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COUNCIL DATE: 0-hu-U"-k

REGULAR COUNCIL

TO: Mayor & Council **DATE: September 23, 2014**

FROM: Deputy City Engineer, Engineering **FILE: 5510-101**
General Manager, Finance & Technology **XC: 5520 (11-00075)**
XXC: 5520 (12-0349)

SUBJECT: District Energy System Utility (Surrey City Energy) –
Agreements under the Early Adopters Policy

RECOMMENDATION

The Engineering and Finance & Technology Department recommends that Council:

1. Receive this report as information;
2. Authorize the General Manager, Engineering to enter into a partnering agreement with Bosa Properties Inc., as attached as Appendix III, in support of the City's District Energy Early Adopters Policy; and
3. Authorize the General Manager, Engineering to enter into a partnering agreement with Rize Alliance Properties, as attached as Appendix IV, in support of the City's District Energy Early Adopters Policy.

BACKGROUND

At its Regular meeting on June 7, 2012, Council adopted the recommendations of Corporate Report No. R123; 2012 that introduced the District Energy System By-law ("the By-law") and the District Energy Early Adopters Policy ("the Policy"). A copy of the Policy is attached to this report as Appendix I.

With a view to mitigating some of the initial additional costs of hydronic heating systems for "early adopters" whose developments will likely be selling at the same time that the remaining inventory of recently constructed residential dwelling units with conventional electric baseboard heating are still for sale, the Policy provides that repayable financial assistance will be provided to proponents of residential projects that qualify as "early adopters".

This incentive is time-limited and will not be required as the market shifts more generally to hydronic systems. The Policy provides financial assistance up to \$1.50 per sq. ft. of dwelling unit area will be provided but in any case such assistance will not exceed 50% of the cost premium related to installing the hydronic systems in comparison to the cost of installing a conventional electric baseboard heating system in the same dwelling units.

Although there is an additional cost for hydronic heating systems, development projects serviced by district energy systems offer the following advantages:

- 1) they emit significantly less greenhouse gases in comparison to developments serviced by natural gas make up air units and natural gas hot water heaters;
- 2) energy sources are flexible to minimize energy costs over time; and
- 3) they gain a significant financial advantage if the cost of electricity and natural gas increases more rapidly than is currently projected.

The Policy defines an “early adopter” as a residential development project within Service Area A or Service Area B with a floor area ration (FAR) equal to or greater than 2.5 that installs a hydronic heating system and a hot water system that is immediately connectable to the City’s DE system. Financial assistance will only be available so long as the floor area of the project combined with all other projects that have been previously designated as “early adopter” projects is less than or equal to a total floor area of 1,500,000 ft² and subject to a building permit being issued for each such project within 3 years of the date of adoption of the By-law, expiring June 25, 2015.

DISCUSSION

Two applications for financial assistance have been submitted under the Policy. Application no. 11-0075 located at 10378 133 Street by Rize Alliance Properties and application no. 12-0349 at 13388 104 Avenue by Bosa Properties Inc., as illustrated in the map attached as Appendix II, have recently submitted building permit applications which are currently under review. Both projects are located in Service Area A as defined by the By-law, have floor area ratios greater than 2.5, are in full compliance with the By-law and qualify as early adopters in accordance with the Policy.

As stipulated in the Policy, early adopters are required to enter into a partnering agreement with the City to receive the referenced financial assistance. The following table summarizes the amount of financial assistance that each project is eligible for:

Developer	Address	Residential Floor Area (sq. ft.)	Value of Assistance	Scheduled Occupancy Date
Bosa Properties Inc.	13388 104 Avenue	191,676	\$287,514.00	January 1, 2017
Rize Alliance Properties	10378 133 Street	173,659	\$260,488.50	March 1, 2017

Financial assistance will be provided to the project owners at the time of issuance of the occupancy permit.

The draft partnering agreements are attached as Appendix III and IV. It is recommended that the General Manager, Engineering be authorized to enter into a partnering agreement with each of Bosa Properties Inc. and Rize Alliance Properties.

Eligibility of Future Projects as Early Adopters

The Policy provides that financial assistance is to be made available in accordance with the Policy up to a maximum of 1,500,000 ft² for a period of 3 years following the adoption of the By-law, which was formally adopted on June 25, 2012. As such, any project that has not been issued a building permit by June 25, 2015, will not be eligible to receive financial assistance in accordance with the Policy. At this time, staff estimate that two additional projects may qualify as early adopters before the June 25, 2015 deadline.

