

THE CORPORATION OF THE CITY OF NORTH VANCOUVER
LONSDALE ENERGY CORPORATION

REPORT

To: Mayor Linda Buchanan and Members of Council

From: Sean Wood, Manager, Finance, Lonsdale Energy

SUBJECT: 2024 RATE REVIEW AND BYLAW AMENDMENT

Date: September 4, 2024 File: 01-0510-20-0004/2024

RECOMMENDATION

PURSUANT to the report of the Manager, Finance, Lonsdale Energy, dated September 4, 2024, entitled “2024 Rate Review and Bylaw Amendment”:

THAT “City of North Vancouver Hydronic Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2024, No. 9085” (Schedule C and Other Fees) be considered for readings.

ATTACHMENTS

1. 2024 Rate Review (CityDocs [2569319](#))
2. 5-Year District Energy System Growth Summary: 2019-2023 (CityDocs [2569322](#))
3. “City of North Vancouver Consolidated Hydronic Heat Energy Service Bylaw, 2004, No. 7575” (CityDocs [2569323](#))
4. “City of North Vancouver Hydronic Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2024, No. 9085” (CityDocs [2569329](#))

PURPOSE

This report presents Lonsdale Energy Corp.’s (Lonsdale Energy) 2024 Rate Review (**Attachment 1**) and provides Council with recommendations that the Meter, Capacity, and Connection rates be adjusted for the 2023 rate of inflation (3.3%) and that the Capacity Charge be adjusted by an additional 3.9% to facilitate a new low-carbon energy source. These changes are presented in Amendment Bylaw No. 9085 (**Attachment 4**).

BACKGROUND

Lonsdale Energy has been in operation since 2004 following the enactment of Bylaw No. 7575 (**Attachment 3**), which created the energy service. The Company has grown significantly since incorporation and a summary of system statistics and growth can be found in **Attachment 2**. Recently, Lonsdale Energy has increased efforts towards reducing the greenhouse gas (GHG) emissions of the system with low-carbon energy sources being used in priority and directly offsetting energy that would otherwise be generated with conventional natural gas. Staff continue to investigate the feasibility of adding new low-carbon energy sources through a lens of their impact on rates to customers. Lonsdale Energy has conducted annual rate reviews since 2016. Historically, these reviews have made rate recommendations to adjust for inflation, as well as to facilitating a low-carbon transition.

Cooling Rates

Cooling districts have been established when proven economically feasible for both Lonsdale Energy and the customer. Feasibility has been dependent on the system's ability to use the recovered waste heat, as well as demand from the customer that is great enough to make the service economically viable (i.e. a commercial customer). Rates for cooling services are determined on a case-by-case basis and established in individual service agreements. Given rising temperatures and a growing demand for cooling services, staff are working on establishing a cooling policy and assessing future cooling network opportunities.

Rate Setting Principles

Lonsdale Energy's rates are set and reviewed within the context of three key principles derived from the mission to deliver clean, reliable, and competitively priced energy through the community energy system:

1. Enabling an economical transition toward low-carbon energy sources.
2. Setting rates that facilitate operations and meeting financial obligations.
3. Maintaining customer affordability.

DISCUSSION

Proposed Rate Adjustments

Inflationary Adjustment to the Meter Charges, Capacity Charges, and Connection Fee *Staff recommend adjusting these rates by the 2023 change in the Consumer Price Index (CPI) All-item Index of 3.3% to account for annual inflation since the last rate review.* This adjustment accounts for the rising costs to operate and maintain the system and protect Lonsdale Energy's purchasing power. The proposed inflationary adjustment is representative of the change in the All-item rate of inflation from December 2022 to December 2023 as reported by Statistics Canada.

Low-carbon Energy Adjustment to the Capacity Charge *Staff recommend adjusting this rate by 3.9% to cover the additional cost of running electric boilers during the Rate period (November 1, 2024 to October 31, 2025).* Lonsdale Energy has secured plant space at 128 West 15th Street and has scheduled construction of an electric boiler plant

(MP11) to be commissioned in Fall 2025. MP11 is expected to be in operation for three months of this rate review period. Staff have calculated the incremental cost of operating the electric boiler plant (as opposed to a natural gas boiler plant) over 3 months as approximately \$200,000. A rate adjustment of 3.9% to the capacity charge will cover these incremental costs. This increase directly facilitates the continued transition to low-carbon energy sources. It is expected that running MP11 in 2025 will **remove an estimated 1,300 tonnes of CO2 emissions and increase low-carbon energy sales to 25% in 2025**. This brings Lonsdale Energy one step closer to its decarbonization targets:

	2027	2030	2040	2050
Low-Carbon Sources Energy Sales	40%	60%	80%	Net Zero

Table 1.0: Decarbonization Targets

Affordability

Staff consider these rate recommendations to be affordable based on the following:

- Maintaining affordability for residential customers.** Costs for residents are projected to increase by 4.6% or \$3.00 per month for a one-bedroom unit. One way to contextualize this is to compare it to wage inflation for Canadians, which was 5.0% over the past year.
- Maintaining competitiveness with municipally owned district energy systems.** Lonsdale Energy remains the low-cost provider at a price of \$113/MWh after these recommendations, compared to the next lowest price of \$116/MWh.

Comparison of municipally-owned systems

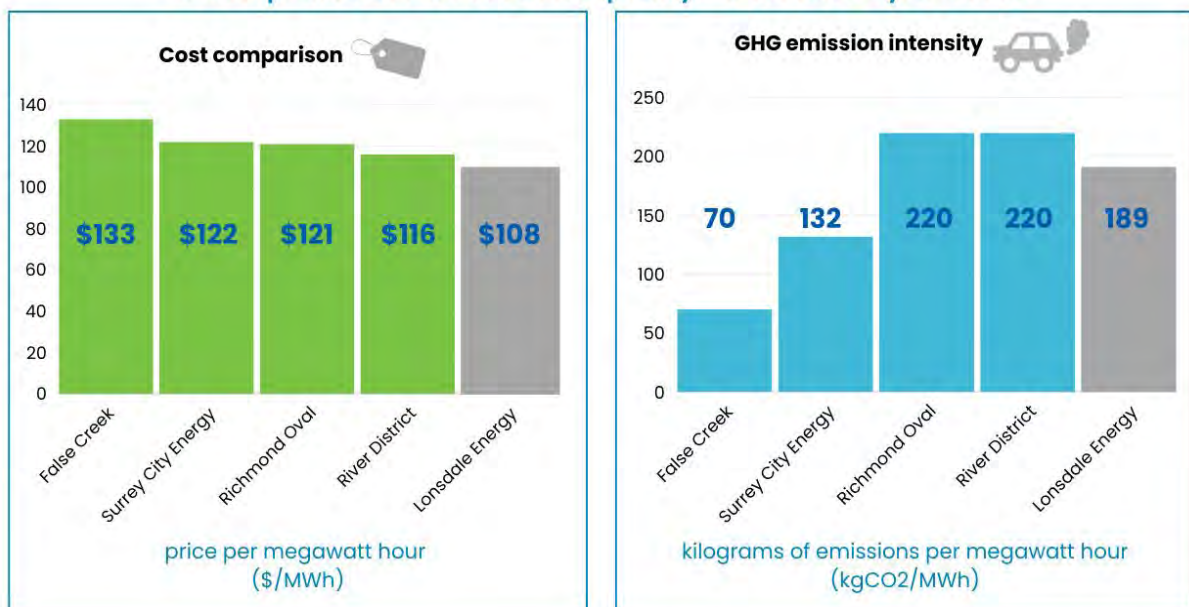


Table 2.0: Effective Cost (\$/MWh) and emission intensity (kgCO2/MWh) of municipally owned DEs

- Remaining below the Company's established rate ceiling** of \$150/MWh (BC Hydro residential rate plus 15%).

Energy delivered from low-carbon energy sources is more expensive to construct and operate. As Lonsdale Energy works towards achieving its decarbonization targets, an increase in rates is necessary, however staff will always consider the rate impacts before

initiating low-carbon energy projects prior to proceeding. In this case, an increase in cost of 2.9% (for the low-carbon adjustment only) will help Lonsdale Energy reach an estimated 25% low-carbon energy sales in 2025, which is 10% higher than 2023 (and estimates for 2024). For more information on affordability and the impact of low-carbon energy on rates, please see the 2024 Rate Review (**Attachment 1**).

Public Input

Lonsdale Energy will inform customers of the public meeting on the proposed rate increase via email. Information will also be posted on the company website and advertised in the North Shore News.

SUMMARY

The table below summarizes the current rates and the recommended rate adjustments which would be implemented on November 1, 2024. Given that these adjustments only affect Meter and Capacity Charges (approximately 50% of total charges), they are projected to **increase the total cost to the customer base by approximately 4.6%**. These recommendations have been made based on Company’s rate setting principles.

Rate Schedule 1				
Rate Schedule 1 (Approx. annual consumption is < 300 MWh)	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
Meter Charge (per month)	\$ 35.89	3.3%	n/a	\$ 37.07
Capacity Charge (per kW)	\$ 5.2339	3.3%	3.9%	\$ 5.6107
*Commodity Charge (per kWh)	variable	n/a	n/a	variable
<i>* Adjusted proportionally to FortisBC's Rate 3, please see website for latest rate.</i>				
Rate Schedule 2				
Rate Schedule 2 (Approx. annual consumption is > 300 MWh)	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
Meter Charge (per month)	\$ 193.26	3.3%	n/a	\$ 199.64
Capacity Charge (per kW)	\$ 5.2339	3.3%	3.9%	\$ 5.6107
*Commodity Charge (per kWh)	variable	n/a	n/a	variable
<i>* Adjusted proportionally to FortisBC's Rate 3, please see website for latest rate.</i>				
Connection Fee				
Connection Fee	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
*Connection Fee (per kW)	\$ 94.18	3.3%	n/a	\$ 97.29
<i>* The minimum connection fee is \$75,000.</i>				

Table 3.0: Summary of Proposed Rates with Previous Year for Comparison

FINANCIAL IMPLICATIONS

Current planning and decision-making is based on comparing alternatives and opportunities with the business-as-usual scenario of heat generated from conventional natural gas, as well as comparison to other thermal energy providers. Combining the Company's historical position as a low-cost energy provider with normalized natural gas prices in 2023 and 2024, short-term modeling estimates a net impact of 4.5% - 5.0% to the customer base resulting from the rate recommendations in this report. With consideration for these rate recommendations, modelling conducted by staff confirms Lonsdale Energy's ability to remain profitable and meet its obligations to the City and other stakeholders in 2024 and 2025.

Uncertainty around potential low-carbon energy source additions to the system in the coming years makes it difficult to conduct reliable long-term modelling. However, given the increased complexity of the low-carbon transition, staff will conduct a comprehensive rate review in the coming year and consider implementation of a cost-of-service model. The intention of a cost-of-service model would be to provide long-term benchmarking for rates that considers changes in operations while smoothing rate changes year-over-year (as the Company adjusts to low-carbon energy sources). A comprehensive rate review and more certainty on energy sourcing in the coming years will allow for longer term rate setting in the future.

The current rate structure and rate recommendations are reasonable and balanced with the Company's current energy sources and in consideration of the addition of electric boilers during this rate review period.

STRATEGIC PLAN IMPLICATIONS:

Lonsdale Energy's goals aligns with the 2022-2026 Council Strategic Plan, more specifically, Council's Resilient City Priority that leads the way in climate action and acts as a steward of the environment for future generations by implementing the following initiative:

- Supporting Lonsdale Energy Corporation in advancing its decarbonization strategy in order to transition to a net-zero emissions system.

RESPECTFULLY SUBMITTED BY:

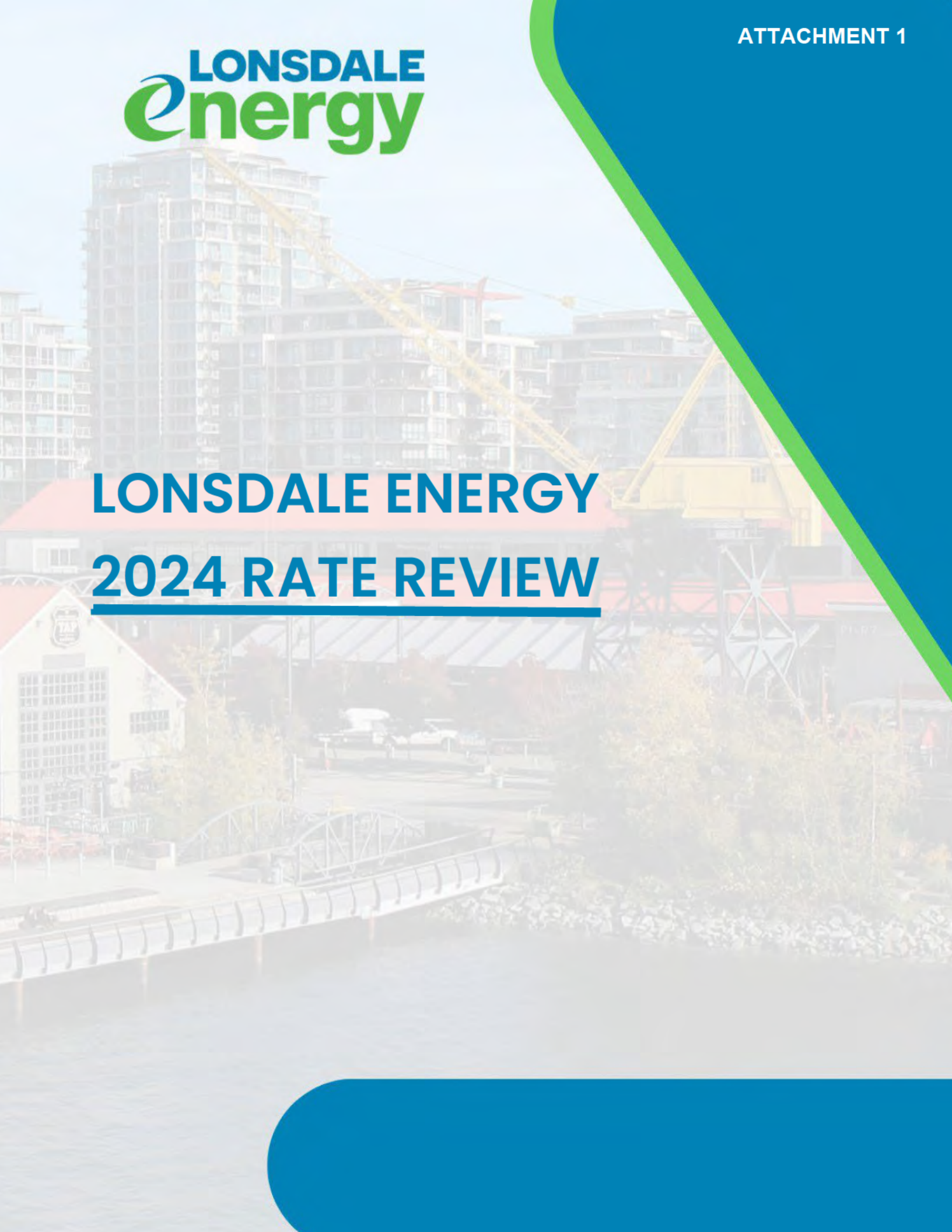


Sean Wood, CPA
Manager - Finance



LONSDALE ENERGY

2024 RATE REVIEW



INTRODUCTION

Lonsdale Energy Corp. (Lonsdale Energy) conducts a rate review on an annual basis. This review considers historical rate setting, rate structure, and the company's current position with respect to its rate setting principles. Based on the findings of the rate review, staff make rate recommendations to Council, who acts as Lonsdale Energy's rate regulator.

