



THE CORPORATION OF THE CITY OF NORTH VANCOUVER

NOTICE OF PUBLIC MEETING

**LONSDALE ENERGY CORP. – RATE REVIEW AND BYLAW AMENDMENT**

**NOTICE** is hereby given by the City of North Vancouver that a Public Meeting will be held on **MONDAY, SEPTEMBER 23, 2013 AT 7:00 PM** in the Council Chamber, City Hall, 141 West 14<sup>th</sup> Street, North Vancouver, BC, to receive community input in connection with the following:

**“City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575 Amendment Bylaw, 2013, No. 8321” (Rate Review)**

Lonsdale Energy Corp. (LEC) has applied to its regulator, the City of North Vancouver, for permission to increase its Capacity Charge by 5% effective October 1, 2013 and 5% effective July 1, 2014. The Meter Charge and Commodity Charge are to remain unchanged. Detailed information regarding the application is available in the section “Latest News and Updates” at [www.lonsdaleenergy.ca](http://www.lonsdaleenergy.ca).

All persons who believe they may be affected by this LEC rate increase will be afforded an opportunity to be heard in person and/or by written submission at this Public Meeting.

Written or electronic (email) submissions should be sent to the attention of the City Clerk at [kgraham@cnv.org](mailto:kgraham@cnv.org) or by mail to City Clerk, City Hall, 141 West 14<sup>th</sup> Street, North Vancouver, BC, V7M 1H9. Electronic submissions must be received no later than 4:00 pm on Monday, September 23, 2013, to ensure their availability to Council at the Public Meeting.

The LEC Rate Review and proposed Bylaw Amendment may be inspected at the office of the City Clerk between 8:30 am and 5:00 pm, Monday to Friday, except statutory holidays, from September 12, 2013, or viewed online at [www.cnv.org/publichearings](http://www.cnv.org/publichearings).

Please direct inquiries to Ben Themens, Director, Lonsdale Energy Corp., at 604-983-7312 or [bthemens@lonsdaleenergy.ca](mailto:bthemens@lonsdaleenergy.ca).

Sincerely,

Karla D. Graham, MMC  
City Clerk

**MINUTES OF THE REGULAR MEETING OF COUNCIL HELD IN THE  
COUNCIL CHAMBER, CITY HALL, 141 WEST 14<sup>th</sup> STREET, NORTH  
VANCOUVER, BC, ON MONDAY, JULY 22, 2013**

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**REPORTS OF COMMITTEES, COUNCIL REPRESENTATIVES AND STAFF**

**17. Lonsdale Energy Corp. – Rate Review and Bylaw Amendment  
– File: 5500-06-01**

Report: Director, Lonsdale Energy Corp., July 16, 2013

Moved by Councillor Keating, seconded by Councillor Clark

**PURSUANT** to the report of the Director of Lonsdale Energy Corp., dated July 16, 2013, entitled "Lonsdale Energy Corp. – Rate Review and Bylaw Amendment":

**THAT** the July 16, 2013 report and proposed amendments to "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2013, No. 8321" be forwarded to Lonsdale Energy Corp. customers for information and comment;

**AND THAT** "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2013, No. 8321" be considered and referred to a Public Meeting on September 23, 2013, to receive input from Lonsdale Energy Corp. customers and the public.

**CARRIED UNANIMOUSLY**

**MINUTES OF THE REGULAR MEETING OF COUNCIL HELD IN THE  
COUNCIL CHAMBER, CITY HALL, 141 WEST 14<sup>th</sup> STREET, NORTH  
VANCOUVER, BC, ON MONDAY, JULY 22, 2013**

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**BYLAWS - Introduction and First Reading Only**

18. "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004,  
No. 7575, Amendment Bylaw, 2013, No. 8321".

Moved by Councillor Keating, seconded by Councillor Clark

**THAT** Bylaw No. 8321 be read a first time in short form, copy of same  
having been distributed to Council and read by them.

**CARRIED UNANIMOUSLY**



† 604.983.7305 † 604.985.1573 † info@cnv.org  
141 West 14th Street, North Vancouver, BC V7M 1H9

## REPORT

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To: Mayor Darrell Mussatto and Members of Council

From: Ben Themens, Director, LEC

SUBJECT: LONSDALE ENERGY CORP. – RATE REVIEW AND BYLAW AMENDMENT

Date: July 16, 2013

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### RECOMMENDATION

**PURSUANT** to the report of the Director of Lonsdale Energy Corp., dated July 16, 2013 entitled "Lonsdale Energy Corp. – Rate Review and Bylaw Amendment":

**THAT** this report and proposed amendments to "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2013, No. 8321" be forwarded to LEC customers for information and comment;

**AND THAT** "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2013, No. 8321" be considered and referred to a Public Meeting on September 23, 2013, to receive input from LEC customers and the public.

### ATTACHMENTS

1. City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2013, No. 8321
2. Letter to LEC customers from the Director of LEC dated December 14, 2012 entitled "LEC Potential 2013 Rate Increase and Impact of the Re-introduction of the PST"
3. Summary of LEC revenue and expenses 2004 – 2012

4. Report of the Deputy City Engineer and Deputy Director of Finance entitled "Lonsdale Energy Corp. – Rate Review and Bylaw Amendment" dated January 17, 2007
5. City of North Vancouver Consolidated Hydronic Heat Energy Service Bylaw, 2004, No. 7575

## **PURPOSE**

This report provides an overview of the rate setting work that was done in the past, explains how LEC has managed to maintain its current rates for almost 10 years and provides the rationale for recommending that the Capacity Charge be increased by 5% in fall 2013 as well as a further 5% in summer 2014. The report also provides a pricing comparison with other Lower Mainland district energy providers.

## **BACKGROUND**

The City of North Vancouver (CNV) owned district energy utility, Lonsdale Energy Corp. (LEC), has been in operation since 2004 following the signing of an operating agreement with Terasen Utility Services (now known as Corix Utilities), the acquisition of external funding from FCM, and the enactment of Bylaw 7575, creating the energy service.

Since inception, several buildings have been connected to the LEC system and currently LEC has over 40 customers which include approximately 2,500 households or 2.9 million sq. ft. of properties including commercial and institutional premises.

### ***Early Customer Rates***

The original (2003) rate structure was deemed too high and during the first couple of years of operations staff and strata representatives of the early adopters formed a customer focus group to facilitate open communication between system users and the energy utility.

The issues raised by the customer group concerned the cost of the service, the quality of the service, and the issue of financial equity for those 'early adopters' onto the system where the positive future financial impact of more system users was not recognized in the current rate structure. Issues regarding the quality of service seem to have been resolved and the present report discusses the cost of service.

In 2007 Council adopted bylaw 7843 that reduced customer costs. The new rates were applied retroactively to when each developer-built building transferred control to the building's strata corporation. Consequently, the rates adopted in 2007 can be

considered as the cost that has been charged to LEC's customers since LEC's started operations in 2004. Those rates are provided in the following table:

Charge	Description	Original Bylaw 7575 adopted in 2004	Bylaw 7843 adopted in 2007	Increase (Decrease)
Meter Charge	Monthly charge for each Service Connection serving the Premises.	\$491.00 / month	\$299.34 / month	-39.0%
Capacity Charge	Monthly charge per kilowatt multiplied by the energy capacity of the Premises in kilowatts.	\$3.920 / Kw	\$2.930 / Kw	-25.3%
Commodity Charge	Charge per kilowatt hour of Hydronic Energy provided to the Premises.	\$0.0430 / Kw.hr	\$0.0458 / Kw.hr *	6.5%

\* The commodity charge is adjusted to follow Fortis BC gas pricing fluctuation.

With the exception of pricing adjustments to follow Fortis BC gas prices, the capacity and commodity charge have remained unchanged since the adoption of bylaw 7843. The meter charge was further reduced in December 2009 (bylaw 8059) to \$150 / month. The decrease aimed at enhancing LEC's competitiveness to connect smaller buildings to its network.

#### ***Developers' Cost / Service Connection Installation Fee***

Initially, the amount charged to developers for a service connection fee was set at only \$500. At the outset, the development community viewed LEC or its concept with either reluctance or apprehension. LEC came through an initial implementation period with a track record of meeting builder's needs for service and the service connection fee was soon deemed insufficient compared against the financial, operational, and marketing advantages that the LEC system offers to the development community.

Furthermore, LEC's early customers believed that the developers were not paying their fair share of the service and that too much of the initial capital cost was recovered from them through monthly charges. Some customers mentioned that when purchasing a new high-end apartment, it would be reasonable to expect that at least some of the hydronic heating capital cost was included in the purchase price set by the developer as it would be the case if the building came equipped with an in-building stand-alone hydronic heating system.

Bylaw 7843 significantly increased the service connection fee to \$20,000 per service connection plus \$30/Kw of required capacity. Subsequent bylaws adjusted this rate to \$60/Kw of required capacity. The abolishment of the fix cost component was to further encourage developers to build energy efficient buildings and to reduce the impact on smaller buildings connecting to the LEC. A 50% reduction is also available to building areas that are set aside for rental purposes or that have had a certificate of occupancy for more than 5 years.