Since the adoption of the By-law, hydronic heating systems are becoming more prominent in the region and as such it appears that the cost premium associated with hydronic heating is decreasing. In addition, by the time that these two projects are completed, there may be little to no new residential dwelling units for sale in Service Area A that are heated by conventional electric baseboard heating. As a result, staff do not believe there is sufficient merit to extend the deadline for eligibility under the Policy.

Funding

Given the community carbon reductions that will be achieved as a result of the advancement of the district energy system in support of the City's Community Energy & Emissions Plan, funding for these incentives will come from the City's carbon tax rebate. This model will support the City's move to becoming an energy-efficient community while reducing the impact on customer rates to ensure a financially efficient rate model.

Legal Services Review

This report and the proposed partnering agreements have been reviewed by the Legal Services Division.

SUSTAINABILITY CONSIDERATIONS

The implementation of a district energy system in the City Centre supports the Economic and Environmental Pillars of the City's Sustainability Charter under the following specific elements of the Charter:

- EC8: Energy security by promoting the use of low-impact, renewable energy sources and promoting community energy solutions;
- EN1: Energy efficiency by incorporating alternative energy systems such as geo-exchange and solar heating systems as potential heat sources; and
- EN10: Integrated Community Energy Master Plans by developing an Integrated Community Energy Master Plan for the City Centre and by working with property owners to promote and increase building energy efficiency through implementation of a district energy system.

CONCLUSION

Based on the above discussion, the Engineering Department recommends that Council authorize the General Manager, Engineering to enter into a partnering agreement with each of Bosa Properties Inc. and Rize Alliance Properties in support of the City's District Energy Early Adopters Policy.

Gerry McKinnon
Deputy City Engineer
Engineering

Vivienne Wilke, CGA
General Manager
Finance & Technology

VL/JA/JO/ras

Appendix I – Corporate Report No. R123; 2012

Appendix II – Site Map – Development Application 11-0075-00 & 12-0349-00

Appendix III – Draft Partnering Agreement with Bosa Properties Inc.

Appendix IV - Draft Partnering Agreement with Rize Alliance Properties

NO: **R123**

COUNCIL DATE: **June 11, 2012**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **June 7, 2012**

FROM: **General Manager, Engineering**

FILE: **5510-101**

SUBJECT: **City Centre District Energy System By-law and Related Financial Assistance Policy**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Authorize the City Clerk to bring forward for the required readings the District Energy System By-law, 2012, No. 17667, which is attached as Appendix I to this report; and
2. Adopt the policy titled “District Energy Early Adopters Policy”, which is attached as Appendix II to this report that will form the basis for the provision of financial assistance to residential development projects that are constructed with hydronic heating systems in support of the City Centre District Energy (DE) system.

INTENT

The purpose of this report is to obtain Council approval of a by-law and related policy that will act to support the implementation of a District Energy System in the City Centre area.

BACKGROUND

At its Regular meeting on May 7, 2012, Council adopted the recommendations of Corporate Report No. Ro89; 2012, a copy of which is attached as Appendix III. The recommendations of this report support Council’s resolution related to that previous report.

DISCUSSION

In accordance with Council’s direction staff has prepared for Council’s consideration the *District Energy System By-law* (the “By-law”), which is attached as Appendix I to this report.

The By-law is structured around the strategy of developing DE systems around each of the high-density land use nodes in City Centre, which over time will become interconnected as each of the nodes reaches maturity in terms of its development. The three core DE nodes are centered at each of the three (3) City Centre SkyTrain stations.

At this early stage of DE implementation in City Centre, it is difficult to serve all development by the DE utility; however, it is critical that hydronic systems be implemented in each new

development to facilitate its future connection to the DE system when the system becomes available to the development.

Service Area

Staff have reviewed all active development applications within the City Centre area and established the viability of a DE connection for each site based on 3 key criteria:

- proposed density;
- timing of development; and
- proximity to the three core DE nodes.