Historical Rate Reviews

Since 2016, Lonsdale Energy has conducted annual rate reviews; prior to 2016, rates were adjusted on an "as needed" basis. The Company also introduced a two-rate structure which allowed smaller buildings (with lower energy consumption) to have a reduced fixed cost (Meter Charge), while increasing the rate for the variable cost based on energy consumption (Commodity Charge). Historically, these reviews have made recommendations to adjust rates for inflationary considerations, as well as to facilitate the decarbonization of the system.

Cooling districts have been established where and when economically feasible for Lonsdale Energy and the customer. Feasibility has been dependent on the system's ability to recover and use the waste heat (without needing to vent heat into the atmosphere) and customer demand is great enough for economic feasibility (generally commercial customers). Rates for cooling services are determined on a case-by-case basis and established in individual service agreements with each customer. **Given rising temperatures and a growing demand for cooling services, staff are working towards establishing a cooling policy and assessing future cooling network opportunities.**

Rate Structure

Since its comprehensive rate review in 2016, Lonsdale Energy has had an approximate 50/50 split between its fixed and variable charges. Fixed charges are a combination of the Meter and Capacity Charges and account for the costs to operate, maintain, and replace capital equipment for the community energy system. This means the fixed charges must consider the technologies used to generate thermal energy. As such, in 2023, Lonsdale Energy increased its fixed costs by 7.0% to consider the cost of RNG in the short-term and the higher operating costs of low-carbon energy sources in the long-term, as the Company transitions away from natural gas.

Variable charges (Commodity Charges) are billed according to the customer base's actual energy consumption. Per Bylaw No. 7575, the Commodity Charge rate is adjusted proportionally with the changes in the cost of FortisBC's "Rate 3" as the Company's energy purchases have primarily been made up of natural gas.

Staff intend to initiate a comprehensive rate review in the coming year with consideration for a cost-of-service model. The findings of this comprehensive review will be presented to Council once available.

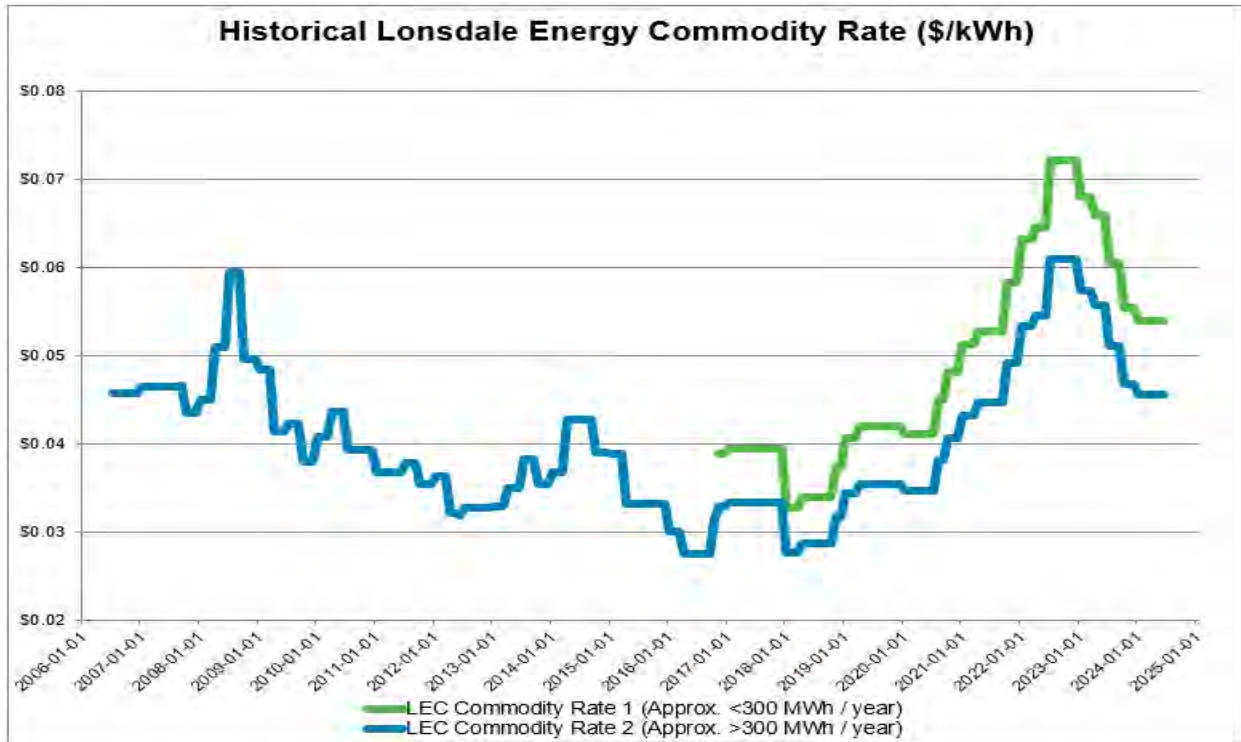


Table 1.0: Historical Lonsdale Energy Commodity Rates

Natural gas prices increased significantly between 2018 and 2022 due to impacts on supply and demand in the market resulting from an Enbridge pipe rupture in BC in 2018, the COVID-19 pandemic in 2020-22, and Russia’s invasion of the Ukraine in 2022. Over 2023, the market stabilized, and rates reacted with decreases in each quarter; the first half of 2024 indicates more stability with another decrease in Q1 and no change in Q2. The impact on cost to customers during this period was significant (2019: 5.4%; 2020: 6.7% 2021: 10.4%; 2022: 12.7%). While prices have decreased in 2023 and 2024, staff expect natural gas costs to increase in the future due to two major factors:

1. The continued increase of the Carbon Tax, which will double the current rate by 2030.
2. The impact of Liquefied Natural Gas (LNG) sales to the global markets, which is expected to commence in late 2025, this will significantly increase demand for our natural gas sources.

Beyond reducing carbon emissions, these factors further incentivize Lonsdale Energy to diversify its energy sourcing portfolio.

Rate Setting Principles

Lonsdale Energy’s rates are set and reviewed within the context of three key principles derived from the mission of the Company to deliver clean, reliable, and competitively priced energy through the community energy system:

1. **Enabling an economical transition toward low-carbon energy sources.** Lonsdale Energy has set targets to achieve net-zero emission by 2050, however low-carbon energy sources carry higher capital and operating costs than traditional high efficiency natural gas

boilers. Therefore, low-carbon energy sources need to be assessed to determine their impact on rates.

2. **Setting rates that facilitate operations and meeting financial obligations.** Rates must be set at a level that facilitates the short and long-term operations of the Company and allow it to meet its obligations to lenders and other stakeholders.
3. **Maintaining customer affordability.** Lonsdale Energy has a responsibility to customers to provide rates that are fair and competitive with other City residents. Affordability is assessed by comparing rates with other local energy providers to determine competitiveness in the market.

Rate Recommendations

The following table summarizes the current rates and the recommended rate adjustments which would be implemented on November 1, 2024:

Rate Schedule 1				
Rate Schedule 1 (Approx. annual consumption is < 300 MWh)	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
Meter Charge (per month)	\$ 35.89	3.3%	n/a	\$ 37.07
Capacity Charge (per kW)	\$ 5.2339	3.3%	3.9%	\$ 5.6107
*Commodity Charge (per kWh)	\$ 0.05395	n/a	n/a	\$ 0.05395
<i>* Adjusted proportionally to FortisBC's Rate 3, which was last adjusted on Jan. 1, 2024.</i>				
Rate Schedule 2				
Rate Schedule 2 (Approx. annual consumption is > 300 MWh)	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
Meter Charge (per month)	\$ 193.26	3.3%	n/a	\$ 199.64
Capacity Charge (per kW)	\$ 5.2339	3.3%	3.9%	\$ 5.6107
*Commodity Charge (per kWh)	\$ 0.04559	n/a	n/a	\$ 0.04559
<i>* Adjusted proportionally to FortisBC's Rate 3, which was last adjusted on Jan. 1, 2024.</i>				
Connection Fee				
Connection Fee	Current Rates	Inflationary Adjustment	Low-Carbon Energy Adjustment	Proposed Rates
*Connection Fee (per kW)	\$ 94.18	3.3%	n/a	\$ 97.29
<i>* The minimum connection fee is \$75,000.</i>				

Table 2.0: Summary of Proposed Rates with Previous Year for Comparison

The recommended rate adjustments are estimated to increase the total cost to the customer base by approximately 4.5 - 5.0%. The reasons for these recommendations are explained in throughout this rate review report.

GUIDING PRINCIPLE #1: ENABLING A TRANSITION TO LOW-CARBON SOURCES

Lonsdale Energy remains committed to reducing its carbon emissions and helping the City achieve its goal of net-zero emissions by 2050. To guide the Company towards this goal, Lonsdale Energy has set internal targets (see Table 3.0 below).

	2027	2030	2040	2050
Low-Carbon Sources Energy Sales	40%	60%	80%	Net Zero

Table 3.0: Decarbonization Targets

With increased efforts to decarbonize, the cost of service to customers will increase due to the higher capital and operating costs of low-carbon technologies compared to a natural gas-based system. This trend is demonstrated by other local energy companies further along in their transition to net zero having higher costs to customers (see Table 5.0). Current low-carbon energy sources include renewable natural gas (RNG), a solar panel array on the roof of the City Library, a geo-exchange field under and the School District 44 head office, as well as recovery of rejected heat from cooling customers. These sources are used in priority and directly offset energy that would otherwise be provided by using conventional natural gas. The impact of these low-carbon energy sources can be seen below:

Year	Description	% of Energy Sales from Low-Carbon Sources	Emissions Displaced by Low-Carbon Sources (tonnes CO2)	Carbon Emission Intensity (kgCO2/MWh)
Baseline	A natural gas-based boiler system	0%	-	220
2021	Cooling heat recovery; geo-exchange; and solar panels	2%	175	218
2022	RNG purchases; cooling heat recovery; geo-exchange; and solar panels	16%	3,216	187
2023	RNG purchases; cooling heat recovery; geo-exchange; and solar panels	15%	2,846	189

Table 4.0: Lonsdale Energy Carbon Emission Figures

Low-carbon energy sources removed approximately 3,000 tonnes of CO2 from the atmosphere in 2022 and again in 2023, which is the equivalent to removing 1,000 cars from the road in each year.



This year, Lonsdale Energy has secured plant space at 128 West 15th Street and has scheduled construction of an electric boiler plant (MP11) to be commissioned in Fall 2025. Given that this plant will be run during the coming year, its impact on costs must be considered in 2024 rate recommendations. MP11 is expected to be in operation for three months of the rate review period. Staff have calculated the incremental cost of operating the electric boiler plant (as opposed to a natural gas boiler plant) over 3 months as approximately \$200,000. A rate adjustment of 3.9% to the capacity charge will cover these incremental costs. This increase directly facilitates the continued transition to low-carbon energy sources. It is expected that running MP11 in 2025 will **remove an estimated 1,300 tonnes of CO2 emissions and increase low-carbon energy sales to 25% in 2025**. This brings Lonsdale Energy one step closer to achieving its decarbonization targets.

GUIDING PRINCIPLE #2: OPERATIONS & MEETING FINANCIAL OBLIGATIONS

Rate setting needs to ensure that the Company can meet its operational needs, service its financial obligations, and provide a return on investment to the shareholder. In order to do this, staff perform detailed modelling for a 24-month period on a quarterly basis, as well as a 5-year model on an annual basis. Recent modelling conducted by staff confirms Lonsdale Energy's ability to remain profitable and meet its obligations to the City and other stakeholders over 2024 and 2025. However, with uncertainty around multiple low-carbon energy sources being added to the system in the coming years, it is difficult to rely on longer term models. Given the increased complexity of multiple energy sources, staff will conduct a comprehensive rate review in the coming year and consider the implementation of a cost-of-service model. A cost-of-service model will provide long-term benchmarking for rates that considers changes in operations and will smooth rate changes year-over-year, as the Company adjusts to low-carbon energy sources. A comprehensive rate review and more certainty on energy sourcing in the coming years will allow for long-term rate setting in the future.

Lonsdale Energy continues to experience rising costs to operate and maintain the community energy system and must correspondingly adjust rates for these rising costs. The Company bases its adjustments for this rise in costs on Statistics Canada's *Consumer Price Index (CPI) All-item Index*. The proposed inflationary adjustment is representative of the change in the All-item rate of inflation from December 2022 to December 2023 as reported by Statistics Canada¹.