This translate into a service connection fee of \$50,000 to \$100,000 per residential high-rise multi-unit building of 100 suites or more, but in most cases, it still translates into savings to the developers who do not have to spend in excess of \$100,000 for a full-service boiler room in new buildings.

## **DISCUSSION**

### ***Rationale for the proposed rate increase***

The January 17, 2007 report that recommended the above-mentioned rate adjustment also stipulated that LEC would continue to monitor the financial and operating performance of its system in order to determine needed rate modifications in the future. It also stated that the 2007 financial model considered that the applicable rates would increase with inflation.

Fortunately, LEC has been able to delay rate increases until now. Good and efficient management and operation practices have kept costs under control. For instance, LEC constantly monitors and adjusts the performance of its system. In 2007, using the information available from 2 years of data, LEC was able to determine that buildings could be heated with less LEC equipment than originally presumed. This knowledge provided savings to LEC customers. Since then, LEC has continued to monitor system performance and has been able to defer some of its capital purchases by further reducing its estimate of the amount of equipment required to heat buildings. In addition to this, LEC has taken advantage of the fact that mini-plants are inter-connected and serviced by distinct gas meters. LEC can arrange to purchase gas from different sources at each of the mini-plants and use in priority the sources that provide the best pricing opportunity. Finally, LEC has reduced the use of third party project management and financing in the Central Lonsdale and Marine Drive service areas, which has also provided some savings.

Part of the savings was passed to customers under the form of a reduction of the monthly Meter Charge. The charge was reduced from \$299.34 to \$150 as of December 2009. Based on the fact that \$55,400 was collected under the Meter Charge in 2012 and that the charge was reduced by 50%, the total saving provided by this reduction in 2012 was \$55,400. While no increase of the Capacity Charge was recommended at the time of the Meter Charge decrease, the December 2009 report suggested that the possibility of increasing the Capacity Charge be reviewed in mid-2010. Such an increase has yet to occur.

By now, it is becoming evident that those opportunities have been exploited as much as possible. Equipment to meet increasing demand now needs to be added to the system. In 2012, it also became obvious that LEC's staffing needs could no longer be satisfied by assigning CNV staff on a part-time basis to LEC. Given the volume of its operation

and the opportunities that were increasingly being identified to incorporate renewable energy to its system, LEC hired two full-time staff members in 2012. LEC anticipates hiring a third staff member in the coming months. This being said, the cost of these hiring is somewhat offset by decreasing the amounts paid in consulting fees and various external service providers.

While LEC is still profitable, the 2012 year-end return was lower than 2011. Several reasons explain this decrease:

- 1) As it is the case in every other sector, capital costs of equipment and construction have increased over the past 10 years while LEC's rates have remained constant.
- 2) As mentioned previously, LEC has hired permanent staff, the cost of which will be somewhat offset by reducing the need to hire external service providers. As some of the services are provided under long-term contracts that are in place until 2013, part of the offset will be available only in 2014.
- 3) LEC has started operating in a third, less dense, service area (Marine Drive/Fell Avenue) where several future development projects have been identified and which will, by its location, facilitate the access to energy at the future Metro Vancouver North Shore waste water treatment plant. The depreciation of the distribution system is over a period of 40 years and the expense is reasonable. However, some of the anticipated density will take a few years to be completed and revenue at this location may be lagging for a few years.
- 4) LEC is increasingly diversifying its energy sources to include environmentally-friendly alternative energy. For instance, LEC is now using a geo-exchange system at the new School District office building. LEC has also been using solar energy since 2009 in its system. Those sources are more expensive to use than conventional natural gas boiler technology.
- 5) LEC has used several senior government grants and contributions to fund some of its equipment and network. Those sources are currently unavailable. LEC will continue to apply for funding whenever it identifies an opportunity to access such funding, particularly to fund alternative technologies. In the meantime, LEC is fully funding the cost of its distribution network and energy generation equipment.

In recognition of the fact that some of the above issues are deemed to be temporary, LEC is not suggesting to recover the full cost of the above increases through an immediate rate increase. However, LEC recommends that only the Capacity Charge be increased at this time by 5% to \$3.077 per kilowatt of capacity nominated by each building. The Meter Charge and Commodity Charge adequately cover the cost associated with energy metering and gas purchases. Furthermore, an increase of the Meter Charge which is a fix monthly fee per building would adversely affect smaller buildings. It should be noted that the Capacity Charge represents slightly less than 50% of the total amount invoiced to customers and that consequently, while LEC recognizes that part of the customer charge may also fluctuate with the price of natural gas, this increase still translates into a 2.5% increase of the total amount invoiced to customers.

In term of net amount, the increase being recommended translates in approximately \$40,350 per year based on the fact that \$807,000 was invoiced under the Capacity Charge for the year ending December 31, 2012. This is still less than the saving of \$55,400 provided by the 2009 reduction of the Meter Charge discussed above.

To be clear, the proposed rate structure, would translate in the following:

Charge	Description	Current Rates	Proposed Bylaw	Increase (Decrease)
Meter Charge	Monthly charge for each Service Connection serving the Premises.	\$150 / month	\$150 / month	0.0%
Capacity Charge	Monthly charge per kilowatt multiplied by the energy capacity of the Premises in kilowatts	\$2.930 / Kw	\$3.077 / Kw	5.0%
Commodity Charge	Charge per kilowatt hour of Hydronic Energy provided to the Premises	\$0.03832 / Kw.hr *	\$0.03832 / Kw.hr *	0.0%

\* Commodity Charge as of July 1st, 2013 is adjusted to follow Fortis BC gas pricing fluctuation.

### Cost of Service

The following table provides a comparison of the cost of service of other Lower Mainland district energy providers as well as the equivalent cost of natural gas or electricity used for heating purposes. In 2012, LEC has delivered 23,945,719 kWh of heat and invoiced \$1,681,470.14. This translates in an average energy cost of \$70.22 / MW.hr.

Table - Comparison of LEC rate with other providers

Energy Provider	Type of Service	Year of rate	Rate (\$ / MW.hr)	Difference with LEC
LEC	Hot Water	2012	\$70.22	-
BC Hydro	Electricity	2013	\$90.51	29%
Fortis BC	Stand-alone NG Boiler	2012	\$84	20%
River District Energy (East Fraserlands)	Hot Water	2013	\$96	37%
South East False Creek (SEFC)	Hot Water	2013	\$94	34%
SFU UniverCity Energy	Hot Water	2013	\$146	108%

Notes:

LEC cost based on 2012 revenue and heat deliveries.

BC Hydro cost based on purchase of 50% residential step 1 and 50% residential step 2 electricity price as of April 1, 2013 and a 5% rate rider.

Cost of Fortis BC, River District Energy, SEFC and SFU UniverCity taken from CoV report dated November 19, 2012.

Central Heat Distribution Ltd. has been omitted due to the fact that the system is steam based.

As per the table, LEC is the most competitive, hot water based, district energy provider in the Lower Mainland. For users, LEC rates are more economical than using baseboard electric heat. The bylaw and recommendation accompanying this report aims at providing an immediate 5% increase of the Capacity Charge and further recommends that a second similar increase be implemented mid-2014. Assuming a fix natural gas cost, the proposed net increases of 2.5% would translate into an average energy cost of \$71.98 as of October 2013 and \$73.75 as of July 2014. Both amounts are still much lower than the cost of other alternatives.

In 2003, when LEC was first created, it was envisioned that the utility would aim at providing heat at a rate that would not exceed the cost of electricity by more than 15%. Electric baseboard heating is one of the cheapest alternatives in terms of construction costs and is often preferred by developers. The cost of electricity being estimated at \$90.21 / MW.hr, a 15% target would translate in rates averaging \$104 / MW.hr for LEC.

While LEC is certainly not contemplating to raise its rates by such an extent, the amount is significant and demonstrates that LEC has some latitude to provide a return to CNV or to finance and implement carbon neutral technologies. LEC endeavor to have rates that are fair to both, LEC users as well as City residents as CNV invested in LEC and is funding some of the initial system costs. LEC is also constantly reviewing the implementation of greener technologies and is targeting diversifying its heat sources in a way that will provide reasonable rate increases to its customers.

### ***Impact on Customers***

In a letter dated December 14, 2012 (attachment 2), LEC informed its customers that it would apply to its regulator, CNV, for a rate increase to the amount recommended in this report. Property managers were invited to include a provision for the increase in their 2013 budget. Considering that the letter forecasted for the increase to be in place as early as April 1<sup>st</sup>, 2013 and that the current request would see the increase implemented only in October 2013, building owners are expected to have budgeted an amount to cover the increase. Furthermore, the inclusion of the 2014 increase in the bylaw will provide building owners with additional certainty when preparing their 2014 budgets.