For the purpose of providing a clear indication to all land development applicants of the DE requirements for their development, staff has established two distinct boundaries within City Centre: these are illustrated as Service Area A and Service Area B on the map attached as Appendix IV. These boundaries have been developed based on the Surrey City Centre Land Use and Density Concept Plan approved by Council at its Regular meeting of July 25, 2011 (Corporate Report No. R151;2011).

The boundary of Service Area A encompasses those lands within the City Centre that are designated for high density development with a Floor Area Ratio (FAR) greater than 3.5. The boundary of Service Area A includes a small pocket of low to medium density land between Old Yale Road and 104 Avenue west of 133 Street. This pocket was included due to its immediate proximity to the Surrey Central node. Developments within Service Area A with a build out FAR equal to or greater than 1.0 will be required to provide full hydronic capability in support of the City's DE system including domestic hot water, make-up air units, and in-suite hydronic heating and will be required to connect to the City's DE system prior to occupancy.

Service Area B involves the remainder of the land within the Surrey City Centre, which primarily includes land designated for low to medium densities at an FAR less than 3.5, and in majority less than 2.5. Developments on the lands within Service Area B may not be able to be immediately serviced by the DE system and, as such, those projects with a build out FAR equal to or greater than 1.0 and less than 2.5 will only be required to incorporate hydronic make-up air and hot water systems. Given the uncertain timeline over which these developments can be connected to the DE network, staff is of the opinion that partial compatibility to the City's DE system (domestic hot water and make-up air units but not in-suite hydronic heating) is appropriate. Developments in Service Area B with a build out FAR equal to or greater than 2.5 will be required to install a hydronic heating system as well (i.e., be fully compatible for connection to the DE system when it is available).

Early Adopters Policy

With a view to mitigating some of the additional costs of hydronic heating systems for "early adopters" and to establish a consistent approach to providing financial assistance a draft policy titled "District Energy Early Adopters Policy" has been prepared, which is attached as Appendix II to this report. The proposed Policy is summarized in the following paragraphs.

The Policy provides that repayable financial assistance will be provided to proponents of residential projects that qualify as "early adopters". This incentive is time-limited and will not be required once the market shifts more generally to hydronic systems. The Policy provides that financial assistance up to \$1.50 per sq. ft. of dwelling unit area will be provided but in any case

such assistance will not exceed 50% of the cost premium related to installing the hydronic systems in comparison to the cost of installing a conventional electric baseboard heating system in the same dwelling units. This financial assistance will be recovered by way of a transfer of property tax revenues from the dwelling units. In this regard, consistent with Corporate Report No. R089;2012, it is proposed that one-half of the property taxes that are collected on such projects be transferred as repayment to the DE utility to amortize the debt associated with the financial assistance. At this rate of repayment, the debt would be retired over 3 years for a typical project.

The Policy defines an “early adopter” as a residential development project within Service Area A or Service Area B (with an FAR equal to or greater than 2.5) that installs a hydronic heating system and a hot water system that is immediately connectable to a DE system and where the floor area of the project combined with all other projects that have been designated as “early adopter” projects is less than or equal to a total floor area of 1,500,000 ft² and subject to a building permit being issued for each such project within 3 years of the date of adoption of the By-law. Based on this total floor area limit, the DE utility would incur repayable debt up to a maximum of \$2,250,000. The 1,500,000 sq. ft. of floor area represents approximately 1,500 to 2,000 dwelling units or 3 to 5 high rise residential projects. Early adopters will be required to enter into a partnering agreement with the City to receive the referenced financial assistance. Each such partnering agreement will be subject to City Council approval before it is executed.

Developments that do not install hydronic heating systems are not eligible for consideration as an early adopter.

In-stream Applications

The By-law sets new requirements for the in-building mechanical systems for development projects. Such requirements will be conditions attached to the issuance of a building permit in relation to each such project. Those projects in the City Centre with an FAR equal to or greater than 2.5 for which a development permit has been issued in advance of the adoption of the By-law and that have been designed based on conventional electric baseboard heating but have not been issued a building permit, will only be required to provide for a DE connection for the project’s hot water system and make-up air units provided that a building permit is issued for the project within 1 year of the adoption of the By-law. The owner of each such development will be required to enter into a partnering agreement with the City in advance of the issuance of a building permit for the project. These developments that are exempted from the full connection requirements of the By-law will not be eligible for financial assistance as an early adopter.