The current rate structure and rate recommendations are reasonable and balanced with the Company’s current energy sources for this rate review period, with consideration for the addition of electric boilers.

GUIDING PRINCIPLE #3: AFFORDABILITY

To assess affordability, Lonsdale Energy compares itself to other thermal energy providers in the Lower Mainland, calculates the costs for residential units, and compares its price to the Company’s price ceiling.

Affordability – Competitiveness in the Lower Mainland

To further analyze affordability and competitiveness, Lonsdale Energy compares its cost of services to other Lower Mainland thermal energy providers. The table below shows the effective cost for each provider to deliver 1 MWh of energy. This allows us to fairly compare different sized systems with different energy sources. The table also provides the GHG Emission Intensity (kgCO₂/MWh) which represents the “effective rate of emissions” for the system, where 0 represents net zero and 220 represents a purely natural gas system.

Cost comparison with local energy providers

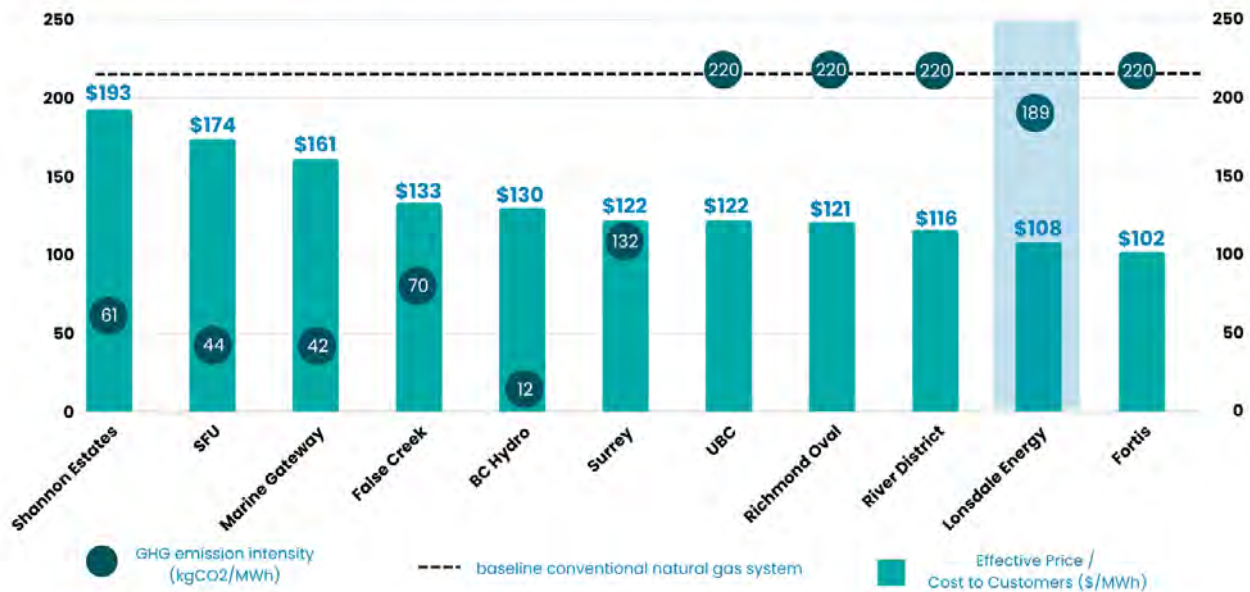


Table 5.0: 2024 Effective Rates and GHG Emission Intensity for Lower Mainland Thermal Energy Providers – comparative figures have been sourced from the City of Vancouver’s Report “2024 False Creek Neighbourhood Energy Utility Customer Rates” dated November 23, 2023.

As seen above, Lonsdale Energy is the lowest cost provider of district energy and is competitive with FortisBC as a thermal energy provider, all while providing a carbon emission intensity 14% lower than a conventional natural gas system in 2023. This table also demonstrates the higher

cost of service of low-carbon energy sources, as GHG Emission Intensity is reduced, the effective price trends upwards.

Affordability – Costs to Residential Units

Lonsdale Energy serves approximately 1 of 4 residents in the City of North Vancouver, so it is important that staff examine the cost of service specifically for residential customers. This is different from data for the entire customer base, which includes commercial and institutional buildings, due to the difference in customer characteristics (building occupancy, domestic hot water use, etc.).

Average monthly cost

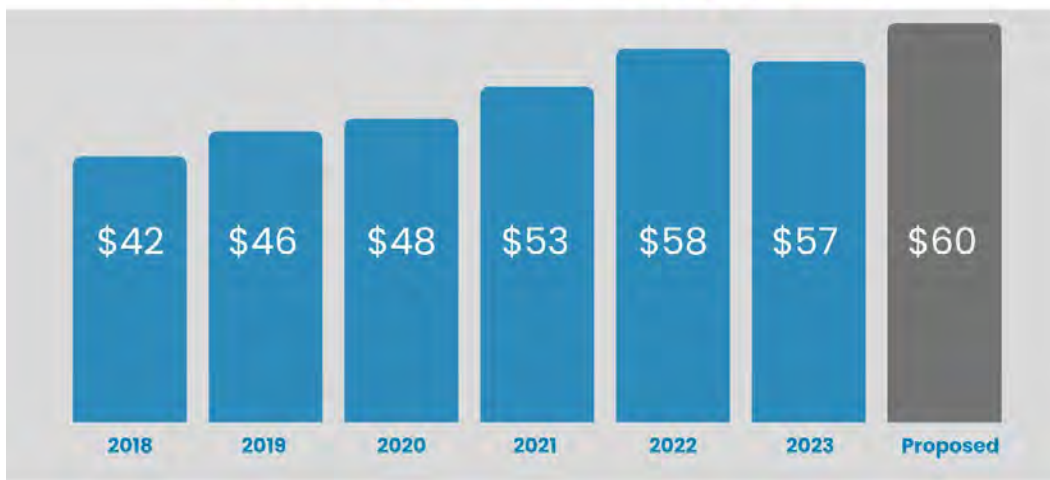


Table 6.0: Average Monthly Cost of Heating Service for a One-Bedroom Unit (70 sq. m. / 750 sq. ft.) – this chart is based on data for all Lonsdale Energy residential buildings. Actual costs for individual buildings may vary.

Projections by staff indicate that this year’s recommended rate adjustments will result in an approximate increase of 4.6% or \$3 per month for a 750 sq. ft. unit. For perspective, this increase is less than the 5.0% wage growth from 2022 to 2023 reported by Statistics Canada’s based on their annual “Employee wages for all industries”ⁱⁱ. This is also affordable when compared to other municipally owned district energy companies:

	Lonsdale Energy	Surrey City Energy	False Creek NEU
Monthly Heating Cost	\$60	\$75	\$91
Year of Data	2024	2022	2024
Size of Unit (sq. ft.)	750	750	800
Size of Unit (sq. m.)	70	70	75
GHG Emission Intensity	189	132	70

Table 7.0: Average Monthly Cost for a 70-75 sq. m. residential unit Comparison

As seen above, Lonsdale Energy’s monthly cost for heating a residential unit is less than other municipally owned district energy providers, however this relative cost must be considered in the context of GHG emissions. As seen above, these providers use more low-carbon energy reducing their emission intensity and explaining the difference in cost. The 2024 rate recommendations are considered affordable for residential customers when compared to other similar district energy provider. Once again, this comparison demonstrates the higher cost of low-carbon energy sources.

Rate Ceiling

To ensure affordability, Lonsdale Energy has maintained a rate ceiling of “BC Hydro plus 15%”. BC Hydro is a commonly considered alternative by developers seeking thermal energy with lower carbon emissions, therefore it provides a good benchmark for the Company. The addition of 15% is to establish a ceiling and consider advantages afforded to BC Hydro due to economies of scale (as a much larger utility and crown corporation). Given BC Hydro’s current residential price of \$130/MWh, this gives a rate ceiling of \$150/MWh:

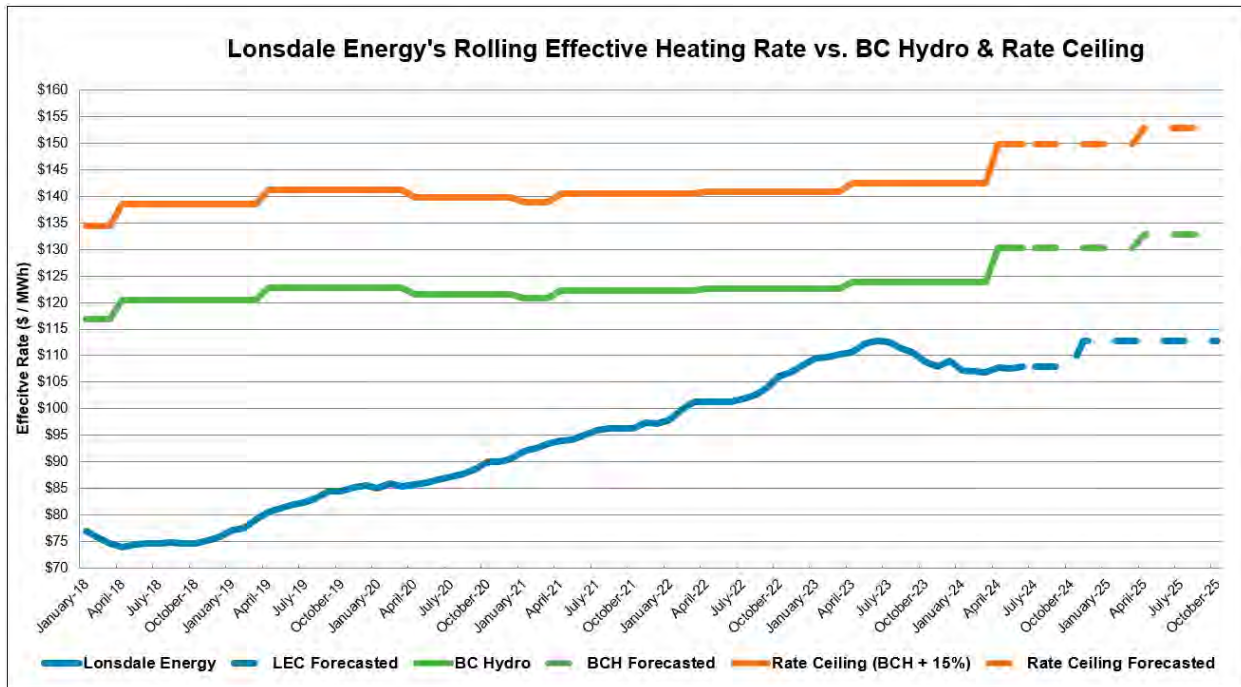


Table 8.0: Lonsdale Energy’s Rolling Effective Rate vs. BC Hydro & Rate Ceiling

The recommended rate adjustments are expected to increase Lonsdale Energy’s price to approximately \$113/MWh, which is well below the rate ceiling of \$150/MWh.

RECOMMENDED RATE ADJUSTMENTS

After concluding the 2024 Rate Review, staff have the following rate recommendations:

Inflationary Adjustment to the Meter Charges, Capacity Charges, and Connection Fee

Staff recommend adjusting these rates by the 2023 change in the Consumer Price Index (CPI) All-item Index of 3.3% to account for annual inflation since the last rate review.

This adjustment accounts for the rising costs to operate and maintain the system and protect Lonsdale Energy's purchasing power.

Low-carbon Energy Adjustment to the Capacity Charge

Staff recommend adjusting this rate by 3.9% to cover the additional cost of running electric boilers during the Rate period.

This adjustment will cover the costs of operating MP11 for three months during this rate review period at an incremental cost of approximately \$200,000. It is expected that running MP11 in 2025 will remove an estimated 1,300 tonnes of CO2 emissions and increase low-carbon energy sales to 25% in 2025.

Summary

The recommended rate adjustments from the 2024 Rate Review are estimated to increase the total cost to the customer base by approximately 4.6%. They are intended to progress Lonsdale Energy's transition to low carbon energy sources and ensure operating needs and financial obligations are met. The recommendations are considered affordable within the context of:

1. Higher costs for low-carbon energy sources and enabling Lonsdale Energy to reach 25% low-carbon energy sales in 2025, with a target of 40% by 2027.
2. Maintaining affordability for residential customers. Costs are projected at \$60 per month with an increase of \$3 per month for a one-bedroom unit from last year. This is competitive with other district energy providers costs to residents.
3. Maintaining competitive prices with other local thermal energy providers. Lonsdale Energy remains the low-cost district energy provider at an effective price of \$113/MWh.
4. Remaining below the established rate ceiling of \$150/MWh.

These recommendations have been guided by the Company's rate setting principles.

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ATTACHMENT 2

THE CORPORATION OF THE CITY OF NORTH VANCOUVER

BYLAW NO. 9085

A Bylaw to amend the City of North Vancouver “Hydronic Energy Service Bylaw, 2004, No. 7575”

The Council of The Corporation of the City of North Vancouver, in open meeting assembled, enacts as follows:

1. This Bylaw shall be known and cited for all purposes as **“City of North Vancouver Hydronic Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2024, No. 9085” (Schedule C and Other Fees)**.
2. “Hydronic Energy Service Bylaw, 2004, No. 7575” is amended as follows:
 - A. Under Schedule B and the Standard Fees and Charges Schedule applicable to Service Connection Installation Fees and Charges, by deleting “94.18 per kilowatt” and replacing it with “\$97.29 per kilowatt”.
 - B. By deleting Schedule “C” in its entirety and replacing it with the Schedule “C” attached to this bylaw.
3. This Bylaw shall be effective as of the 1st day of November, 2024.

READ a first time on the <> day of <>, 2024.

READ a second time on the <> day of <>, 2024.

READ a third time on the <> day of <>, 2024.

ADOPTED on the <> day of <>, 2024.