### ***Financial Modeling***

The 2007 rate adjustment was based on a 20-year financial model. The model covered the Lower Lonsdale service area only. Considering the fact that the model was based on information and knowledge accumulated during only the first two years of operation, it has proven to be extremely accurate and reliable for the planning of LEC. The model provided sufficient information to support the decision to expand in Central Lonsdale. While the expansion and development significantly differed from the original

assumptions, the model and rate structure proved to be sufficiently robust to provide fair and predictable rates to LEC customers.

At this time, given the uncertainty concerning the future rate of real estate development in the city as well as the rate of implementation and cost of alternative energy generation technology, staff consider that it would be futile to try to generate a 20-year model. The current rate structure seems sufficiently fair, reasonable and accurate to support increasing the Capacity Charge assuming that LEC continues providing heating service predominantly using natural gas boiler technology.

The recommendation to increase the capacity charge is based on past performance, a decrease of LEC's net income as well as the fact that the current rate structure is significantly lower than any other alternatives. LEC needs to generate more revenue to reimburse outstanding amounts to CNV and/or to implement alternative energy sources.

In the immediate, staff suggest that planning and decision-making be based on comparing alternatives and opportunities with the business-as-usual scenario that considers heat generation using natural gas boiler technology.

In 2014, LEC will undertake a review of its system and potential alternative energy options. LEC will be reporting on alternative energy source opportunities and assess their impact on the financial planning of the organization. The need and benefit of building a long-term financial model will be assessed at that time.

### ***British Columbia Utility Commission***

During the last municipal election, some residents and consultants have suggested that LEC submit itself to the review of the British Columbia Utility Commission (BCUC). At the time, LEC raised the issue that such a review would be costly for all LEC's customers, as the LEC would need to hire staffing and/or consultants to prepare a submission to the BCUC. Furthermore, LEC could be required to compensate the BCUC for the review.

The BC Utilities Commission Act stipulates that the following is not included in the definition of a public utility: "a municipality or regional district in respect of services provided by the municipality or regional district within its own boundaries". As such, to date, CNV has been the regulator of LEC and staff recommends that it continues to act as such.

As a matter of fact, a request for BCUC to be the regulator of LEC would go against BCUC's attempt to reduce regulations with regard to Thermal Energy Systems. On December 27, 2013, BCUC issued its Report on the Inquiry into the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives (AES Report) available in the Orders and Decisions listing on the BCUC website. In that report the Commission found that Thermal Energy Systems (TES) are regulated under the Utilities

Commission Act but that the market conditions and monopoly characteristics of some of these systems warrant "light-handed" forms of regulation such as exemptions, regulation by complaint or market-based pricing.

In fact, the AES Report went as far as stipulating that the least amount of regulation to protect the ratepayer should be used for Thermal Energy Systems (TES). Specifically the Commission stated:

"The Commission Panel has serious reservations about the applicability of the regulated cost of service model across the entire regulated TES market and reiterates the comments of the Commission in the Delta School District Decision that full cost of service regulation is the "method of last resort"...The presence of market-based pricing or the protection of consumer interests through the execution of long-term contracts may result in a better alignment and balance of risks and incentives between ratepayers and the thermal provider. Regulation by complaint may also provide the appropriate level of consumer protection."(AES Report, page 77)

The AES Report went on to task BCUC staff with conducting consultation on a "scaled regulatory framework", which is to establish the form of regulation required for TES. LEC staff has been invited to collaborate in the review of the BCUC proposal aimed at initiating stakeholder consultation for the form of regulation required for TES.

### ***Other adjustments***

The current bylaw does not provide a rate for cases where LEC provides monthly meter reading/invoicing services for meters that are paid in full and maintained by customers. The proposed bylaw includes a monthly fee of \$25 per meter to cover the cost of the service.

### ***Future Work***

The rate increase contained in this report is based on a review of the revenue and expenses contained in LEC's income statements including depreciation. Depreciation is deemed to be representing fairly the use of capital assets over time. As such, the review is considered to be done on an accrual-basis rather than a cash-basis form of accounting. That is, this information does not consider when cash disbursements occur. Further work is required in the coming weeks/months to evaluate the cash flow requirements of the organization and evaluate various financing scenarios. Once more information is available in this regard, the rate structure may be re-evaluated to confirm its appropriateness.

**SUMMARY**

As mentioned in the 2007 report:

“LEC is owned by the City and ultimately the City benefits from profits made by LEC. However LEC’s main objective is not to generate excessive or extraordinary profits, but rather to ensure that the community heating system achieves an appropriate balance of environmental, social, and economically sustainable benefits to the City.”

LEC has always conveyed the message that it aimed to be cost neutral to both system users and city residents. Since the start of its operations, LEC has tried to compare its rates with those of BC Hydro to ensure that the amount paid by its customers would not exceed the cost of using electric baseboard by more than 15%. Similarly, one could consider that if rates were significantly lower than the cost of using electric baseboards, LEC customers would be benefiting at the expense of the community. The income generated by LEC should be used to provide CNV with a return on investment or to further diversify LEC’s heating sources to include alternative energy which will benefit the whole community.

On that basis, LEC staff consider that the proposed rate increase is fair and reasonable to both LEC customers and CNV residents.

**FINANCIAL IMPLICATIONS**

The financial implications are addressed throughout the report.

**STRATEGIC PLAN IMPLICATIONS**

The community energy system implemented by LEC is consistent with the goals of the City Strategic Plan concerning the enhancement of the natural and built environment.

**RESPECTFULLY SUBMITTED BY:**



Ben Themens, MBA, P.Eng., CGA  
Director, LEC

**REVIEWED BY:**



*FOR* A.K. Tollstam, B.Comm, CA  
President, LEC



READ a third time and passed by the  
Council on the day of , 2013.

RECONSIDERED and finally adopted by  
the Council, signed by the Mayor and City  
Clerk and sealed with the Corporate Seal on  
the day of , 2013.

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MAYOR

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CITY CLERK



604.985.7761 • 604.985.9417 • info@cnv.org  
141 West 14th Street, North Vancouver BC V7M 1H9

Attachment No. 2

December 14, 2012

To: all Lonsdale Energy Corporation Customers

**Subject: Lonsdale Energy Corporation (LEC)  
Potential 2013 Rate Increase and  
Impact of the Re-introduction of the PST**

Mesdames/Sirs:

This letter follows our letter of November 6, 2012 that provided information concerning LEC's energy pricing for 2013. The original letter followed the request by some building owners who wished to receive updated information for 2013 budgeting purposes. Our previous letter suggested that you provide for a Capacity Charge increase of 5% and that you forecast the Commodity Charge price fluctuation to be in line with forecasted natural gas price fluctuations.

The review of the new Provincial legislation regarding the re-introduction of the Provincial Sales Tax (PST) (ref. Bill 54 – 2012 Provincial Sales Tax Act) leads us to believe that our earlier forecast, which did not consider the impact of the PST, could be misleading. Considering that this is a complex subject, this letter will discuss the potential 2013 LEC rate increase in its entirety rather than add to the information of our previous letter. Consequently, you may want to disregard our previous letter on this subject and consider the following.

LEC's rate structure is made up of three components:

- 1) The Meter Charge, which is constant from month to month and similar for each customer, at \$150 per month, per service connection.
- 2) The Capacity Charge, which is constant from month to month but different for each customer. Basically, the charge is for ensuring that LEC's generating capacity is sufficient to meet LEC's system capacity requirement. The monthly charge is currently set at \$2.93 per kilowatt multiplied by the energy capacity nominated by a customer.
- 3) The Commodity Charge, which varies from month to month and is based on the amount of energy consumed. This charge essentially covers the cost of the energy purchased by LEC to provide heat to the buildings. The total charge is based on the amount of heat consumed in a month and the unit cost is adjusted in line with FortisBC gas price fluctuations.

More information with regard to these charges is available on our website at [www.LonsdaleEnergy.ca](http://www.LonsdaleEnergy.ca) under the heading "How LEC Rates Are Calculated" and also directly available at <http://www.cnv.org/server.aspx?c=2&i=249>.

Considering the above pricing structure, for 2013 budgeting purposes, LEC is suggesting that the following information be taken into consideration:

- 1) The Meter Charge is expected to remain unchanged at \$150 per month, per service connection.
- 2) LEC is planning to apply to its regulator the City of North Vancouver, in early 2013, for a Capacity Charge increase. For budgeting purposes, LEC is recommending that an increase of 5% be included in your forecasts. More information regarding the application for an increase and an opportunity to provide comments to the regulator will be forwarded to you in the coming weeks/months. Note that this is the first time that LEC is suggesting increasing this charge since 2003. For forecasting purposes, we recommend that you take the amount under the heading Capacity Charge on your invoice and add 5% while also considering that this monthly charge is constant over a period of 12 months. The capacity charge is subject to taxes but may be eligible for the BC Energy Credit in some situations. However, there is uncertainty with regard to how/if such a credit will be available following the re-introduction of the PST.
- 3) The Commodity Charge will continue to be adjusted in line with FortisBC rate fluctuations and the tax treatment that LEC's natural gas and electricity purchases receive. Please visit our website for more details on the commodity charge adjustment and a complete history of the rates. LEC recommends that you forecast the Commodity Charge price fluctuation in line with forecasted natural gas price fluctuations. LEC further recommends that you allow for a 7% increase of the Commodity Charge following the re-introduction of the PST set for April 1, 2013.