The City has 36 active development applications for properties within Service Areas A and B of which 20 are within Service Area A. Applications within Service Area A are illustrated on the map attached as Appendix V and are described more specifically in Appendix VI.

The following table lists development applications within Service Area A that can request exemption from the full DE connection requirements of the By-law based on the fact that a development permit has been issued for the project:

ID No.	Project #	Address	Developer	Description	Development Permit Application Status
1	11-0075-00	13286 – 104 Avenue	Rize - LHC Building Inc.	Rezoning from RF to CD (based on RMC-150); Development Permit in order to permit the development of two high-rise apartment towers containing approximately 450 apartment units and 21 ground-oriented units, for a total of 471 units.	Issued on May 7, 2012
2	10-0324-00	9647 - 137 Street	Parmit Nagra	Rezoning from RF to C-5; Development Permit and Development Variance Permit in order to permit the development of a two-storey medical office with basement.	Issued on March 12, 2012
3	10-0258-00	13718 – 100 Avenue	Concord Pacific	One 39-storey apartment tower containing 430 units and one 42-storey apartment tower containing 449 units and 7 ground-oriented townhouses.	Issued on July 25, 2011
4	08-0312-00	13778 – 100 Avenue	King George Developments	One 46-storey apartment building and one 20-storey apartment building containing a total of 551 units.	Issued on December 12, 2011

The following table lists the only development application within Service Area B that can request exemption from the full DE connection requirements of the By-law, as a development permit has been issued for this project and the project has an FAR greater than 2.5:

ID No.	Project #	Address	Developer	Description	Development Permit Application Status
N/A	11-0176-00	13852 – 101 Avenue	Lark Group	One 27-storey apartment building containing 164 units and 3 ground-oriented townhouses.	Issued on September 12, 2011

All in-stream development applications within Service Area A or Service Area B (with an FAR equal to or greater than 2.5) will be required to be designed with full compatibility for connection to the City's DE system (i.e., domestic hot water, make-up air units, and in-suite hydronic heating).

All in-stream development applications within Service Area B with an FAR equal to or greater than 1.0 and less than 2.5 will be required to provide for DE connectability for their domestic hot water system and make-up air units but will not be required to install in-suite hydronic heating.

Next steps

Staff is in the process of developing:

- detailed design guidelines for each of hydronic heating systems and hot water systems;
- a formal “application for service” document; and
- promotional materials that will be available to developers in relation to marketing developments in which hydronic systems are installed.

An economic model is being developed for establishing energy rates based on DE utility revenue requirements. As capital costs of system infrastructure are confirmed, the economic model will be used to generate a rate schedule, which will be presented for Council’s consideration and incorporation into the By-law well in advance of the system commencing service delivery to any development project.

Legal Services/Finance Review

This report, the By-law, and the proposed Policy have been reviewed by Legal Services and the Finance & Technology Department.

SUSTAINABILITY CONSIDERATIONS

The implementation of a district energy system in the City Centre supports the Economic and Environmental Pillars of the City’s Sustainability Charter under the following specific elements of the Charter:

- EC8: Energy security by promoting the use of low-impact, renewable energy sources and promoting community energy solutions;
- EN1: Energy efficiency by incorporating alternative energy systems such as geo-exchange and solar heating systems as potential heat sources; and
- EN10: Integrated Community Energy Master Plans by developing an Integrated Community Energy Master Plan for the City Centre and by working with property owners to promote and increase building energy efficiency through implementation of a district energy system.

CONCLUSION

Based on the above discussion, the Engineering Department recommends that Council:

- Authorize the City Clerk to bring forward for the required readings the District Energy System By-law, 2012, No. 17667, which is attached as Appendix I to this report; and
- Adopt the policy titled “District Energy Early Adopters Policy”, which is attached as Appendix II to this report that will form the basis for the provision of financial assistance to residential development projects that are constructed with hydronic heating systems in support of the City Centre District Energy (DE) system.