MAYOR

CORPORATE OFFICER

**SCHEDULE “C”
FEES, RATES AND CHARGES**

The rates, fees and charges payable in respect of the Service defined in “Hydronic Energy Service Bylaw, 2004, No. 7575” are as set out below.

Except as otherwise stated, capitalized terms in this Schedule “C” shall have the meaning defined in the General Terms and Conditions of “Hydronic Energy Service Bylaw, 2004, No. 7575” attached as Schedule “B”.

PROVISION OF HEATING TO PREMISES:

The rates payable for the provision of Hydronic Energy Heating Service to Premises are a combination of the meter charge, capacity charge and commodity charge.

RESIDENTIAL SERVICE

RATE SCHEDULE 1

- (a) **Meter Charge** – A monthly charge of \$37.07 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.6107 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.03398 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

RATE SCHEDULE 2

- (a) **Meter Charge** – A monthly charge of \$199.64 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.6107 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.02871 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

COMMERCIAL SERVICE

RATE SCHEDULE 1

- (a) **Meter Charge** – A monthly charge of \$37.07 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.6107 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.03398 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

RATE SCHEDULE 2

- (a) **Meter Charge** – A monthly charge of \$199.64 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.6107 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.02871 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

PROVISION OF COOLING TO PREMISES:

The rates payable for the provision of Hydronic Energy Cooling Service to Premises shall be determined by Council for each Premises which connects to and uses the Hydronic Energy Cooling Service.

In addition to the foregoing rates the fees and charges set out in the Standard Fees and Charges attached as a schedule to the General Terms and Conditions will apply to the provision of the Service.



THE CORPORATION OF THE CITY OF NORTH VANCOUVER

**“City Of North Vancouver
Hydronic Energy Service Bylaw, 2004, No. 7575”**

CONSOLIDATED FOR CONVENIENCE – DECEMBER 1, 2023

Amendment #	Adoption Date	Subject
7843	February 5, 2007	Schedule A, Schedule B and Schedule C
7865	May 28, 2007	Section 4 and Schedule A
7891	November 19, 2007	Section 15, Schedule B and Schedule C
7926	April 28, 2008	Harbourside Service Area
7954	July 28, 2008	Service Connection Fee
8059	December 14, 2009	Schedule C, Fees Rates and Charges Schedule
8086	June 28, 2010	Schedule C and Housekeeping
8123	November 1, 2010	Schedule C – Meter Charge
8187	September 12, 2011	Schedule C – Service Connection Fee
8321	October 7, 2013	Standard Fees and Charges Schedule & Capacity Charge
8497	October 17, 2016	Schedule B, Standard Fees and Charges Schedule, Schedule C
8545	March 6, 2017	Standard Fees and Charges Schedule
8561	June 19, 2017	Standard Fees and Charges Schedule
8596	December 11, 2017	Schedule C
8660	July 9, 2018	Addition of Section 14.10
8656	July 16, 2018	Schedule C
8730	October 7, 2019	Schedule C and Other Fees
8878	November 15, 2021	Schedule C and Other Fees
8910	February 14, 2022	Acute Healthcare Buildings and Pilot Study
8994	November 20, 2023	Schedule C and Other Fees

THE CORPORATION OF THE CITY OF NORTH VANCOUVER

BYLAW NO. 7575

A Bylaw to Create a Hydronic Energy Service

WHEREAS the *Community Charter* empowers the municipality to provide any service that the Council considers necessary or desirable.

WHEREAS the City of North Vancouver (“City”) wishes to establish a service for the purpose of providing hydronic heat energy for space heating and domestic hot water to multi-family, residential, commercial, institutional and industrial buildings.

NOW THEREFORE the Council of The Corporation Of The City Of North Vancouver in open meeting assembled, enacts as follows:

1. This Bylaw shall be known and cited for all purposes as “**City of North Vancouver Hydronic Energy Service Bylaw, 2004, No. 7575**”.
2. The service of providing hydronic heat energy for space heating and domestic hot water (“Heating Service”) and the service of providing hydronic cooling energy for space cooling (“Cooling Service”) to properties with multi-family residential, commercial, institutional and industrial buildings thereon (collectively the “Service”) is hereby established.
3. The Service may be provided to properties with multi-family residential, commercial, industrial or institutional buildings thereon in the City of North Vancouver (“Service Area”).
4. There shall be three classes of property within the Service Area:
 - Class 1 – properties described in Schedule “A”;
 - Class 2 – properties, other than Class 1 properties, on which it is proposed to construct or renovate (to an extent that requires substantial occupancy postponement) multi-family residential, commercial, industrial and institutional buildings having a combined floor area of greater than 1000 square metres; and *[Bylaw 8596, December 11, 2017]*
 - Class 3 – properties other than Class 1 properties and Class 2 properties.
5. Multi-family residential, commercial, industrial and institutional buildings:
 - (a) on Class 1 properties, are required to apply for, be connected to and use the Heating Service and may apply for, be connected to and use the Cooling Service unless the City’s Director of Finance considers that the cost of providing the Cooling Service to the property and buildings would be excessive to the City;
 - (b) subject to section 5.1, on Class 2 properties, are required to apply for, be connected to and use the Heating Service and may apply for, be connected to and use the Cooling Service unless the City’s Director of Finance considers that the cost of providing the Heating Service or the Cooling Service as the case may be to the property and buildings would be excessive to the City; and *[Bylaw 8910, February 14, 2022]*

- (c) on Class 3 properties, may apply for, be connected to and use the Heating Service and the Cooling Service unless the City's Director of Finance considers that the cost of providing the Heating Service or the Cooling Service as the case may be to the property and the buildings would be excessive to the City.
- 5.1 Notwithstanding section 5(b), on Class 2 properties, acute healthcare buildings containing hospital spaces are not required to use the Heating Service, provided that:
- (a) the buildings are required to apply for, and be connected to, the Heating Service, may use the Heating Service, and may apply for, be connected to and use the Cooling Service, unless the City's Director of Finance considers that the cost of providing the Heating Service or the Cooling Service as the case may be to the property and buildings would be excessive to the City;
 - (b) the buildings are designed to meet or exceed the latest published CSA Z317.2 standard (Special Requirements for Heating, Ventilation, and Air-Conditioning (HVAC) Systems in Health Care Facilities); and
 - (c) the buildings are designed to use active heat recovery, recovering most of the waste heat from exhaust air.
- [Bylaw 8910, February 14, 2022]*
- 5.2 The City authorizes its officers and employees and the officers and employees of the Service Provider to conduct a study evaluating the performance and lifecycle costs of an active heat recovery system used pursuant to section 5.1, and to generate, collect, exchange and analyze information in support of such study. *[Bylaw 8910, February 14, 2022]*
6. The Service shall be provided and used in accordance with the terms and conditions described in Schedule "B" ("General Terms and Conditions").
7. The fees payable in respect of the Service shall be those described in Schedule "C" which shall be based on the cost of providing, maintaining and expanding the Service and may be different for different properties and buildings based upon the use, capacity and consumption of those properties and buildings
8. The City may operate the Service directly or through another organization (the "Service Provider").
9. The City authorizes its officers and employees and the officers, employees, agents, servants, contractors and subcontractors of the Service Provider to enter onto any property or into any building applying for, connecting or connected to or using the Service or required to apply for connect to and use the Service to connect or disconnect the Service and to inspect and determine whether all regulations, prohibitions and requirements contained in this Bylaw and the General Terms and Conditions are being met.
10. The City authorizes its officers and employees and the officers and employees of the Service Provider to require persons applying for, connecting or connected to or using the Service to provide security with respect to the Service in an amount determined by the City or the Service Provider.

11. Except as provided in the General Terms and Conditions and Sections 12, 13 and 14 of this Bylaw no building situated on a Class 3 property which is connected to and using the Service may be disconnected from the Service unless the City Engineer is satisfied, in his sole discretion, that the building will be adequately supplied with an alternate form of energy capable of heating the building and no building situated on a Class 1 or Class 2 property which is connected to and using the Service may be disconnected from the Service.
12. The City or the Service Provider may discontinue providing the Service to a person or property because of:
 - (a) unpaid fees or taxes in relation to the Service; or
 - (b) non-compliance with the General Terms and Conditions or the provisions of this Bylaw.
13. The City or the Service Provider may discontinue providing the Service to a person or property upon providing not less than 48 (forty-eight) hours written notice outlining the reasons for the discontinuance.
14. A person whose Service is discontinued for non-compliance with the General Terms and Conditions or the provisions of this Bylaw other than a failure to pay fees or taxes payable in respect of the Service may appeal such discontinuance to the Council of the City by delivering to the City, within 10 (ten) days of the date of the written notice of discontinuance, written notice of their intention to appeal stating in a concise fashion the grounds upon which the appeal is based. If, upon receipt of a written notice of intention to appeal, the Service has not yet been discontinued then the decision of the City or the Service Provider to discontinue the Service shall be stayed until the appeal has been considered by the Council unless the Service is to be discontinued for reasons which the City or the Service Provider reasonably believe will endanger persons or property, including the property of the City or the Service Provider, in which case the decision will not be stayed and the Service will be discontinued in accordance with the notice of discontinuance.

READ a first time by the Council on the 23rd day of February, 2004.

READ a second time by the Council on the 23rd day of February, 2004.

READ a third time and passed by the Council on the 23rd day of February, 2004.

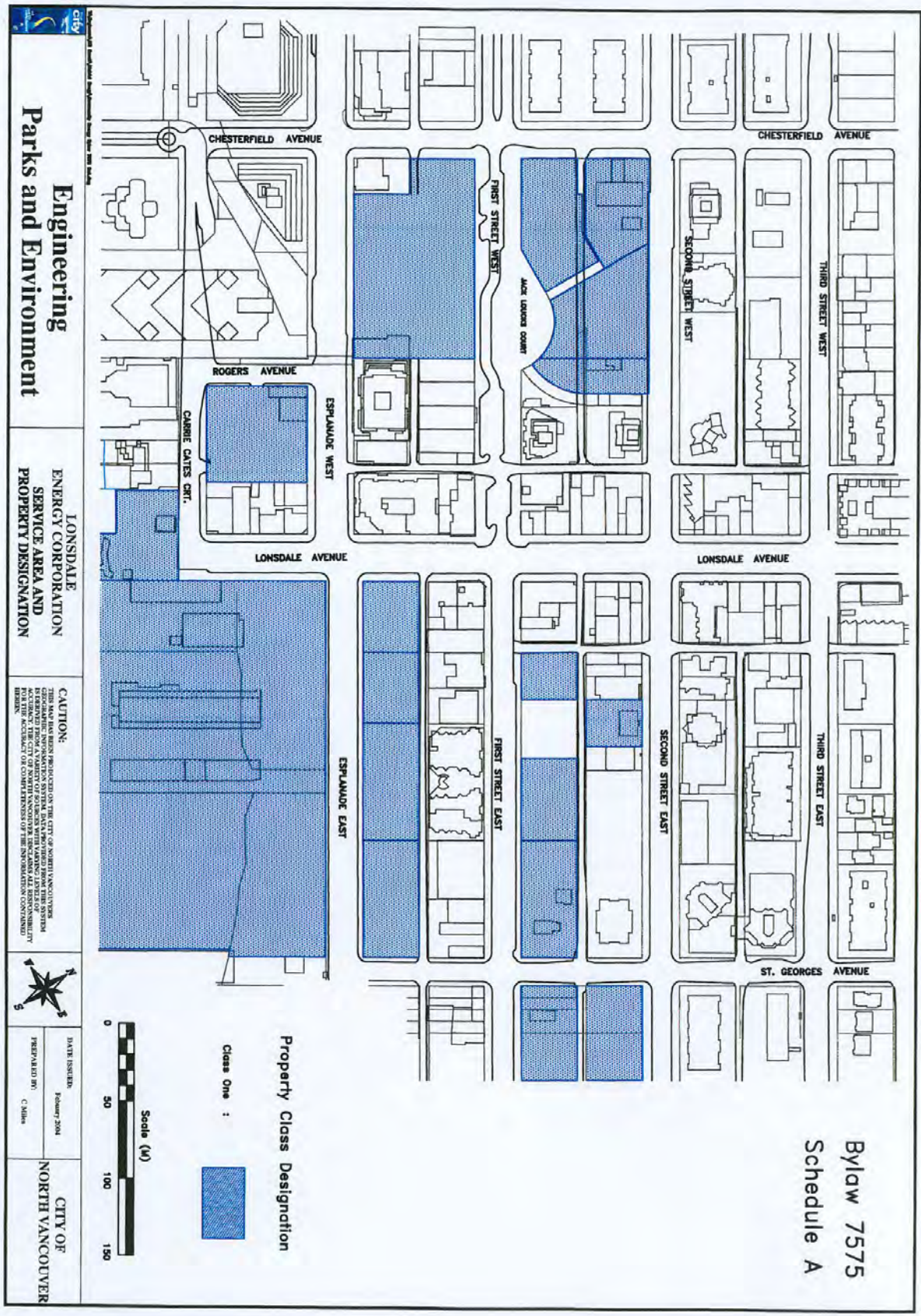
RECONSIDERED and finally adopted by the Council, signed by the Mayor and City Clerk and sealed with the Corporate Seal on the 1st day of March, 2004.

"Barbara A. Sharp"

MAYOR

"Bruce A. Hawkshaw"

CITY CLERK



Engineering
Parks and Environment

**LONSDALE
ENERGY CORPORATION
SERVICE AREA AND
PROPERTY DESIGNATION**

CAUTION:
THIS MAP HAS BEEN PRODUCED ON THE BASIS OF THE CITY OF NORTH VANCOUVER'S
GEOGRAPHIC INFORMATION SYSTEM DATA PROVIDED TO THE SYSTEM
OPERATOR BY THE CITY OF NORTH VANCOUVER. THE CITY OF NORTH VANCOUVER
ACCEPTS NO LIABILITY FOR ANY ERRORS OR OMISSIONS. THE CITY OF NORTH VANCOUVER
ACCEPTS NO LIABILITY FOR ANY ERRORS OR OMISSIONS. THE CITY OF NORTH VANCOUVER
ACCEPTS NO LIABILITY FOR ANY ERRORS OR OMISSIONS.