***Total impact on an average customer***

**For simplicity, the forecasted increase of the amount expected to be invoiced to an average customer for the year 2013, is estimated at approximately 4.4% of the total amount paid in 2012. This amount excludes the impact of natural gas prices fluctuations.**

This estimate is for a typical building and is based on the following assumptions. Property Managers should consider if their buildings fall outside the following parameters.

The average LEC customer is invoiced at the following pro-rata on an annual basis:

3% Meter Charge, 47% Capacity Charge and 50% Commodity Charge.

Based on this assumption, the impact of the increases may be estimated at  $47\% \times 5\%$  increase +  $50\% \times 7\%$  increase = 5.85%. Since the increases are expected to be in place only on April 1<sup>st</sup>, 2013, only 75% of this increase or approximately 4.4% should be budgeted for 2013.

This increase does not provide for natural gas prices fluctuations. Since 50% of an average LEC customer invoice is for the Commodity Charge which is directly related to the cost of natural gas, we recommend that you budget a 0.5% increase of the total LEC invoice for each 1% increase in the cost of natural gas that you include in the budget of the other properties of your management portfolio.

This information is provided for budgeting purposes only. LEC is currently reviewing its pricing model and the allocation of the increase may vary. We will forward more information with regard to LEC's application to modify its rate structure when it becomes available.

A report to the Council of the City of North Vancouver dated December 5, 2012 and entitled "Return to the PST" is attached to this letter. The report provides additional information on the impact of the PST and discusses the efforts that are being made to bring forward these issues to the attention of the provincial government. While the report mentions an increase of 5% of LEC's rates due to PST, this is a long-term forecast and in the short-term, the impact is expected to be roughly 7% of the Commodity Charge or 3.5% of the total invoice of an average customer.

My contact information is at the bottom. Please do not hesitate to contact me with any questions or requests for information. I am also available to provide assistance if you would like to voice your concerns to the provincial government regarding the re-introduction of the PST. Finally, with

sufficient notice, I would be happy to meet with your building strata Council, if you deem it appropriate.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ben Themens", with a stylized flourish at the end.

Ben Themens, MBA, P.Eng. CGA  
Director  
Phone: 604-983-7312  
Email: [bthemens@LondaleEnergy.ca](mailto:bthemens@LondaleEnergy.ca)



**REPORT**

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To: Mayor Darrell Mussatto and Members of Council

From: Ben Themens, Director, LEC

SUBJECT: RETURN TO THE PST

Date: December 5, 2012

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*file 5500-06-01*

**RECOMMENDATION:**

**PURSUANT** to the report of the Director of Lonsdale Energy Corp., dated December 5, 2012, entitled, "Return to the PST":

**WHEREAS** the City of North Vancouver, through its wholly-owned district energy corporation, Lonsdale Energy Corp. (LEC), has been providing heat to various buildings located in its municipality since 2003;

**WHEREAS** when the former British Columbia Social Service Tax (PST) was in place, the City and LEC made representations to various British Columbia ministers to request that the Social Service Tax Act be amended to provide a level playing field to energy providers throughout British Columbia;

**WHEREAS** the implementation of the Harmonized Sales Tax (HST) provided for an equitable taxation of energy that allowed energy providers to compete and be evaluated on the basis of their technical merits;

**WHEREAS** the province is set to return to a PST system on April 1, 2013;

**AND WHEREAS** the new PST could increase LEC's rates by 5% which would negatively impact existing customers as well as reduce LEC's cost advantage to incite existing, less energy efficient, buildings to connect to its system;

**THEREFORE BE IT RESOLVED THAT** the City of North Vancouver requests that the PST be implemented in a way that will ensure that all energy providers

are treated equitably so that they may compete on the basis of their respective system efficiencies, technical merit and carbon emissions;

**THAT** this goal be achieved by including provisions in the future PST that will:

- 1) Provide for the exemption or the reimbursement of PST charges on energy (gas, electricity) purchased for the purpose of generating energy for resale;
- 2) Make available the former exemption on Production Machinery and Equipment to equipment purchased by district energy systems; and
- 3) Maintain, as per the former PST regulation, the PST exemption on the sale of Heat to residential district energy customers;

**AND THAT** copy of this resolution and report be forwarded to the Premier of the province of British Columbia; the Minister of Finance and House Leader of the province of British Columbia; the Members of the Legislative Assembly of North and West Vancouver; all UBCM municipalities; and LEC customers.

**ATTACHMENTS:**

1. Summary of Past Activities – Application of the PST on LEC

**PURPOSE:**

This report provides a review of the impact of the proposed PST on the rates and competitiveness of Lonsdale Energy Corp. (LEC). LEC believes that it is not the intention of the government to introduce a taxation system that will influence the competitiveness of energy systems that might otherwise contribute to reaching the province sustainability objectives. It proposes that a resolution be sent to government representatives requesting that they re-examine the issues concerning the application of the PST on energy processing utilities.

**BACKGROUND:**

The BC government has introduced legislation on May 14, 2012, to meet the government's commitment to return to the Provincial Sales Tax on April 1, 2013. As committed during the referendum leading to this decision, the PST is being re-implemented with all its former permanent exemptions.

The former PST was prejudicial to District Energy (DE) systems and the implementation of the HST did provide an opportunity to level the playing field of DE systems vis-à-vis other energy providers.

This report provides some background regarding the application of the PST and recommends that the PST be amended to ensure that it is equitable to all energy providers. The issues surrounding the application of the PST have been of concern to

LEC since it first started to produce heat. Attachment 1 provides a short summary of the efforts and results that have been achieved regarding these issues.

#### **DISCUSSION:**

It is now widely recognized that DE systems contribute to the economic, social and environmental sustainability of British Columbia.

Originally, the City of North Vancouver created LEC in large part to reduce the City's demand for hydro-electricity as a space heating energy source. At that time, the City's view was, and still is, that the Province's hydro-electric resource is of extraordinary high value, especially in an e-commerce age, but continues to be consumed in very low grade applications such as space heating in our developing and densifying urban centres. LEC has successfully met this initial goal of ensuring that hydro-electricity is not used as a direct heating source in North Vancouver's real estate developments.

Since then, LEC has connected more than 2.4 million square feet of properties to its network and the City and LEC have expended LEC's role and goal toward ensuring that the most appropriate source of energy is used whenever available. Furthermore, LEC is not only connecting new projects, as it has successfully integrated existing building for the purpose of enhancing their heating system performance and efficiency.

However, to achieve such a goal, it is important that all energy providers be compared on the basis of energy efficiency rather than the incentives or tax treatment that they receive. Failure to do so is seriously detrimental to the long-term viability of LEC and other alternative energy providers. In addition, it will frustrate federal and provincial green house gas reduction objectives, national and provincial energy efficiency objectives, and the development of a community energy industry in the Province of BC.

The recommendation included in this report aims at fostering a business environment that will encourage the development and implementation of various energy generation technologies in British Columbia. More specifically with regard to DE systems, the purpose is to place LEC energy consumers on the same cost level as non-LEC consumers of energy, and to ensure that LEC's energy is available to potential new customers on the same terms as other energy providers.

#### ***LEC's Approach to DE System Implementation***

LEC believes that the issues that are being brought to the attention of the government are of great importance for British Columbians. LEC is playing an important role in reducing the environmental footprint associated with space and domestic hot water heating. Presently, LEC provides heat to nearly 2,200 residential units as well as various commercial and institutional premises. New customers are constantly being added to the system.

The City of North Vancouver through LEC has successfully ensured that these residential suites are not heated using electric baseboard heating. To date, LEC has used natural gas to generate energy. However, LEC's system of high efficiency

interconnected boilers has proven to be at least 15% more energy efficient than standard stand-alone boilers installed in each building. Far more important, LEC's current gas boilers are being supplemented and replaced with alternative technology energy sources as they become available. For instance, heat from 120 solar panels is used in priority in LEC's system when available. LEC has also completed the construction of a geo-exchange and heat pump system that can produce heating and cooling simultaneously which enhances the overall efficiency of this energy source. In this case while one institutional building requires cooling, the heat generated during the process is provided to the residential buildings of the neighbourhood. LEC is also constantly investigating other energy sources such as the use of biomass and ocean-source energy generation.

The strategy LEC has followed is to get the district heating system up and running with available technology, and then bring renewable sources of energy as fast as possible, so that each building constructed, may be immediately supplied by the DE system. A high-rise building constructed today, using electric baseboard heating, will be drawing electricity from the grid for the next 50 years. District heating must be a viable alternative now to avoid that future.

