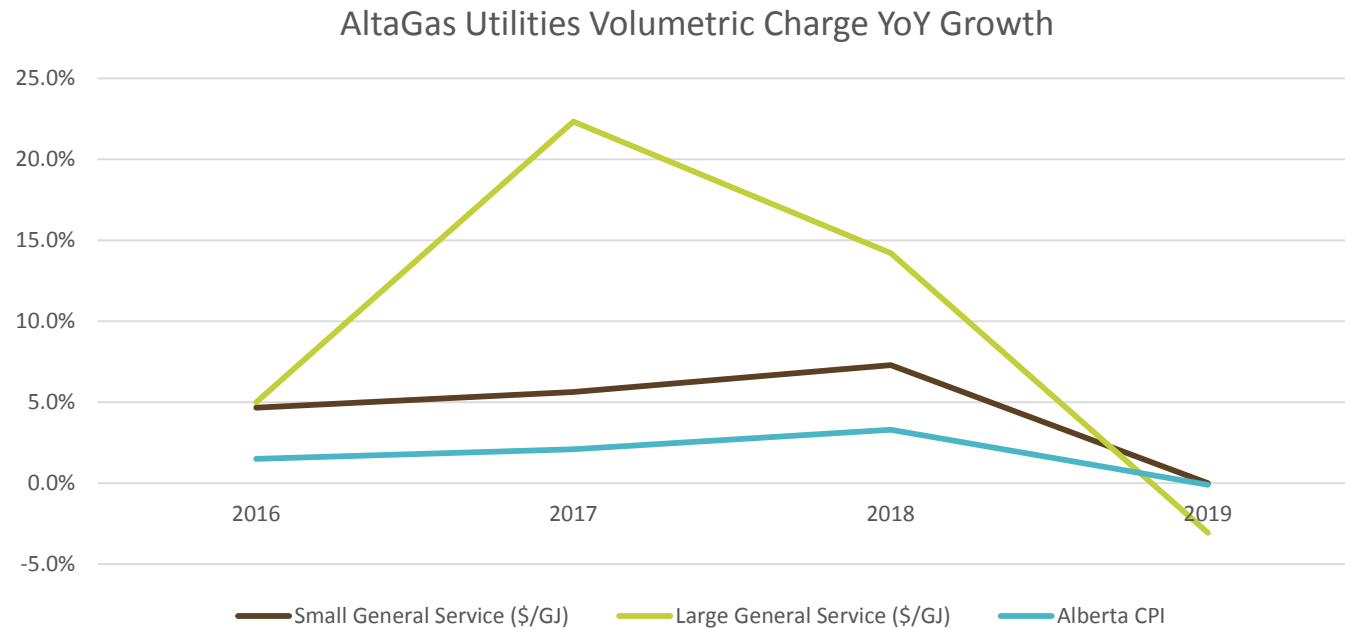
Rate Growth vs. CPI - Gazifère

- MNP compared the year over year growth of approved rates across comparable utilities.
- The focus of our analysis was the volumetric charge across the applicable rate classes.
- The chart below summarizes the YoY Rate growth compared to CPI for Gazifère.