DATE ISSUED: February 2004
PREPARED BY: CHM

**CITY OF
NORTH VANCOUVER**

**Bylaw 7575
Schedule A**

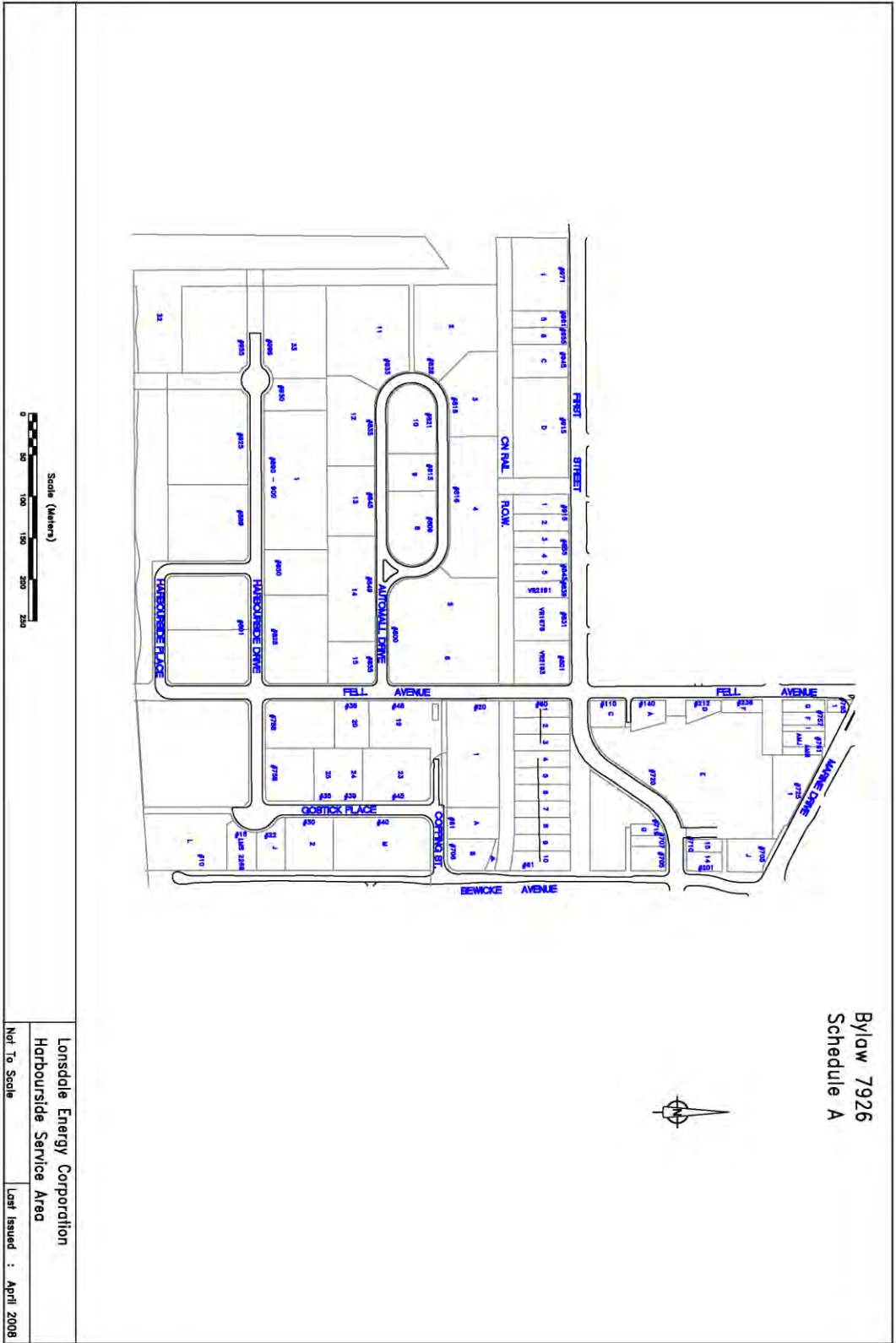


Priority Class Designation
Class 1

Lonsdale Energy Corporation
Service Area And Property Designation

Map No. 5046

Last Revised: 2 May 2007



Bylaw 7926
Schedule A

Lonsdale Energy Corporation
Harbourside Service Area
Not To Scale
Last Issued : April 2008

[Bylaw 7926, April 28, 2008]

SCHEDULE “B”

GENERAL TERMS AND CONDITIONS

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DEFINITIONS

Unless the context indicates otherwise, in these General Terms and Conditions and in the rate schedules referred to herein the following words have the following meanings:

Class 1 Properties means the properties within the Service Area described in the schedule attached to and forming part of the General Terms and Conditions.

Class 2 Properties means properties within the Service Area, other than Class 1 Properties, on which it is proposed to construct multi-family residential, commercial, industrial and institutional buildings having a combined floor area of greater than 1000 square meters.”;

Class 3 Properties means properties within the Service Area other than Class 1 Properties and Class 2 Properties

Commercial Service means the provision of Hydronic Energy Service to commercial, institutional and industrial Premises.

Commodity means the fuel used by the Service Provider in the Hydronic Energy System to create the Hydronic Energy.

Conversion Factor means a factor, or combination of factors, which converts Hydronic Energy meter data to kilowatts or cubic metres for billing purposes.

Cooling means the energy transferred for the purpose of lowering the ambient air temperature in a Premise including all energy transferred at a temperature of 21 degree C or less.

Customer means a Person who is being provided Service or who has filed an application for Service with the Service Provider that has been approved by the Service Provider.

Day means any period of 24 consecutive Hours beginning and ending at 7:00 a.m. Pacific Standard Time or as otherwise specified in the Service Agreement.

Delivery Point means the outlet of the Heat Exchanger unless otherwise specified in the Service Agreement.

Delivery Temperature and replacing it by the following “Delivery Temperature means the Hydronic Energy transfer temperature as determined by the Service Provider available to the Customer at the Delivery Point.”

Distribution System means the system of water pipes, fittings and ancillary components used for distributing water for the purposes of providing Hydronic Energy to Premises in the Service Area including all additions thereto and replacements thereof and the system of water pipes connecting the Distribution System to the Service Connection including all additions thereto and replacements thereof.

General Terms & Conditions means these general terms and conditions as amended from time to time by the Council of the City of North Vancouver.

Heating means the energy transferred for the purpose of raising the ambient air or domestic hot water temperature in a Premise including all energy transferred at a temperature exceeding 21 degree C.

Heat Exchanger means the equipment including ventilation systems installed at the Customer's Premises to transfer Hydronic Energy from the Hydronic Energy System to the Customer's Premises.

Hour means any consecutive 60 minute period.

Hydronic Energy Hydronic Energy means heated water and cooled water.

Hydronic Energy Service means the delivery of Hydronic Energy through the Hydronic Energy System to a Delivery Point and through a Meter Set for use in multi-family residential, commercial, institutional and industrial Premises.

Hydronic Energy System means the Hydronic Energy generation system including the Distribution System and water boilers, heat pumps and solar panels used for the purpose of heating or cooling the water that flows through the Distribution System and the Service Connections and all equipment including the pressure vessels, conduits, pipes, valves, lines, pumps, Heat Exchangers and Meter Sets together with all ancillary appliances and fittings necessary to provide Hydronic Energy to Premises in the Service Area and all additions thereto and replacements thereof as such system is expanded, reduced or modified from time to time.

Hydronic Energy System Extension means an extension or expansion of the Hydronic Energy System including the upgrading of existing pipes, and ancillary equipment on private property, but does not include the installation of Service Connections, Heat Exchangers or Meter Sets.

LEC means Lonsdale Energy Corporation, a body corporate incorporated pursuant to the laws of the Province of British Columbia.

Meter Set means an assembly of metering and ancillary equipment, including Heat Exchangers, that measure the amount of Hydronic Energy consumed by a Customer.

Month means a period of time, for billing purposes, of 27 to 34 consecutive Days.

Other Service means the provision of service other than Hydronic Energy Service.

Other Service Charges means charges for damages, alterations and repairs, financing, insurance, and late payment charges, Social Service Tax, Goods and Services Tax or other taxes related to these charges.

Person means a natural person, partnership, corporation, society, unincorporated entity or body politic.

Premises means a building, a separate unit of a building, or machinery together with the surrounding land.

Rate Schedule means a schedule attached to and forming part of the General Terms and Conditions, which sets out the charges for Service and certain other related terms and conditions for a class of Service.

Residential Service means the provision of Hydronic Energy Service to multi-family residential Premises.

Return Temperature means the temperature, as determined by the Service Provider and measured at the Heat Exchanger, at which water from the Customer's Premises may be returned to the Hydronic Energy System.

Service means the provision of Hydronic Energy Service and Other Service by the Service Provider.

Service Agreement means an agreement between the Service Provider and a Customer for the provision of Service.

Service Area means that portion of the City of North Vancouver designated by the Council of the City of North Vancouver for the provision of Hydronic Energy Service.

Service Connection means that portion of the Hydronic Energy System extending from the Distribution System to the Delivery Point.

Service Provider means the Person who provides Service to Customers in accordance with the General Terms and Conditions including without limitation LEC and its successors, assigns, officers, employees, servants, agents and contractors;

Service Related Charges include, but are not limited to, application fees, Service Connection installation fees, disconnection fees and late payment charges, plus Social Services Tax, Goods and Service Tax, or other taxes related to these charges.

Standard Fees & Charges Schedule means the schedule attached to and forming part of the General Terms and Conditions which lists the various fees and charges relating to Service provided by the Service Provider as approved from time to time by the Council of the City of North Vancouver.

Utility Services means the hydro-electric, water, sewer and other utility services required by the Service Provider to provide the Hydronic Energy Service.

Year means a period of 12 consecutive Months.

SERVICE AREAS

These General Terms and Conditions refer to the provision of Hydronic Energy Service in the City of North Vancouver or such portions thereof as may be designated by the Council of the City of North Vancouver and such other areas as may be added from time to time by the Council of the City of North Vancouver.

1. APPLICATION REQUIREMENTS

1.1 Requesting Services - A Person requesting the Service Provider to provide Service, including

- (a) providing Hydronic Energy Services,
- (b) providing a Service Connection,
- (c) re-activating existing Service Connections,
- (d) transferring an existing account,
- (e) changing the type of Service provided, or
- (f) making alterations to existing Service Connections, Heat Exchangers or Meter Sets,

must apply to the Service Provider in person, by mail, by telephone, by facsimile or by other electronic means.

1.2 Required Documents - An applicant for Service may be required to sign an application and a Service Agreement provided by the Service Provider.

1.3 Separate Premises / Businesses - If an applicant is requesting Service from the Service Provider at more than one Premises, or for more than one separately operated business, then the applicant will be considered a separate Customer for each of the Premises and businesses. For the purposes of this provision, the Service Provider will determine whether any building contains one or more Premises or any business is separately operated.

1.4 Required References – The Service Provider may require an applicant for Service to provide reference information and identification acceptable to the Service Provider.

1.5 Refusal of Application – The Service Provider may refuse to accept an application for Service for any of the reasons listed in Section 19 (Discontinuance of Service and Refusal of Service).

2. AGREEMENT TO PROVIDE SERVICE

2.1 Service Agreement - The agreement for Service between a Customer and the Service Provider will be:

- (a) the oral or written application of the Customer that has been approved by the Service Provider and that is deemed to include the General Terms and Conditions, or
- (b) a Service Agreement signed by the Customer.

2.2 Customer Status - A Person becomes a Customer of the Service Provider when the Service Provider

- (a) approves the Person's application for Service, or
- (b) provides Service to the Person.

2.3 Service Connections

Subject to the following, the Service Provider will serve each parcel of land with one Service Connection. Additional Service Connections may be provided at the sole discretion of the Service Provider. In the case of buildings which have been subdivided by way of strata plan all strata lots and common property will be served by one Service Connection and the Customer will be the Strata Corporation.

2.4 No Assignment/Transfer – A Customer may not transfer or assign a Service Agreement without the written consent of the Service Provider.

3. CONDITIONS ON USE OF SERVICE

3.1 Return Temperature – A Customer will ensure that the temperature of the water returning from the Customer's Premises to the Distribution System complies with the requirements of the Service Provider.

3.2 Unauthorized Sale / Supply / Use - Unless authorized in writing by the Service Provider, a Customer will not sell or supply Hydronic Energy supplied to it by the Service Provider to other Persons or use Hydronic Energy supplied to it by the Service Provider for any purpose other than as specified in the Service Agreement and the General Terms and Conditions.

4. RATE CLASSIFICATION

4.1 Rate Classification - Customers may be served under any Rate Schedule for which they meet the applicability criteria as set out in the appropriate Rate Schedule.

4.2 Rate Selection – The Service Provider will endeavour to provide the Customer with information and advice on all rates available to the Customer from time to time, but in every case the selection of the appropriate Rate Schedule will be the sole responsibility of the Customer.

In the absence of instructions from the Customer, the Service Provider will select a Rate Schedule on behalf of the Customer on the basis of information available at the time of selection. If the Customer wishes to be on a specific Rate Schedule, then the Customer must inform the Service Provider in writing prior to November 1 of their Rate Schedule selection. The selected Rate Schedule will remain in effect for one (1) year, starting November 1. *[Bylaw 8497, October 17, 2016]*

4.3 Periodic Review – the Service Provider may

- (a) conduct periodic reviews of the quantity of Hydronic Energy and the rate of delivery of Hydronic Energy to a Customer to determine which Rate Schedule applies to the Customer, and
- (b) change the Customer's charge to the appropriate charge, or
- (c) change the Customer to the appropriate Rate Schedule.

5. APPLICATION AND SERVICE CONNECTION INSTALLATION FEES AND CHARGES

5.1 Application and Service Connection Installation Fees - An applicant for Service must pay the applicable application and installation fees set out in the Standard Fees and Charges Schedule.