#### ***Impact of the former PST on DE Systems***

LEC has been a supporter of the new Harmonized Sales Tax (HST). The previous PST was prejudicial to DE systems in two ways, first, by forcing DE suppliers to pay PST on energy acquired to create heat for residential customers, when residential customers who acquired energy directly and created their own heat did not pay PST, and secondly, by providing an exemption on the purchase of production machinery or equipment to energy providers but denying it to LEC due to the fact that it is municipally owned. By preventing such inequities, the implementation of the HST provided an opportunity to level the playing field of DE systems vis-à-vis other energy providers.

Issues surrounding the application of the PST were a concern for the City of North Vancouver and LEC since it first started its operations in 2004. As summarized in attachment 1, the City and LEC spent significant resources to meet with government representatives, prepare briefing notes and suggest amendments to the legislation for the purpose of minimizing the impact of the PST on DE system providers. At the time of the HST implementation, the two sources of inequity mentioned in the preceding paragraph were still pending and being reviewed by the BC government.

Based on information found on the BC government website, it seems that the regulations are still being prepared. However, Bill 54 "Provincial Sales Tax Act" has received third reading on May 31<sup>st</sup>, 2012 and the terms of this legislation will clearly be prejudicial to DE system providers.

The legislation defines heat, electricity and natural gas as being tangible personal property. Subsection 141(1) of the legislation stipulates that tangible personal property that is used for the purpose of being processed, fabricated or manufactured into other tangible personal property for the purpose of retail sale is exempt from tax. However,

subsection 141(3) specifies that if the tangible personal property is used to produce energy or is used as a source of energy, the exemption does not apply.

LEC has requested to be contacted by a government representative to obtain more details but has yet to receive a reply. However, based on the information received to date, it seems that the issues identified in the former PST legislation are included in the new PST legislation.

### ***Recommendations***

LEC maintains its contention that the legislation should ensure that all energy providers are compared on the basis of energy efficiency, carbon emissions and technical merit rather than the tax treatment that they receive. Consequently, this report recommends three specific provisions that should be considered while reintroducing the PST.

- 1) Provide for the exemption or the reimbursement of PST on energy (gas, electricity) purchased for the purpose of generating energy for resale.

Under the former PST, LEC had to pay PST on its natural gas purchases. When natural gas was directly purchased by a residential customer, no PST was paid. While LEC is using high-efficiency boilers, the PST charge would put the DE system at a competitive disadvantage. This created an incentive for customers to use stand-alone systems with potentially less efficient technologies. The same incentive existed for commercial users since in their case; LEC had not only to pay PST on its natural gas purchases but had to also charge PST on the heat purchased by commercial users, resulting in a double taxation of commercial users. Note that LEC pays the carbon tax on its gas purchases which is then passed on to its customers.

- 2) Make available the former exemption on Production Machinery and Equipment to equipment purchased by community energy systems.

Under the former PST regulations, BC Hydro, Terasen Gas (now Fortis Gas) and several other privately owned companies were provided a PST exemption on the purchase of their production machinery or equipment. LEC being municipally owned was not allowed this exemption.

- 3) Maintain, as per the former PST regulation, the PST exemption on the sale of Heat to residential DE customers.

Until 2006, heat sold to residential customers was subject to PST while other types of energy such as natural gas and electricity were exempt. The new legislation should maintain this exemption implemented in 2006 to include all types of energy.

### ***Conclusion***

These measures would ensure that all energy providers are compared on the basis of energy efficiency and technical merit rather than the tax treatment that they receive. For instance, LEC generates some of the energy that it distributes from high-efficiency boilers and solar panels. Under the current scenario, this energy with lower carbon

content would end up including a PST charge, while the heat provided by potentially less efficient stand-alone in-building gas furnaces would be tax exempt. Such a scenario would defeat the purpose of the Carbon Tax by providing an incentive for owners to implement their own stand-alone system. Overall, providing the same provincial rebate (as well as applying the same Carbon Tax) on the energy provided by DE systems will contribute to the success of the BC Energy Plan.

The rate structure of LEC is such that a PST/HST reduction/exemption translates into a direct reduction of the rates charged to LEC's customers. An important consequence of the HST implementation was that a level playing field further enhanced the attractiveness for existing older buildings that may be equipped with heating systems of poor efficiency, to connect to LEC as well as to other DE systems. Under the proposed PST it seems that LEC's competitiveness in this regard will be greatly reduced.

#### **FINANCIAL IMPLICATIONS:**

LEC has attempted to quantify the impact of the PST on its competitiveness. LEC estimates that the application of the PST on its energy as well as machinery and equipment purchases has an impact of approximately 5% on the amount invoiced to its customers. Gas purchases currently accounts for approximately 50% of the amount invoiced by LEC to its customers. A 7% tax on gas purchases implies that customers will be impacted by an amount of approximately 3.5% on their total invoices. Current natural gas prices being extremely low and considering that LEC's invoicing is adjusted to follow gas pricing increases, this impact could easily increase to 4% if gas prices were to increase in the future.

The tax on Production Machinery and Equipment applies to equipment only and contractual services are exempt. Without an exemption, PST applies to the purchase of boilers, distribution pipes, heat exchangers, etc. LEC is still a capital intensive organization as it continues expanding its distribution system and heat generation installations. LEC estimates that the net impact of the tax on machinery and equipment will impact its customers by approximately 1%.

A LEC rate increase of 4.5% to 5% has significant implications for LEC. While such an increase is significant for LEC's existing customers, it also reduces LEC's cost advantage to incite existing less energy efficient buildings to connect to its system.

**RESPECTFULLY SUBMITTED BY:**



Ben Themens, MBA, P.Eng., CGA  
Director, LEC

**REVIEWED BY:**



A.K. Tollstam, B.Comm, CA  
President, LEC

**Attachment 1****Summary of Past Activities – Application of the PST on LEC**

The issues surrounding the application of the PST have been of concern to Lonsdale Energy Corp. (LEC) since it first started to produce heat. The following provides a short summary of the efforts and results regarding this issue.

- July 2004: LEC requests a ruling from the Ministry of Provincial Revenue on the application of the PST on its sales and purchases.
- September 2005: Meeting with the Honourable Rick Thorpe, Minister of Provincial Revenue to discuss the draft rulings received from the ministry and the impact of the draft ruling on district energy systems competitiveness.
- October 2005: LEC receives the official ruling of the Ministry of Provincial Revenue. The ruling stipulates that LEC must charge PST on the sale of its heat and pay PST on the purchase of its energy (gas and electricity) resulting in a double taxation to LEC customers. When compared to the option of installing stand-alone boilers in each building, the decision results in increasing the cost of heat by twice the amount of the PST for residential premises and once for commercial locations. While PST is exempt on gas and electricity directly purchased by residential premises, the PST must be paid by LEC on its gas and electricity purchases and LEC must also charge PST on the heat that it delivers. For commercial users, while they are not PST exempt on their gas and electricity purchases, they are now paying the PST twice via the tax paid by LEC on its purchases and the tax charged to them on heat.
- February 2006: The Provincial Budget clarifies the definition of tangible personal property to include Heat. The Budget also introduces an exemption from the PST for heat purchased for residential use. This exemption may be applied retroactively to February 21, 2000. The result of this amendment to the Social Service Tax Act is that the differential between the stand-alone boiler and district energy option is reduced, since PST is only paid once on LEC's purchases of gas and electricity.
- October 2006: Meeting with the Honourable Carole Taylor, Minister of Finance to request that the Social Service Tax Act and Regulations be amended to:
- 1) remove the PST charges on gas purchased for the purpose of generating energy for resale;
  - 2) allow the exemption on Production Machinery and Equipment on equipment purchased by Lonsdale Energy Corp. by including Lonsdale Energy Corp. in the list of companies exempted from

the exclusion under Section 13.10 (e) of the regulations. The list already included the British Columbia Hydro and Power Authority as well as the Columbia Power Corporation. The exemption was also available to privately owned energy providers and this step was required to provide a level playing field to LEC.

- September 2007: Meeting with the Honourable Richard P. Neufeld, Minister of Energy, Mines and Petroleum Resources to ask his support to amend the Social Service Tax Act to remove PST charges on gas purchased for the purpose of generating energy for resale and allow the exemption on Production Machinery and Equipment on equipment purchased by community energy systems.
- March 2008: Meeting with Mr. Chris Trumpy, Deputy Minister, Ministry of Finance to discuss the issues brought forward to the Minister of Finance in October 2006.
- July 2009: BC government announces that it will combine the PST with the federal Goods and Services Tax (GST) in a single HST.
- September 2009: BC Minister of Finance announces in the provincial budget a new HST exemption consisting in "a provincially administered point-of-sale rebate for residential energy – similar to the existing PST exemption". The Minister added that "That means the HST will not increase consumers' costs for oil, electricity, natural gas, or propane used to heat or power homes."