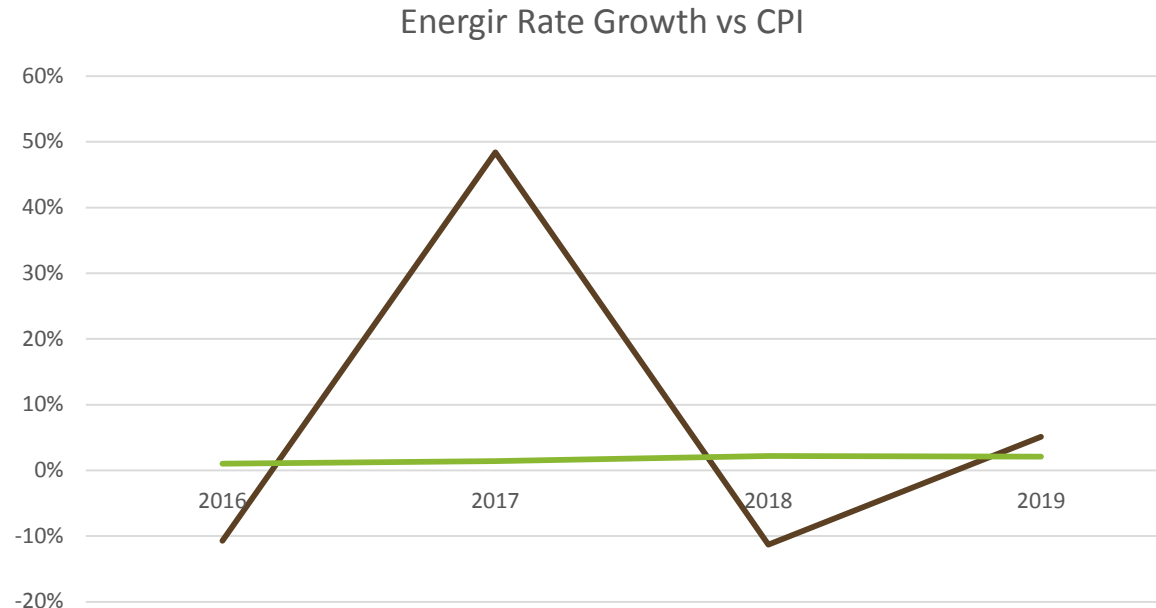
Rate Growth vs. CPI - AltaGas

- MNP compared the year over year growth of approved rates across comparable utilities.
- The focus of our analysis was the volumetric charge across the applicable rate classes.
- The rates have followed the same trend as CPI.
- The chart below summarizes the YoY Rate growth compared to CPI for AltaGas Utilities.



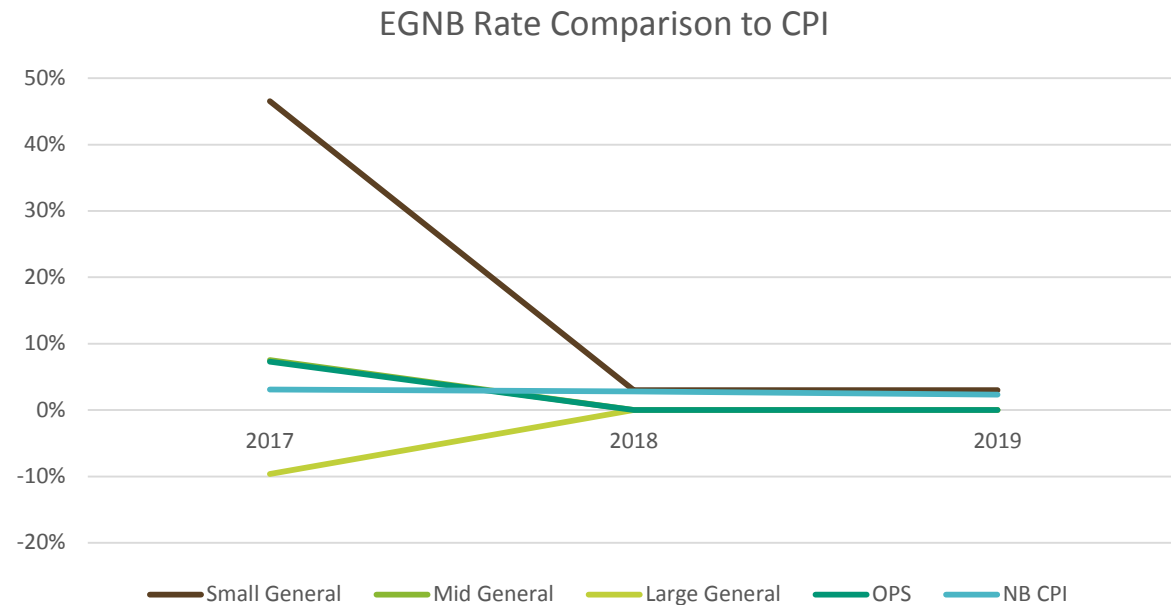
Rate Growth vs. CPI - Energir

- MNP compared the year over year growth of approved rates across comparable utilities.
- The focus of our analysis was the volumetric charge across the applicable rate classes.
- The chart below summarizes the YoY Rate growth compared to CPI for Energir.
- **Note:** Energir gas prices (annual average) are not for a particular rate class and do not depict only the delivery charges.



Rate Growth vs. CPI - EGNB

- MNP compared the year over year growth of approved rates across comparable utilities.
- The focus of our analysis was the volumetric charge across the applicable rate classes.
- The chart below summarizes the YoY Rate growth compared to CPI for EGNB.



Disclaimer

- MNP has relied upon the completeness, accuracy and fair presentation of all the financial and other factual information, data, advice, opinions or representations obtained by it from public sources and management of Gazifère.
- Our analysis is conditional upon the completeness, accuracy and fair presentation of such information.
- Subject to the exercise of professional judgement, MNP has not attempted to verify independently the accuracy, completeness or fair presentation of information obtained.