5.2 Waiver of Application Fee - The application fee will be waived by the Service Provider if Service to a Customer is reactivated after it was discontinued for any of the reasons described in Section 12.2 (Right to Restrict).

5.3 Reactivation Charges – If Service is terminated

(a) for any of the reasons described in Section 19 (Discontinuance of Service and Refusal of Service), or

(b) to permit Customers to make alterations to their Premises,

and the same Customer or the spouse, employee, contractor, agent or partner of the same Customer requests reactivation of Service to the Premises within one Year, then the applicant for reactivation must pay the greater of

(c) the costs the Service Provider incurs in de-activating and re-activating the Service, or

(d) the sum of the minimum charges set out in the applicable Rate Schedule which would have been paid by the Customer between the time of termination and the time of reactivation of Service.

5.4 Identifying Load or Premises Served by Meter Sets - If a Customer requests the Service Provider to identify the Meter Set that serves the Premises and/or load after the Meter Set was installed, then the Customer will pay the cost the Service Provider incurs in re-identifying the Meter Set where

(a) the Meter Set is found to be properly identified, or

(b) the Meter Set is found to be improperly identified as a result of Customer activity, including

(i) a change in the legal civic address of the Premises,

(ii) renovating or partitioning the Premises, or

(iii) rerouting Hydronic Energy lines after the Delivery Point.

6. SECURITY FOR PAYMENT OF BILLS

6.1 Security for Payment of Bills - If a Customer or applicant cannot establish or maintain credit to the satisfaction of the Service Provider, then the Customer or applicant may be required to provide a security deposit in the form of cash or an equivalent form of security acceptable to the Service Provider. As security for payment of bills, all Customers who have not established or maintained credit to the satisfaction of the Service Provider, may be required to provide a security deposit or equivalent form of security, the amount of which may not

- (a) be less than \$50, and
- (b) exceed an amount equal to the estimate of the total bill for the two highest consecutive Months consumption of Hydronic Energy by the Customer or applicant.

6.2 Interest – The Service Provider will pay interest to a Customer on a security deposit at the rate and at the times specified in the Standard Fees and Charges Schedule. Subject to Section 6.5, if a security deposit in whole or in part is returned to the Customer for any reason, the Service Provider will credit any accrued interest to the Customer's account at that time.

No interest is payable

- (a) on any unclaimed deposit left with the Service Provider after the account for which is security is closed, and
- (b) on a deposit held by the Service Provider in a form other than cash.

6.3 Refund of Deposit - When the Customer pays the final bill, the Service Provider will refund any remaining security deposit plus any accrued interest or cancel the equivalent form of security.

6.4 Unclaimed Refund - If the Service Provider is unable to locate the Customer to whom a security deposit is payable, the Service Provider will take reasonable steps to trace the Customer; but if the security deposit remains unclaimed 10 Years after the date on which it first became refundable, the deposit, together with any interest accrued thereon, becomes the absolute property of the Service Provider.

6.5 Application of Deposit - If a Customer's bill is not paid when due, then the Service Provider may apply all or any part of the Customer's security deposit or equivalent form of security and any accrued interest toward payment of the bill. Even if the Service Provider applies the security deposit or calls on the equivalent form of security, the Service Provider may, under Section 19 (Discontinuance of Service and Refusal of Service), discontinue Service to the Customer for failure to pay for Service on time.

6.6 Replenish Security Deposit - If a Customer's security deposit or equivalent form of security is called upon by the Service Provider towards paying an unpaid bill, then the Customer must re-establish the security deposit or equivalent form of security before the Service Provider will reconnect or continue Service to the Customer.

6.7 Failure to Pay - Failure to pay a security deposit or to provide an equivalent form of security acceptable to the Service Provider may, in the Service Provider's discretion, result in discontinuance or refusal of Service as set out in Section 19 (Discontinuance of Service and Refusal of Service).

7. TERM OF SERVICE AGREEMENT

7.1 Term for Residential and Commercial Service to Class 1 and Class 2 Properties If a Customer is being provided Residential Service or Commercial Service at a Class 1 or Class 2 Property then the term of the Service Agreement will be until the Service Agreement is terminated in accordance with the General Terms and Conditions.

7.2 Initial Term for Residential and Commercial Service - If a Customer is being provided Residential Service or Commercial Service at a Class 3 Property, the initial term of the Service Agreement

(a) when a new Service Connection is required will be one Year, or

(b) when a Hydronic Energy System Extension is required will be for a period of time fixed by the Service Provider.

7.3 Renewal of Initial Term of Agreement for Residential and Commercial Service to a Class 3 Property – Unless

(a) the Service Agreement or the applicable Rate Schedule specifies otherwise, or

(b) the Service Agreement is terminated under Section 8 (Termination of Service Agreement),

the Service Agreement described in Section 7.2 will be automatically renewed at the end of its initial Term from Month to Month for Residential or Commercial Service,

8. TERMINATION OF SERVICE AGREEMENT

8.1 Termination by Customer – Subject to applicable federal, provincial and local government laws, statutes, regulations, bylaws, orders and policies, unless the Service Agreement or applicable Rate Schedule specifies otherwise, a Customer whose Premises are located at a Class 3 Property only may terminate the Service Agreement after the end of the initial term by giving the Service Provider at least 48 Hours notice and paying the applicable disconnection fees set out in the Standard Fees and Charges Schedule.

- 8.2 Continuing Obligation** - The Customer is responsible for, and must pay for, all Hydronic Energy delivered to the Premises and is responsible for all damages to and loss of Heat Exchangers, Meter Sets or other equipment of the Service Provider on the Premises until the Service Agreement is terminated.
- 8.3 Effect of Termination** - The Customer is not released from any previously existing obligations to the Service Provider under a Service Agreement by the termination of the agreement.
- 8.4 Sealing Service Connection** - After the termination of Hydronic Energy Service to a Premises and after a reasonable period of time during which a new Customer has not applied for Hydronic Energy Service at the Premises, the Service Provider may seal off the Service Connection to the Premises.
- 8.5 Termination by the Service Provider** - Subject to applicable federal, provincial and local government laws, statutes, regulations, bylaws, orders and policies, unless the Service Agreement or applicable Rate Schedule specifies otherwise, the Service Provider may terminate a Service Agreement for Premises at Class 1, 2 and 3 Properties by giving the Customer at least 48 Hours written notice if Service is discontinued under Section 19 (Discontinuance of Service and Refusal of Service).

9. SERVICE CONNECTIONS

- 9.1 Provided Installation** - If the Hydronic Energy System is adjacent to the Customer's Premises, then the Service Provider
- (a) will designate the location of the Heat Exchanger, Meter Set and Service Connections on the Customer's Premises and determine the amount of space that must be left unobstructed around them,
 - (b) will install the Heat Exchanger and Meter Set upon payment of the applicable installation fees set out in the Standard Fees and Charges Schedule; and
 - (c) will install the Service Connection from the Hydronic Energy System to the Delivery Point on the Customer's Premises at no additional cost to the Customer provided the Service Connection follows the route which is the most suitable to the Service Provider.
- 9.2 Customer Requested Routing – If:**
- (a) the Hydronic Energy System is adjacent to the Customer's Premises,
 - (b) the Customer requests that its piping or Service Connection enter its Premises at a different point of entry or follow a different route from the point or route designated by the Service Provider, and
 - (c) the Customer requests that the Heat Exchanger or Meter Set be installed at a different location from the location designated by the Service Provider,

then the Service Provider may charge the Customer for all additional costs as determined by the Service Provider to install the Heat Exchanger, Meter Set and Service Connection in accordance with the Customer's request.

- 9.3 Additional Connections** - If a Customer requests more than one Service Connection to the Premises, on the same Rate Schedule, then the Service Provider may install the additional Service Connection and may charge the Customer the Application Fee set out in the Standard Fees and Charges Schedule, as well as the full cost (including overhead costs) for the Service Connection installation in lieu of the Service Connection Installation Fee set out in the Standard Fees and Charges Schedule. The Service Provider will bill the additional Service Connection from a separate meter and account. If the additional Service Connection is requested by a, contractor, employee, agent or partner of the existing Customer, then the same charges will apply.
- 9.4 Easement Required** - If an intervening property is located between the Customer's Premises and the Hydronic Energy System, then the Customer is responsible for the costs of obtaining an easement in favour of the Service Provider and in a form specified by the Service Provider, for the installation, operation and maintenance on the intervening property of all necessary facilities for supplying Hydronic Energy to the Customer.
- 9.5 Ownership** – The Customer does not own any part of the Service Connection from the Hydronic Energy System up to and including the Heat Exchanger and Meter Set, whether it is located inside or outside the Customer's Premises.
- 9.6 Maintenance** – The Service Provider will maintain the Heat Exchanger, Meter Set and Service Connection.
- 9.7 Supply Cut Off** - If the supply of Hydronic Energy to a Customer's Premises is cutoff for any reason then, the Service Provider may, but is not required to, remove the Heat Exchanger, Meter Set or Service Connection from the Customer's property or Premises.
- 9.8 Damage Notice** - The Customer must advise the Service Provider immediately of any damage occurring to the Heat Exchanger, Meter Set or Service Connection.
- 9.9 Prohibition** - A Customer must not construct any permanent structure which, in the opinion of the Service Provider, obstructs access to a Service Connection, Heat Exchanger or Meter Set.
- 9.10 No Unauthorized Changes** - No changes, extensions, connections to or replacement of, or disconnection from the Distribution System or Service Connections, will be made except by the Service Provider's authorized employees, contractors or agents or by other Persons authorized in writing by the Service Provider. Any change in the location of an existing Service Connection
- (a) must be approved in writing by the Service Provider, and
 - (b) will be made at the expense of the Customer if the change is requested by the Customer or necessitated by the actions of the Customer.

9.11 Site Preparation - The Customer will be responsible for all necessary site preparation including but not limited to clearing building materials, construction waste, equipment, soil and gravel piles over the proposed service line route to the standards established by the Service Provider. The Service Provider may recover any additional costs associated with delays or site visits necessitated by inadequate or substandard site preparation by the Customer.

10. HEAT EXCHANGERS, METER SETS & METERING

10.1 Installation – In order to provide Hydronic Energy and bill the Customer for Hydronic Energy delivered, the Service Provider will install one or more Heat Exchangers and Meter Sets on the Customer's Premises. The technical specifications of all Heat Exchangers and Meter Sets will be determined by the Service Provider. Unless approved by the Service Provider, all Heat Exchangers and Meter Sets will be located at locations designated by the Service Provider.

10.2 Measurement - The quantity of Hydronic Energy delivered to the Premises will be metered using apparatus approved by the City of North Vancouver. The amount of Hydronic Energy registered by the Meter Set during each billing period will be converted to kilowatts and rounded to the nearest one-tenth of a kilowatt.

10.3 Testing Meters - If a Customer applies for the testing of a Meter Set and

- (a) the Meter Set is found to be recording incorrectly, then the cost of removing, replacing and testing the meter will be borne by the Service Provider subject to Section 20.4 (Responsibility for Heat Exchanger and Meter Set), and
- (b) if the testing indicates that the Meter Set is recording correctly, then the Customer must pay the Service Provider for the cost of removing, replacing and testing the Meter Set as set out in the Standard Fees and Charges Schedule.

10.4 Defective Meter Set - If a Meter Set ceases to register, then the Service Provider will estimate the volume of Hydronic Energy delivered to the Customer according to the procedures set out in Section 14.6 (Incorrect Register).

10.5 Protection of Equipment - The Customer must take reasonable care of and protect all Heat Exchangers, Meter Sets and related equipment on the Customer's Premises. The Customer's responsibility for expense, risk and liability with respect to all Heat Exchangers, Meter Sets and related equipment is set out in Section 20.4 (Responsibility for Heat Exchanger and Meter Set).

10.6 No Unauthorized Changes - No Heat Exchangers, Meter Sets or related equipment will be installed, connected, moved or disconnected except by the Service Provider's authorized employees, contractors or agents or by other Persons with the Service Provider's written permission.

- 10.7 Removal of Service** - At the termination of a Service Agreement, the Service Provider may disable, disconnect or remove a Heat Exchanger and Meter Set on or from the Premises if a new Customer is not expected to apply for Service for the Premises within a reasonable time.
- 10.8 Customer Requested Heat Exchanger and Meter Relocation or Modifications** - Any change in the location of a Heat Exchanger, Meter Set or related equipment, or any modifications to the Heat Exchanger or Meter Set, including automatic and/or remote meter reading
- (a) must be approved by the Service Provider in writing, and
 - (b) will be made at the expense of the Customer if the change or modification is requested by the Customer or necessitated by the actions of the Customer. If any of the changes to the Heat Exchanger, Meter Set or related equipment require the Service Provider to incur ongoing incremental operating and maintenance costs, the Service Provider may recover these costs from the Customer through a Monthly charge.
- 10.9 Meter Set Consolidations** - A Customer who has more than one Meter Set at the same Premises or adjacent Premises may apply to the Service Provider to consolidate its Meter Sets. If the Service Provider approves the Customer's application, then the Customer will be charged the value for all portions of the Hydronic Energy System abandoned except for Meter Sets that are removed to facilitate Meter Set consolidations. In addition, the Customer will be charged the Service Provider's full costs, including overheads, for any abandonment, Meter Set removal and alteration downstream of the new Meter Set. If a new Service Connection is required, then the Service Provider will charge the Customer the Service Connection Installation Fee and the Application Fee. In addition, the Customer will be required to sign a release waiving the Service Provider's liability for any damages should the Customer decide to re-use the abandoned plant downstream of the new Meter Set.

11. HYDRONIC ENERGY SYSTEM EXTENSIONS

- 11.1 System Extension and Expansion** – The Service Provider will make extensions and expansions of its Hydronic Energy System in accordance with system development requirements.
- 11.2 Ownership** - All extensions and expansions of the Hydronic Energy System will remain the property of the Service Provider as between the Service Provider and the Customer.
- 11.3 Contribution** - If the proposed provision of Hydronic Energy Service to Premises will require the Service Provider to extend or expand the Hydronic Energy System and the recovery of the cost of that extension or expansion could result in an increase in the rates paid by existing Customers, then the Customer requiring the extension or expansion will be required to contribute to the cost of the extension or expansion.