## Lonsdale Energy Corp.

## Historical Data for 2004 -2012 Years of Operations

Income Statement line description	2004	2005	2006	2007	2008	2009	2010	2011	2012
Revenue	\$ 176,707	\$ 409,108	\$ 415,741	\$ 630,088	\$ 1,016,118	\$ 1,158,110	\$ 1,434,108	\$ 1,562,007	\$ 1,693,413
Cost of Sales	\$ 66,777	\$ 187,089	\$ 245,839	\$ 299,299	\$ 479,519	\$ 469,707	\$ 722,351	\$ 752,254	\$ 747,330
Gross profit	\$ 109,930	\$ 222,019	\$ 169,902	\$ 330,789	\$ 536,599	\$ 688,403	\$ 711,757	\$ 809,753	\$ 946,083
Plant Operation and Maintenance	\$ 19,087	\$ 91,585	\$ 95,244	\$ 98,149	\$ 114,689	\$ 138,289	\$ 143,305	\$ 191,350	\$ 212,842
Depreciation	\$ 68,531	\$ 114,823	\$ 127,777	\$ 146,220	\$ 212,246	\$ 293,444	\$ 273,586	\$ 309,667	\$ 430,542
General and Administrative	\$ 98,268	\$ 145,543	\$ 172,968	\$ 140,987	\$ 173,957	\$ 146,916	\$ 185,574	\$ 188,783	\$ 309,926
Total - Operating Expenses	\$ 185,886	\$ 351,951	\$ 395,989	\$ 385,356	\$ 500,892	\$ 578,649	\$ 602,465	\$ 689,800	\$ 953,310
Income (loss) before other expenses	\$ (75,956)	\$ (129,932)	\$ (226,087)	\$ (54,567)	\$ 35,707	\$ 109,754	\$ 109,292	\$ 119,953	\$ (7,227)
Contributions		\$ 60,136	\$ 259,458	\$ 38,804	\$ 63,416	\$ 117,389	\$ 120,875	\$ 146,532	\$ 174,480
Finance income		\$ 23,432	\$ 22,037	\$ 24,530	\$ 17,321	\$ 5,111	\$ 11,171	\$ 15,742	\$ 25,121
Finance costs	\$ (111,951)	\$ (207,481)	\$ (194,850)	\$ (34,141)	\$ (123,277)	\$ (125,421)	\$ (128,876)	\$ (131,322)	\$ (139,585)
Subtotal	\$ (111,951)	\$ (123,913)	\$ 86,645	\$ 29,193	\$ (42,540)	\$ (2,921)	\$ 3,170	\$ 30,952	\$ 60,016
Net Income and Comprehensive Income	\$ (187,907)	\$ (253,845)	\$ (139,442)	\$ (25,374)	\$ (6,833)	\$ 106,833	\$ 112,462	\$ 150,905	\$ 52,789
Total Net Accumulated Surplus (loss)	\$ (277,787)	\$ (531,632)	\$ (671,074)	\$ (696,448)	\$ (703,281)	\$ (596,449)	\$ (483,987)	\$ (333,082)	\$ (280,293)
Sales (kW.hr)	1,175,900	3,630,109	4,981,300	6,828,400	11,063,030	14,120,569	18,737,975	22,847,087	23,945,719

Attachment No.

3

Attachment No. 4

The Corporation of THE CITY OF NORTH VANCOUVER  
ENGINEERING, PARKS & ENVIRONMENT / FINANCE  
REPORT

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To: Mayor Darrell Mussatto and Members of the Council

From: William J Susak, Deputy City Engineer  
Ben Themens, Deputy Director of Finance

**SUBJECT: LONSDALE ENERGY CORP. – RATE REVIEW AND BYLAW  
AMENDMENT**

File: 1600-01

Date: January 17, 2007

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#### RECOMMENDATION

PURSUANT to the report of the Deputy City Engineer and Deputy Director of Finance, dated January 17, 2007 entitled "LONSDALE ENERGY CORP. – RATE REVIEW AND BYLAW AMENDMENT":

THAT "City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2007, No. 7843" be brought forward for consideration by Council;

AND THAT the revised rate structure be applied retroactively so that rebates dating back to when each developer-built building transferred control to the building's strata corporation be provided;

AND THAT the late payment charge be applied retroactively from the due date of any outstanding amount not paid by March 1, 2007.

#### ATTACHMENTS

1. City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575, Amendment Bylaw, 2007, No. 7843
2. City of North Vancouver Hydronic Heat Energy Service Bylaw, 2004, No. 7575

## **PURPOSE & BACKGROUND**

Lonsdale Energy Corp. (LEC), the City's district energy utility, has been in operation since early 2004 with the signing of an operating agreement with Terasen Utility Services (now known as Corix Utilities), the acquisition of external funding from FCM, and the enactment of Bylaw 7575 (Attachment 2), creating the energy service.

Since inception, several building customers have connected to the LEC system and several more are expected during 2007 with the completion of developments on the north side of Esplanade and further building developments on the west side of the Lower Lonsdale service area.

Staff and strata representatives of current customer buildings formed a customer focus group last year in order to facilitate open communication between system users and the energy utility. From the meetings several issues for resolution came to the forefront that required efforts during the past year by both the customer group and the energy utility.

The issues raised by the customer group are the cost of the service, the quality of the service, and the issue of financial equity for those 'early adopters' onto the system where the positive future financial impact of more system users is not recognized in the current rate structure.

This report proposes bylaw changes that will reduce customer costs commencing in 2007. Furthermore, rebates for initial buildings will be processed dating back to when each developer-built building transferred control to the building's strata corporation.

## **DISCUSSION**

### ***Cost of Service***

Currently, an "average" suite pays \$50 to \$65 per month for space heating and domestic hot water heating services provided by LEC, although there is a building with an average suite cost above this range. The new proposed 2007 tariff will bring the average suite LEC cost generally down to the \$45 to \$55 range. It is important to note that this is for LEC service only. Suites are often equipped with other heat appliances such as electric or gas fireplaces which generate their own usage costs.

Cost of service is dependent on capacity needs (i.e.: how much capacity of LEC's system is required for a building) and quantity of energy consumed. Cost of service is also dependent on the cost structure of natural gas (more on this later) which is LEC's current prime fuel, and the electricity to run utility system pumps.

An individual building's capacity requirements and building energy consumption patterns, which directly translate into building energy costs, are highly dependent on any given building's design, construction, commissioning, and operating characteristics. Normally, a utility agency delivers a service to a property line and an owner distributes the service from that point. A utility generally does not participate in the in-building works (engineering design, construction, commissioning...performed by private consultants and contractors) necessary to internally distribute a service. Reviews of initial buildings' performance, both operationally and cost-wise, led LEC to publish in-building design guidelines over a year ago that are assisting with more operationally and financially efficient building performance.

Cost is also dependent on the actual operating performance of the utility system. The actual efficiency of LEC's system has been reviewed by the system engineers. Observed system performance over the past 2 years indicates that buildings can be heated with less LEC equipment than originally presumed. This knowledge and ongoing review directly translates into cost savings for system users. Simply put, if more buildings can be heated with the same amount of equipment, then unit costs will decrease as more buildings come on line. This cost saving is being passed on to current customers and future engineering reviews of system efficiency may lead to even further cost reductions.

Costs are also dependent on applicable taxes. While LEC earlier in 2006 won a part of the 'PST battle' with the Province over unexpected application of PST charges on LEC invoices, PST is still applied on LEC commodity inputs. When LEC buys natural gas, the Province still imposes a PST charge that would otherwise not apply if a residential building were buying the natural gas directly from Terasen Gas. This extra tax on LEC's cost structure must be passed on to the customers, and this has a negative impact on LEC's competitive position with respect to a comparative stand-alone boiler heating system. Staff will be continuing their efforts in this matter to completely level the playing field for LEC customers.

Based on this premise, the adoption of proposed bylaw 7843 (Attachment 1) would modify LEC's rates as per the following:

Charge	Description	Existing Bylaw 7575	Proposed Bylaw 7843	Increase (Decrease)
Meter Charge	Monthly charge for each Service Connection serving the Premises.	\$491.00 / month	\$299.34 / month	-39.0%
Capacity Charge	Monthly charge per kilowatt multiplied by the energy capacity of the Premises in kilowatts.	\$3.920 / Kw	\$2.930 / Kw	-25.3%
Commodity Charge	Charge per kilowatt hour of Hydronic Energy provided to the Premises.	\$0.0430 / Kw.hr	\$0.0458 / Kw.hr	6.5%

### ***Quality of Service***

Customers have expressed concerns that insufficient or no heat service sometimes occurs. Investigation by LEC indicates that specified system delivery temperatures have been maintained by LEC since inception. Problems have arisen from time to time with in-building distribution systems that have exhibited less than optimal performance characteristics. The most recent example occurred during a very cold period in late November where one building reported no heat service. Upon notification LEC's own system operator, Chapman Burner and Heating, quickly diagnosed and remedied the problem, a failed building-side hydronic heat distribution pump. LEC will be looking into how to educate and serve customer concerns that are 'building side' distribution issues as opposed to utility service delivery issues. From LEC's perspective, it is important that we offer assistance to remedy any interruption or degradation of service, notwithstanding whether an issue is a building-side problem that normally falls to the responsibility of a strata management company.

### ***Retroactive Application of Proposed Charges***

Bylaw 7843 reduces significantly some of the rates that have been charged to date to LEC's customers. This is largely due to knowledge and expertise acquired since the start of LEC's operations. The rates included in bylaw 7575 were established more than two and a half years ago and were based on conceptual knowledge at the time. Since then, LEC's management has been able to compile a significant amount of data that has been used in the preparation of the latest company's forecasts and proposed rate structure.

While a privately owned company would likely keep all or part of the extra revenue generated in the past to compensate for risk associated with launching a new product/process, LEC is recommending that the proposed rate be applied retroactively. Rebates for initial buildings will be processed dating back to when each developer-built building transferred control to the building's strata corporation. The strata corporation will be refunded in full the difference between the current rate and the proposed rate as if the proposed rate had been in place since inception of operations.

LEC recognizes that a significant portion of the risk associated with the start of operations was borne by the early customers. Furthermore, LEC wishes to recognize the support of its customers as well as their patience while a very complex rate review process was underway. Finally, LEC is owned by the City and ultimately the City benefits from profits made by LEC. However LEC's main objective is not to generate excessive or extraordinary profits, but rather to ensure that the community heating system achieves an appropriate balance of environmental, social, and economically sustainable benefits to the City.

### ***Future Commodity Charge Adjustments***

The existing bylaw 7575 does not provide LEC sufficient flexibility to adjust the commodity charge in line with gas prices fluctuations. The current commodity charge which has remained constant since LEC's inception is based on early 2004 gas prices. Gas prices have fluctuated greatly over the past three years.

The proposed bylaw 7843 will allow for adjustments to be made to the Commodity charge so that it follows the market pricing fluctuations. The proposed Commodity charge is based on a direct recovery of Terasen Gas charges in force in July, 2006. It is being proposed that in the future, LEC adjusts the Commodity charge at the pro-rata of Terasen Gas fees fluctuations. As LEC commodity charge is a blended rate that includes Terasen Gas monthly fee, delivery charge and cost of gas as well as system efficiency, LEC's Board intends to base the adjustment on the price equivalent of buying 1,000 GJ/month under Terasen Gas rate schedule 3. The adjustment criteria may be adjusted by LEC's Board in the future if it is determined that another quantity and rate schedule is more in line with LEC's purchase price.

#### ***Service Connection Installation Fee***

The amount currently charged to developers for a service connection fee is set at only \$500. At the outset, the development community viewed LEC or its concept with either reluctance or apprehension. LEC has come through an initial implementation period with a track record of meeting builder's needs for service and the service connection fee is deemed insufficient compared against the financial, operational, and marketing advantages that the LEC system offers to the development community.

Bylaw 7843 proposes to significantly increase the service connection fee to \$20,000 per service connection plus \$30/Kw of required capacity. This would translate into a service connection fee of \$41,000 to \$71,000 per building but it still translates into significant savings to the developers who do not have to spend in excess of \$100,000 for a full-service boiler room in new buildings.

An appropriate connection fee will assist customer costs in the long run as well as motivate developers to design and construct more energy efficient buildings on the LEC system. There are no intentions of applying this revised service connection fee retroactively to developments which have already received a building permit. Furthermore, to minimize the entry cost to existing buildings wishing to convert/connect to LEC's system, LEC's Board may at its discretion waive partly or totally such service connection fees to potential customers if deemed appropriate.

#### ***Other adjustments***

The initial bylaw includes in section 17.1 of the General Terms and Conditions a provision for late payment charges. The section mentions that the amount is to be based on "the late payment charge specified in the Standard Fees and Charges Schedule". Unfortunately, due to an oversight, bylaw 7575 did not include any amount for that purpose in the said schedule. Bylaw 7843 corrects this situation by specifying

that the late payment charge will be based on the Scotiabank Prime Rate in effect at the time of invoicing of the charge plus 2%. Furthermore, as one of the developers has not been responding to several requests concerning an outstanding amount, Council resolution is to provide LEC with the authority to invoice a late payment charge retroactively based on the due date of each invoice if payment is not received by March 1, 2007.

Bylaw 7843 also amends Schedule A which provides the location of Class One properties. The amendment aims at including all City properties on the north side of East First Street between Lonsdale Avenue and St. Georges.

### ***Future Work***

LEC will continue to monitor the financial and operating performance of its system in order to determine the modifications in the future. Furthermore, LEC's financial models consider that the applicable rates will increase with inflation. It is the intention of LEC to bring forward for Council consideration regular rate adjustments. While LEC hopes to be able to identify further cost savings and efficiencies, it is not expected that future rate adjustments will be of the magnitude of the present adjustment.

As mentioned above, LEC will continue to work on obtaining a PST exemption so that its customers receive the same tax treatment whether they are buying the natural gas directly from Terasen Gas or purchasing heat from LEC. This exemption is an important factor in ensuring that LEC provides competitive services.

Another cost saving that LEC is contemplating to pass to its customers if appropriate, is a Commodity charge rebate. The Commodity charge in the latest financial model is based on the direct cost of gas purchased by LEC. With its interconnected mini-plants each serviced by a distinct gas meter, LEC can arrange to purchase gas from different sources at each of the mini-plants. Since all the Lower Lonsdale mini-plants will be inter-connected in 2007 via the heat distribution system, LEC has the flexibility, as long as the total capacity of all the mini-plants is not required simultaneously, to generate heat from a plant that has access to the most economical gas provider.

While minimizing risks, this redundancy has allowed LEC to enter into a contract for the purchase of gas from a broker at one of its mini-plants since November 1<sup>st</sup>, 2006. While savings may not be available each year, LEC hopes to reimburse partly or entirely the difference between the Commodity charges invoiced to its customers and the costs of its gas purchase if savings are realized.

### **FINANCIAL IMPLICATIONS**

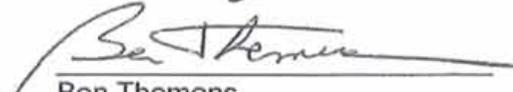
The financial implications are addressed throughout the report.

**STRATEGIC PLAN IMPLICATIONS**

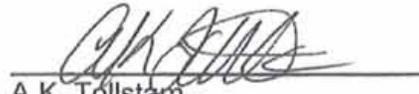
The community energy system implemented by LEC is consistent with the goals of the City Strategic Plan concerning the enhancement of the natural and built environment. The measures contemplated in this report are responsive to community needs as some of LEC's customers have voiced some concerns with regard to the rate charged by LEC.

**RESPECTFULLY SUBMITTED BY:**

  
William J. Susak  
Deputy City Engineer

  
Ben Themens  
Deputy Director of Finance

**REVIEWED BY:**

  
A.K. Tollstam  
City Manager

Attachment No. 5

## THE CORPORATION OF THE CITY OF NORTH VANCOUVER

"CITY OF NORTH VANCOUVER HYDRONIC ENERGY SERVICE  
BYLAW, 2004, NO. 7575"**CONSOLIDATED FOR CONVENIENCE – SEPTEMBER 12, 2011**

Amendment Bylaw, 2007, No. 7843	Schedule A, Schedule B and Schedule C
Amendment Bylaw, 2007, No. 7865	Section 4 and Schedule A
Amendment Bylaw, 2007, No. 7891	Section 15, Schedule B and Schedule C
Amendment Bylaw, 2008, No. 7954	Service Connection Fee
Amendment Bylaw, 2009, No. 8059	Schedule C, Fees Rates and Charges Schedule
Amendment Bylaw, 2010, No. 8086	Schedule C and Housekeeping
Amendment Bylaw, 2010, No. 8123	Schedule C - Meter Charge
Amendment Bylaw, 2010, No. 8187	Schedule C – Service Connection Fee

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 multi-family residential, commercial, industrial and institutional buildings having a combined floor area of greater than 1000 square metres; and  
  
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) 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

(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.;

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 23<sup>rd</sup> day of February, 2004.