12. INTERRUPTION OF SERVICE

12.1 Regular Supply – The Service Provider will use its best efforts to provide the constant delivery of Hydronic Energy and the maintenance of unvaried temperatures.

12.2 Right to Restrict – The Service Provider may require any of its Customers, at all times or between specified Hours, to discontinue, interrupt or reduce to a specified degree or quantity, the delivery of Hydronic Energy for any of the following purposes or reasons:

- (a) in the event of a temporary or permanent shortage of Hydronic Energy, whether actual or perceived by the Service Provider,
- (b) in the event of a breakdown or failure of the supply of Commodity or Utility Service to the Hydronic Energy System,
- (c) to comply with any legal requirements,
- (d) to make repairs or improvements to any part of the Hydronic Energy System, or
- (e) in the event of fire, flood, explosion or other emergency to safeguard Persons or property against the possibility of injury or damage.

12.3 Notice – The Service Provider will, to the extent practicable, give notice of its requirements and removal of its requirements under Section 12.2 (Right to Restrict) to its Customers by

- (a) newspaper, radio or television announcement, or
- (b) notice in writing that is
 - (i) sent through the mail to the Customer's billing address,
 - (ii) left at the Premises where Hydronic Energy is delivered,
 - (iii) served personally on a Customer, or
 - (iv) sent by facsimile or other electronic means to the Customer, or
- (c) oral communication.

12.4 Failure to Comply - If, in the opinion of the Service Provider, a Customer has failed to comply with any requirement under Section 12.2 (Right to Restrict), then the Service Provider may, after providing notice to the Customer in the manner specified in Section 12.3 (Notice), discontinue Service to the Customer.

13. Access to Premises and Equipment

13.1 Access to Premises – The Service Provider has a right of entry to the Customer's Premises. The Customer must provide free access to its Premises at all times to the Service Provider's authorized employees, contractors and agents for the purpose of reading, testing, repairing or removing Service Connections, Meter Sets, Heat Exchangers and ancillary equipment, turning Hydronic Energy on or off, completing system leakage surveys, stopping leaks, examining pipes, connections, fittings and

appliances and reviewing the use made of Hydronic Energy delivered to the Customer, or for any other related purpose which the Service Provider requires.

13.2 Access to Equipment - The Customer must provide clear access to the Service Provider's equipment including the equipment described in section 13.1. The equipment installed by the Service Provider on the Customer's Premises will remain the property of the Service Provider as between the Service Provider and the Customer and may be removed by the Service Provider upon termination of Service.

14. BILLING

14.1 Basis for Billing – The Service Provider will bill the Customer in accordance with the Customer's Service Agreement, the Rate Schedule under which the Customer is provided Service, and the fees and charges contained in the General Terms and Conditions.

14.2 Meter Measurement – The Service Provider will measure the quantity of Hydronic Energy delivered to a Customer using a Meter Set and the starting point for measuring delivered quantities during each billing period will be the finishing point of the preceding billing period.

14.3 Multiple Meters - Hydronic Energy Service to each Meter Set will be billed separately for Customers who have more than one Meter Set on their Premises.

14.4 Estimates - For billing purposes, the Service Provider may estimate the Customer's meter readings if, for any reason, the Service Provider does not obtain a meter reading.

14.5 Estimated Final Reading - If a Service Agreement is terminated then the Service Provider may estimate the final meter reading for final billing.

14.6 Incorrect Register - If any Meter Set has failed to measure the delivered quantity of Hydronic Energy correctly, then the Service Provider may estimate the meter reading for billing purposes, subject to Section 15 (Back-Billing).

14.7 Bills Issued – The Service Provider may bill a Customer as often as the Service Provider considers necessary but generally will bill on a Monthly basis.

14.8 Bill Due Dates -The Customer must pay the Service Provider's bill for Service on or before the due date shown on the bill which will be

- (a) the first business Day after the twenty-first calendar Day following the billing date, or
- (b) such other period as may be agreed upon by the Customer and the Service Provider.

14.9 Historical Billing Information - Customers who request historical billing information may be charged the cost of processing and providing the information.

14.10 Sub-Metering and allocation of Hydronic Energy Fees - Customers may allocate to a Person, fees billed by the Service Provider on the following basis:

- (a) Unless a fee set out in Schedule “B” and “C” of this Bylaw is recovered in compliance with section 99(2) of the *Strata Property Act*, every strata corporation that wishes to collect the fee from a strata lot owner must do so only in compliance with paragraph (c).
- (b) Unless a fee set out in Schedule “B” and “C” of this Bylaw is included in the lump sum regular monthly rent payments stipulated in a rental agreement between the rental property owner and renter, every rental property owner who wishes to collect the fee from a rental unit renter or other occupier must do so only in compliance with paragraph (c).
- (c) Every strata corporation or rental property owner referred to in paragraphs (a) and (b) must collect a fee set out in Schedule “B” and “C” of this Bylaw only on the following basis:
 - (i) a flat fee, including Meter Charge and Capacity Charge, must be recovered on a flat fee basis with the invoice clearly showing:
 - A. the flat fee set out in Schedule “B” and “C” of this Bylaw, and
 - B. the calculation of the amount owing;
 - (ii) a metered fee, including Commodity Charge, must be recovered on a metered fee basis with the invoice clearly showing:
 - A. the metered fee set out in Schedule “B” of this Bylaw,
 - B. the quantity of metered hydronic energy in kilowatt hours, and
 - C. the calculation of the amount owing;
 - (iii) a mark-up above the fee must:
 - A. be provided on a separate line on the invoice,
 - B. identify the purpose of the mark-up, and
 - C. specify that the amount of the mark-up is not regulated by the City of North Vancouver;
 - (iv) for a metered fee under this Bylaw, the quantity of metered Hydronic Energy in respect of the amount of the fee due and owing must be metered. No person may issue an invoice for a fee or otherwise collect a fee based on an estimate of usage or through the use of a device other than a thermal metering device that measures flow and temperature differential at point of delivery.

[Bylaw 8660, July 9, 2018]

15. BACK-BILLING

15.1 When Required – The Service Provider may, in the circumstances specified herein, charge, demand, collect or receive from its Customers for a regulated Service rendered thereunder a greater or lesser compensation than that specified in the subsisting schedules applicable to that Service.

In the case of a minor adjustment to a Customer's bill, such as an estimated bill or an equal payment plan billing, such adjustments do not require back-billing treatment to be applied.

15.2 Definition - Back-billing means the rebilling by the Service Provider for Services rendered to a Customer because the original billings are discovered to be either too high (overbilled) or too low (under-billed). The discovery may be made by either the Customer or the Service Provider. The cause of the billing error may include any of the following non-exhaustive reasons or combination thereof:

- (a) stopped meter
- (b) metering equipment failure
- (c) missing meter now found
- (d) switched meters
- (e) double metering
- (f) incorrect meter connections
- (g) incorrect use of any prescribed apparatus respecting the registration of a meter
- (h) incorrect meter multiplier
- (i) the application of an incorrect rate
- (j) incorrect reading of meters or data processing
- (k) tampering, fraud, theft or any other criminal act.

15.3 Billing Basis - Where metering or billing errors occur, the consumption and demand will be based upon the records of the Service Provider for the Customer, or the Customer's own records to the extent they are available and accurate, or if not available, reasonable and fair estimates may be made by the Service Provider. Such estimates will be on a consistent basis within each Customer class or according to a contract with the Customer, if applicable.

15.4 Tampering/Fraud - If there are reasonable grounds to believe that the Customer has tampered with or otherwise used the Service Provider's Service in an unauthorized way, or there is evidence of fraud, theft or other criminal acts, or if a reasonable Customer should have known of the under-billing and failed to promptly bring it to the attention of the Service Provider, then the extent of back-billing will be for the duration of the unauthorized use, subject to the applicable limitation period provided by law, and the provisions of Sections 15.7 (Under-Billing) to 15.10 (Changes in Occupancy), below, do not apply.

In addition, the Customer is liable for the direct (unburdened) administrative costs incurred by the Service Provider in the investigation of any incident of tampering, including the direct costs of repair, or replacement of equipment.

Under-billing resulting from circumstances described above will bear interest at the rate normally charged by the Service Provider on unpaid accounts from the date of the original under-billed invoice until the amount under-billed is paid in full.

- 15.5 Remediating Problem** - In every case of under-billing or over-billing, the cause of the error will be remedied without delay, and the Customer will be promptly notified of the error and of the effect upon the Customer's ongoing bill.
- 15.6 Over-billing** - In every case of over-billing, the Service Provider will refund to the Customer all money incorrectly collected for the duration of the error, subject to the applicable limitation period provided by law. Simple interest, computed at the short-term bank loan rate applicable to the Service Provider on a Monthly basis, will be paid to the Customer.
- 15.7 Under-billing** - Subject to Section 15.4 (Tampering/Fraud), above, in every case of under-billing, the Service Provider will back-bill the Customer for the shorter of
- (a) the duration of the error; or
 - (b) six Months for Residential or Commercial Service; and
 - (c) one Year for all other Customers or as set out in a special or individually negotiated contract with the Service Provider.
- 15.8 Terms of Repayment** - Subject to Section 15.4 (Tampering/Fraud), above, in all cases of under-billing, the Service Provider will offer the Customer reasonable terms of repayment. If requested by the Customer, the repayment term will be equivalent in length to the back-billing period. The repayment will be interest free and in equal instalments corresponding to the normal billing cycle. However, delinquency in payment of such instalments will be subject to the usual late payment charges.
- 15.9 Disputed Back-bills** - Subject to Section 15.4 (Tampering/Fraud), above, if a Customer disputes a portion of a back-billing due to under-billing based upon either consumption, demand or duration of the error, then the Service Provider will not threaten or cause the discontinuance of Service for the Customer's failure to pay that portion of the back-billing, unless there are no reasonable grounds for the Customer to dispute that portion of the back-billing. The undisputed portion of the bill will be paid by the Customer and the Service Provider may threaten or cause the discontinuance of Service if such undisputed portion of the bill is not paid.
- 15.10 Changes in Occupancy** - Subject to Section 15.4 (Tampering/Fraud), above, back-billing in all instances where changes of occupancy have occurred, the Service Provider will make a reasonable attempt to locate the former Customer. If, after a period of one year, such Customer cannot be located, then the applicable over or under billing will be cancelled.

16. EQUAL PAYMENT PLAN

- 16.1** The Service Provider may, at its discretion, create and administer an Equal Payment Plan in which case Sections 16.2 to 16.7 apply.

16.2 Definitions - In this Section 16, “**equal payment plan**” means a plan created and administered by the Service Provider whereby Customers may average their Hydronic Energy costs over a specified period of time and “**equal payment plan period**” means a period of twelve consecutive Months commencing with a normal meter reading date at the Customer's Premises.

16.3 Application for Plan - A Customer may apply to the Service Provider by mail, by telephone, by facsimile or by other electronic means to pay fixed Monthly instalments for Hydronic Energy delivered to the Customer during the equal payment plan period. Acceptance of the application will be subject to the Service Provider finding the Customer's credit to be satisfactory.

16.4 Monthly Instalments – The Service Provider will fix Monthly instalments for a Customer so that the total sum of all the instalments to be paid during the equal payment plan period will equal the total amount payable for the Hydronic Energy which the Service Provider estimates the Customer will consume during the equal payment plan period.

16.5 Changes in Instalments – The Service Provider may, at any time, increase or decrease the amount of Monthly instalments payable by a Customer in light of new consumption information or changes to the Rate Schedules or the General Terms and Conditions.

16.6 End of Plan – Participation in the equal payment plan may be ended at any time

- (a) by the Customer giving 5 Days' notice to the Service Provider,
- (b) by the Service Provider, without notice, if the Customer has not paid the Monthly instalments as required; or
- (c) by the Service Provider if the Service Provider terminates the Equal Payment Plan.

16.7 Payment Adjustment - At the earlier of the end of the equal payment plan period for a Customer or the end of the Customer's participation in the plan under Section 16.6 (End of Plan), the Service Provider will

- (a) compare the amount which is payable by the Customer to the Service Provider for Hydronic Energy actually consumed on the Customer's Premises from the beginning of the equal payment plan period to the sum of the Monthly instalments billed to the Customer from the beginning of the equal payment plan period, and
- (b) pay to the Customer or credit to the Customer's account any excess amount or bill the Customer for any deficit amount payable.

17. LATE PAYMENT CHARGE

17.1 Late Payment Charge - If the amount due for Service or Service related Charges on any bill has not been received in full by the Service Provider or by an agent acting on behalf of the Service Provider on or before the due date specified on the bill, and the unpaid balance is \$15 or more, then the Service Provider may include in the next bill to

the Customer the late payment charge specified in the Standard Fees and Charges Schedule.

17.2 Equal Payment Plan - If the Monthly instalment, Service Related Charges and payment adjustment as defined under Section 16.7 (Payment Adjustments) due from a Customer billed under the equal payment plan set out in Section 16 have not been received by the Service Provider or by an agent acting on behalf of the Service Provider on or before the due date specified on the bill, then the Service Provider may include in the next bill to the Customer the late payment charge in accordance with Section 17.1 (Late Payment Charge) on the amount due.

18. RETURNED CHEQUE CHARGE

18.1 Dishonoured Cheque Charge - If a cheque received by the Service Provider from a Customer in payment of a bill is not honoured by the Customer's financial institution for any reason other than clerical error, then the Service Provider may include a charge specified in the Standard Fees and Charges Schedule in the next bill to the Customer for processing the returned cheque whether or not the Service has been disconnected.