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

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

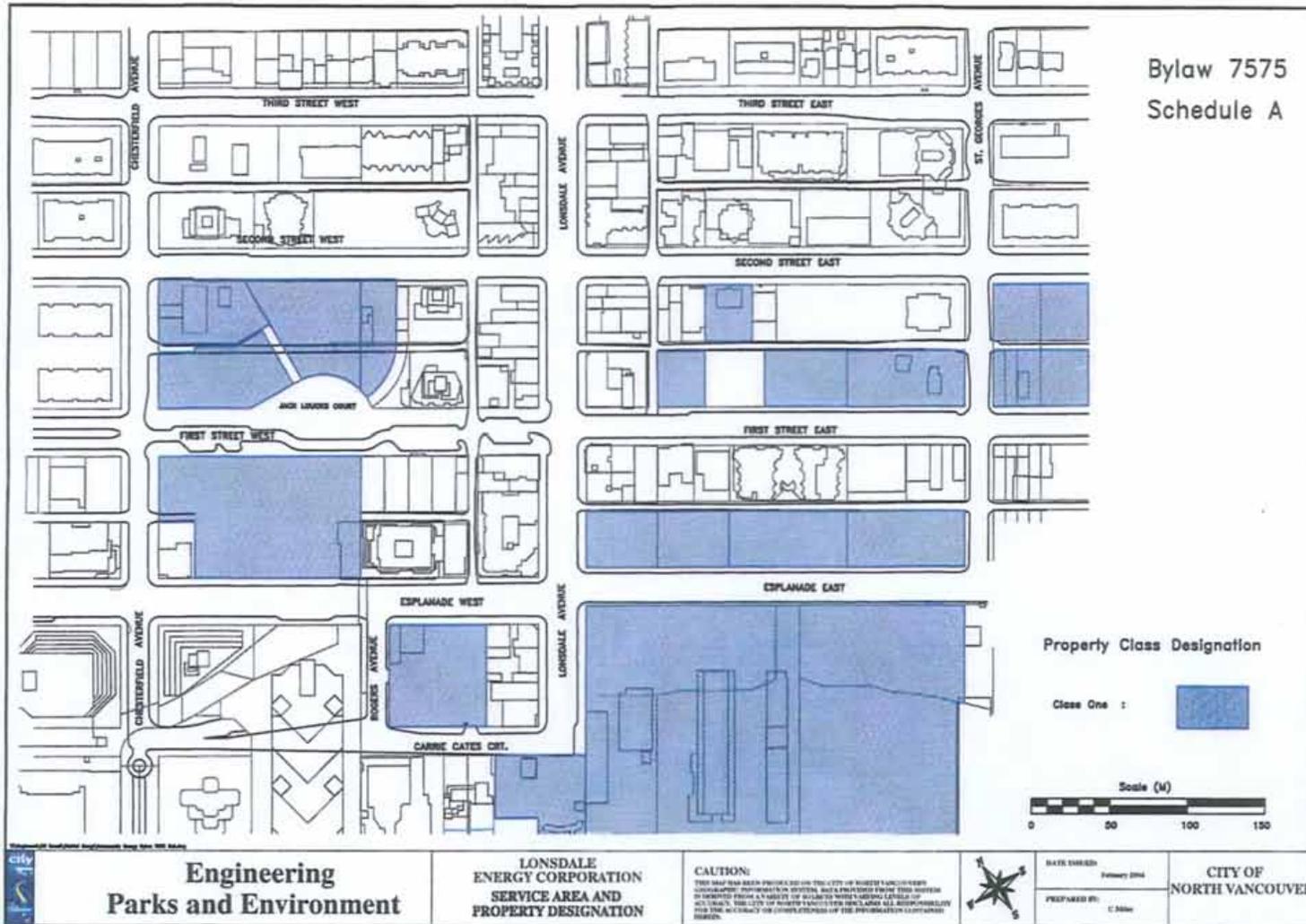
RECONSIDERED and finally adopted by the Council, signed by the Mayor and City Clerk and sealed with the Corporate Seal on the 1<sup>st</sup> day of March, 2004.

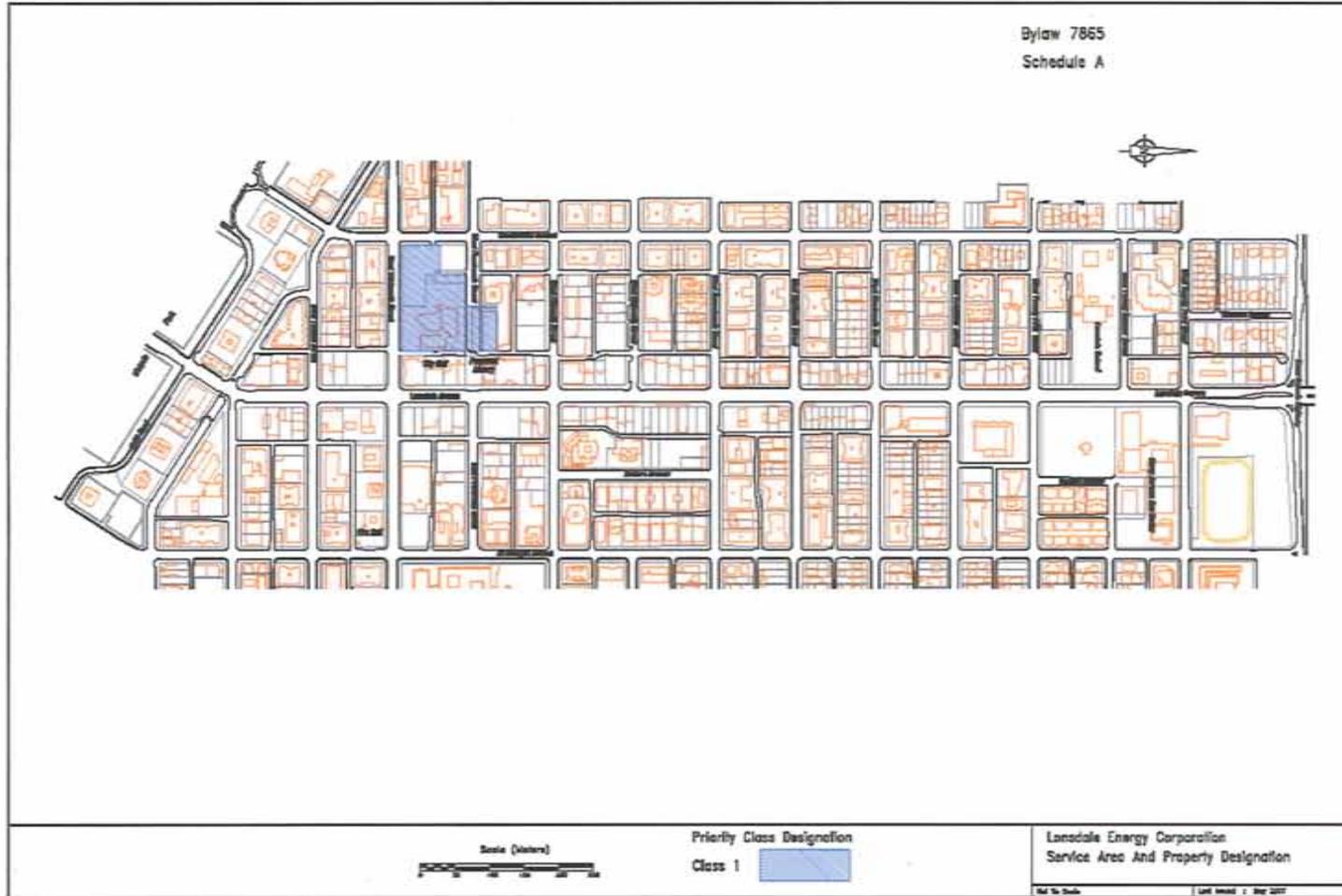
\_\_\_\_\_  
"Barbara A. Sharp"

MAYOR

\_\_\_\_\_  
"Bruce A. Hawkshaw"

CITY CLERK





## 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 210C 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 201C.

**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.

**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

- (i) be less than \$50, and
- (ii) 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.

**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 Remedying 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 \$100

Service Connection Fee \$60 per kilowatt  
multiplied by the energy capacity of the Premises as determined for the purpose of calculating the monthly Capacity Charge except those areas of existing buildings applying for connection that received an occupancy permit at least five years prior to the date of connection or those areas of new or existing buildings that are stipulated by covenant to be used in perpetuity only for residential rental purposes which shall be multiplied by 50% of the energy capacity of such areas.

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.

**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 based on the Scotiabank Prime Rate in effect at the time of invoicing of the charge plus 2%. The charge is to be calculated from the date that the invoiced amount was due until payment is received.

Payment of interest will be credited to the Customer's account in January of each Year.

**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  
BYLAW 8086**

The rates, fees and charges payable in respect of the Service defined in Bylaws 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 Bylaw 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**

- (a) **Meter Charge** – A monthly charge of \$150.00 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$2.93 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 \$0.0458 by the percentage increase or decrease in the price of 1,000 GJ/month under Terasen Gas rate schedule 3 from the price established as of July 1, 2006.

**COMMERCIAL SERVICE**

- (a) **Meter Charge** – A monthly charge of \$150.00 for each Service Connection serving the Premises.
- (b) **Capacity Charge** – A monthly charge of \$2.93 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 \$0.0458 by the percentage increase or decrease in the price of 1,000 GJ/month under Terasen Gas rate schedule 3 from the price established as of July 1, 2006.

**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.