19. DISCONTINUANCE OF SERVICE AND REFUSAL OF SERVICE

19.1 Discontinuance With Notice and Refusal Without Notice – Subject to applicable federal, provincial, and local government laws, statutes, regulations, bylaws, orders and policies the Service Provider may discontinue Service to a Customer with at least 48 Hours written notice to the Customer or Customer's Premises, or may refuse Service for any of the following reasons:

- (a) the Customer has not fully paid the Service Provider's bill with respect to Services on or before the due date,
- (b) the Customer or applicant has failed to pay any required security deposit, equivalent form of security, or post a guarantee or required increase in it by the specified date,
- (c) the Customer or applicant has failed to pay the Service Provider's bill in respect of another Premises on or before the due date,
- (d) the Customer or applicant occupies the Premises with another occupant who has failed to pay the Service Provider's bill, security deposit, or required increase in the security deposit in respect of another Premises which was occupied by that occupant and the Customer at the same time,
- (e) the Customer or applicant is in receivership or bankruptcy, or operating under the protection of any insolvency legislation and has failed to pay any outstanding bills to the Service Provider,
- (f) the Customer has failed to apply for Service, or
- (g) the land or portion thereof on which the Service Provider's facilities are, or are proposed to be, located contains contamination which the Service Provider, acting reasonably, determines has adversely affected or has the potential to

adversely effect the Service Provider's facilities, or the health or safety of its workers or which may cause the Service Provider to assume liability for clean up and other costs associated with the contamination. If the Service Provider, acting reasonably, determines that contamination is present it is the obligation of the occupant of the land to satisfy the Service Provider that the contamination does not have the potential to adversely affect the Service Provider or its workers. For the purposes of this Section, "contamination" means the presence in the soil, sediment or groundwater of special waste or another substance in quantities or concentrations exceeding criteria, standards or conditions established by the British Columbia Ministry of Water, Land and Air Protection or as prescribed by present and future laws, rules, regulations and orders of any other legislative body, governmental agency or duly constituted authority now or hereafter having jurisdiction over the environment.

19.2 Discontinuance or Refusal Without Notice – Subject to applicable federal, provincial and local government laws, statutes, regulations, bylaws, orders and policies the Service Provider may discontinue without notice or refuse the supply of Hydronic Energy or Service to a Customer for any of the following reasons:

- (a) the Customer or applicant has failed to provide reference information and identification acceptable to the Service Provider, when applying for Service or at any subsequent time on request by the Service Provider,
- (b) the Customer has defective pipe, appliances, or Hydronic Energy fittings in the Premises,
- (c) the Customer uses Hydronic Energy in such a manner as in the Service Provider's opinion:
 - (i) may lead to a dangerous situation, or
 - (ii) may cause undue or abnormal fluctuations in the temperature of Hydronic Energy in the Hydronic Energy System,
- (d) the Customer fails to make modifications or additions to the Customer's equipment which have been required by the Service Provider to prevent the danger or to control the undue or abnormal fluctuations described under paragraph (c),
- (e) the Customer breaches any of the terms and conditions upon which Service is provided to the Customer by the Service Provider,
- (f) the Customer fraudulently misrepresents to the Service Provider its use of Hydronic Energy or the volume delivered,
- (g) the Customer vacates the Premises,
- (h) the Customer's Service Agreement is terminated for any reason,
- (i) the Customer stops consuming Hydronic Energy on the Premises, or

- (j) the Customer fails to ensure that the temperature of the water returning from the Customer's Premises to the Hydronic Energy System complies with the requirements of the Service Provider.

20. LIMITATIONS ON LIABILITY

20.1 Responsibility for Delivery of Hydronic Energy – The Service Provider, its employees, contractors or agents are not responsible or liable for any loss, damage, costs or injury (including death) incurred by any Customer or any Person claiming by or through the Customer caused by or resulting from, directly or indirectly, any discontinuance, suspension or interruption of, or failure or defect in the supply or delivery or transportation of, or refusal to supply, deliver or transport Hydronic Energy, or provide Service, unless the loss, damage, costs or injury (including death) is directly attributable to the gross negligence or wilful misconduct of the Service Provider, its employees, contractors or agents provided, however that the Service Provider, its employees, contractors and agents are not responsible or liable for any loss of profit, loss of revenues, or other economic loss even if the loss is directly attributable to the gross negligence or wilful misconduct of the Service Provider, its employees, contractors or agents.

20.2 Responsibility Before Delivery Point - The Customer is responsible for all expense, risk and liability for:

- (a) the use or presence of Hydronic Energy before it passes the Delivery Point in the Customer's Premises, and
- (b) the Service Provider-owned facilities serving the Customer's Premises

if any loss or damage caused by or resulting from failure to meet that responsibility is caused, or contributed to, by the act or omission of the Customer or a Person for whom the Customer is responsible.

20.3 Responsibility After Delivery Point - The Customer is responsible for all expense, risk and liability with respect to the use or presence of Hydronic Energy after it passes the Delivery Point.

20.4 Responsibility for Heat Exchanger and Meter Set - The Customer is responsible for all expense, risk and liability with respect to all Heat Exchangers, Meter Sets or related equipment at the Customer's Premises unless any loss or damage is

- (a) directly attributable to the negligence of the Service Provider, its employees, contractors or agents, or
- (b) caused by or resulting from a defect in the equipment. The Customer must prove that negligence or defect.

For greater certainty and without limiting the generality of the foregoing, the Customer is responsible for all expense, risk and liability arising from any measures required to be taken by the Service Provider to ensure that the Heat Exchangers, Meter Sets or related equipment on the Customer's Premises are adequately protected, as well as any updates or alterations to the Service Connection(s) on the Customer's Premises

necessitated by changes to the grading or elevation of the Customer's Premises or obstructions placed on such Service Connection(s).

20.5 Customer Indemnification - The Customer will indemnify and hold harmless the Service Provider, its employees, contractors and agents from all claims, loss, damage, costs or injury (including death) suffered by the Customer or any Person claiming by or through the Customer or any third party caused by or resulting from the use of Hydronic Energy by the Customer or the presence of Hydronic Energy in the Customer's Premises, or from the Customer or Customer's employees, contractors or agents damaging the Service Provider's facilities.

21. MISCELLANEOUS PROVISIONS

21.1 Taxes - The rates and charges specified in the applicable Rate Schedules do not include any local, provincial or federal taxes, assessments or levies imposed by any competent taxing authorities which the Service Provider may be lawfully authorized or required to add to its normal rates and charges or to collect from or charge to the Customer.

21.2 Conflicting Terms and Conditions - Where anything in these General Terms and Conditions conflicts with the provisions of a bylaw adopted by the City of North Vancouver or conflicts with special terms or conditions specified under an applicable Rate Schedule or Service Agreement, then the terms or conditions specified under the bylaw or the Rate Schedule or Service Agreement govern.

21.3 Authority of Agents of the Service Provider - No employee, contractor or agent of the Service Provider has authority to make any promise, agreement or representation not incorporated in these General Terms and Conditions or in a Service Agreement, and any such unauthorized promise, agreement or representation is not binding on the Service Provider.

21.4 Additions, Alterations and Amendments - The General Terms and Conditions, fees and charges, and Rate Schedules may be added to, cancelled, altered or amended by the Council of the City of North Vancouver from time to time.

21.5 Headings - The headings of the Sections set forth in the General Terms and Conditions are for convenience of reference only and will not be considered in any interpretation of the General Terms and Conditions.

STANDARD FEES AND CHARGES SCHEDULE

Application Fee

When the Service Provider is involved in the process of building permit issuance or is required to perform an inspection or inspections to determine compliance with an issued building permit, the Service Provider shall charge a fee in the amount equal to 0.15% of the construction value of the work associated with the building permit with a minimum fee of \$225.00. Such fee will be due and payable at the time of building permit issuance. For the purposes of this section, "value of the work" means the construction values as determined by Construction Regulation Bylaw. *[Bylaw 8878, November 15, 2021]*

Service Connection Fee

\$94.18 per kilowatt

[Bylaw 8994, November 20, 2023]

Multiplied by the energy capacity of the Premises as determined for the purpose of calculating the monthly Capacity Charge, with a minimum fee of \$75,000, except those areas of existing buildings applying for connection that received an occupancy permit at least five years prior to the date of connection, which shall be multiplied by 50% of the energy capacity of such areas. This charge will be assessed on the basis of the fee in place as of the date of the Service Agreement. *[Bylaw 8994, November 20, 2023]*

Service Disconnection Fee

At cost

Whereas provision of the service of the Hydronic Energy System requires the construction of capacity for each Customer connecting to the system, and whereas rates are established for each Customer based, in part, on recovery of such capacity costs, therefore, where a Customer is permitted to disconnect from the Hydronic Energy System, and where the Service Provider determines that such disconnection will result in additional costs to the remaining customers on the Hydronic Energy System in respect of capacity constructed for the disconnecting Customer, the Service Provider may require the disconnecting Customer to pay such costs as determined by the Service Provider.

Disputed Meter Testing Fees

If a Customer requests that a meter be tested for accuracy, the Customer shall be required to provide a deposit of \$500 to the Service Provider, which will be returned to the Customer if the meter proves inaccurate, as determined by the Service Provider. If the meter proves accurate, the Customer requesting the testing of the meter shall reimburse the Service Provider for the full cost of the testing procedure.

Meter Reading and Invoicing Fee

\$32.48 per month

[Bylaw 8878, November 15, 2021]

In cases where the Service Provider reads and invoices a Customer on the basis of more than one meter on the Premises; and provided that the secondary meter or Meter Set has been fully paid and maintained by the Customer, the Customer shall be invoiced a Meter Reading and Invoicing Fee for each secondary meter or Meter Set. *[Bylaw 8321, October 7, 2013]*

Administrative Charges

Dishonoured Cheque Charge \$15

Interest on Cash Security Deposits

The Service Provider will pay interest on cash security deposits at the Service Provider's prime interest rate minus 2%. The Service Provider's prime interest rate is defined as the floating annual rate of interest which is equal to the rate of interest declared from time to time by the Service Provider's lead bank as its "prime rate" for loans in Canadian dollars.

Late Payment Charge

The late payment charge is to be 1.5% per month (19.56% per annum). The charge is to be calculated from the date that the invoiced amount was due until payment is received. *[Bylaw 8497, October 17, 2016]*

RATE SCHEDULE – RESIDENTIAL SERVICE

The rate payable for Residential Service is a combination of a meter charge, capacity charge and a commodity charge, more particularly described in Schedule 'C' attached to "City of North Vancouver Bylaw, 2004, No. 7575", as amended from time to time.

RATE SCHEDULE – COMMERCIAL SERVICE

The rate payable for Residential Service is a combination of a meter charge, capacity charge and a commodity charge, more particularly described in Schedule 'C' attached to "City of North Vancouver Bylaw, 2004, No. 7575", as amended from time to time.

SCHEDULE "C" **FEES, RATES AND CHARGES**

The rates, fees and charges payable in respect of the Service defined in "Hydronic Energy Service Bylaw, 2004, No. 7575" are as set out below.

Except as otherwise stated, capitalized terms in this Schedule "C" shall have the meaning defined in the General Terms and Conditions of "Hydronic Energy Service Bylaw, 2004, No. 7575" attached as Schedule "B".

PROVISION OF HEATING TO PREMISES:

The rates payable for the provision of Hydronic Energy Heating Service to Premises are a combination of the meter charge, capacity charge and commodity charge.

RESIDENTIAL SERVICE

RATE SCHEDULE 1

- (a) **Meter Charge** – A monthly charge of \$35.89 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.2339 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.03398 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

RATE SCHEDULE 2

- (a) **Meter Charge** – A monthly charge of \$193.26 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.2339 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.02871 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

COMMERCIAL SERVICE

RATE SCHEDULE 1

- (a) **Meter Charge** – A monthly charge of \$35.89 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.2339 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.03398 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

RATE SCHEDULE 2

- (a) **Meter Charge** – A monthly charge of \$193.26 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$5.2339 per kilowatt multiplied by the energy capacity of the Premises, as determined by a professional engineer qualified for such purposes and described in kilowatts.
- (c) **Commodity Charge** – A charge per kilowatt hour of Hydronic Energy provided to the Premises calculated by multiplying \$0.02871 by the percentage increase or decrease in the price of 1,000 GJ/month under FortisBC rate schedule 3 from the price established as of July 1, 2016.

PROVISION OF COOLING TO PREMISES:

The rates payable for the provision of Hydronic Energy Cooling Service to Premises shall be determined by Council for each Premises which connects to and uses the Hydronic Energy Cooling Service.

In addition to the foregoing rates the fees and charges set out in the Standard Fees and Charges attached as a schedule to the General Terms and Conditions will apply to the provision of the Service.

[Bylaw 8994, November 20, 2023]

5-Year District Energy System Growth Summary: 2019-2023					
	2019	2020	2021	2022	2023
HEATING DATA:					
Buildings Connected	87	95	99	103	108
Gross Floor Area Served (Sq. Ft.)	6,576,117	7,374,023	7,671,248	7,921,031	8,236,029
Residential Units Served	5,479	6,378	6,765	7,052	7,430
*Residents Served (assumes an average household of 2.1)	11,506	13,394	14,207	14,809	15,603
Heating Capacity (MW)	28	28	30	35	35
Heating Energy Delivered (MWh)	59,275	67,753	74,783	78,704	75,935
COOLING DATA:					
Buildings Connected	6	6	6	6	6
Cooling Capacity (MW)	1.2	1.2	1.2	1.2	1.2
Cooling Energy Delivered (MWh)	882	1,734	1,858	2,221	2,215
CUSTOMER BREAKDOWN:					
Residential buildings	41	45	48	51	54
Mixed - Residential / Commercial	20	25	26	26	28
Commercial	19	17	17	16	16
Institutional	7	8	8	10	10
Cooling Customers	6	6	6	6	6
Total Energy Transfer Stations	93	101	105	109	114
DISTRICT ENERGY DATA:					
Trenched kilometers of pipe	13	13	14	14	15
Number of boilers in LEC system	30	30	32	35	35
Number of heat pump modules in LEC system	11	11	11	11	11
Total Energy Sales (MWh)	60,157	69,488	76,641	80,926	78,150
District Energy System Emission Intensity (kgCO2/MWh)	219	218	218	187	189
* An average household of 2.1 is based on 2021 Census data.					