Vincent Lalonde, P.Eng.
General Manager, Engineering

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- Appendix I - District Energy System By-law, 2012, No. 17667
- Appendix II - District Energy Early Adopters Policy
- Appendix III - Corporate Report No. R089; 2012
- Appendix IV - District Energy Service Area (Service Area A and Service Area B) Map
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CITY OF SURREY



District Energy System By-law, 2012, No. 17667

DISTRICT ENERGY SYSTEM BY-LAW

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BY-LAW NO. 17667

A By-law to provide for the establishment
and operation of a district energy system

THE COUNCIL OF THE CITY OF SURREY, in public meeting assembled, ENACTS AS FOLLOWS:

**SECTION 1
INTERPRETATION**

Name of By-law

- 1.1 This By-law may be cited for all purposes as “District Energy System By-law, 2012, No. 17667”.

Definitions

- 1.2 In this By-law:

“applicant” means an applicant for a building permit under section 4.2;

“building” means any structure used or intended for supporting or sheltering any use or occupancy either of a temporary or permanent nature;

“Building By-law” means ‘Surrey Building By-law, 1987, No.9011’ as amended from time to time;

“Building Inspector” means the General Manager, Planning and Development, or his or her duly appointed representatives and assistants;

“building mechanical system” includes the internal space heat energy and domestic hot water distribution system for a building;

“charge” means a variable consumption fee based on the amount of heat energy used in, and recorded at the meter or estimated by the Collector under this By-law for, a designated property;

“City” means the City of Surrey;

“Collector” means the individual appointed by Council to be the Collector of Taxes or a person duly authorized to carry out the powers and duties of the Collector of Taxes;

“community energy centre” means an energy supply facility that provides heat energy in the form of hot water to designated buildings through the distribution system;

“Council” means the council of the City of Surrey;

“delivery point” means the outlet of the heat exchanger at a designated property;

“designated building” means a building to which this By-law applies by virtue of section 2.1 or 2.4;

“designated property” means a parcel of real property on which a designated building is situated;

“distribution system” means a thermal distribution network that links the community energy centre with the energy transfer station in each designated building, and that includes separate loops for the supply and return of heat energy in the form of hot water;

“distribution system extension” means that part of the distribution system that is situated on, over, under, or in a parcel of real property on which a designated building is situated or in a designated building;

“district energy system” means the district energy system referred to in section 3.1, and consists collectively of the community energy centre, distribution system and energy transfer station in each designated building, and all necessary appliances and equipment;

“early adopter” means an owner of a building that meets the criteria described in:

(a) section 2.1(a); or

(b) section 2.2(a) where the building has a floor area ratio of 2.5 or greater,

and who enters into a partnering agreement with the City within three years of the adoption date of this By-law regarding the owner's use of the district energy system;

“energy transfer station” means equipment owned by the City and used to meter, for billing purposes, the amount of energy consumed in a designated building, and to transfer heat energy from the distribution system to the building mechanical system in a designated building, and includes pipes for the supply and return of hot water, valves, controls, meters, and separate heat exchangers for domestic hot water and space heating;

“entry points” mean two openings in an exterior wall of a designated building for the passage of the supply and return pipes connecting the distribution system extension and energy transfer station;

“floor area ratio” means the figure obtained when the area of all the floors of the buildings constructed or proposed to be constructed on a parcel is divided by the area of the parcel;

“future designated building” means a building described in section 2.2(a) or (b);

“General Manager, Engineering” means the General Manager, Engineering for the City and includes his or her duly appointed assistants and representatives;

“heat energy” means heat distributed or delivered by water including space heating, domestic hot water, and heat for ventilation make-up air;

“heat exchanger” means the equipment, including ventilation systems and electrical pumps, installed at a designated property transfer of energy from the district energy system to a designated property;

“levy” means a fixed capacity fee based on the design, and the estimated peak heat energy demand, approved or varied by the General Manager, Engineering under this By-law for a designated building;

“meter” means a thermal energy meter at an energy transfer station consisting of a water flow meter, temperature sensors, and associated electronics used to measure and record the heat energy supplied to the designated building which houses the energy transfer station;

“owner” means an owner of a parcel of real property including the registered owner of an estate in fee simple, the tenant for life under a registered life estate, the registered holder of the last registered agreement for sale, the holder or occupier of land held in the manner referred to in the definition of "Owner" in the Schedule to the *Community Charter*, S.B.C. 2003, c.26, and a strata corporation established or continued under the *Strata Property Act*, S.B.C. 1998, c.43.

“parcel” means any lot, block, or other area in which land is held or into which it is subdivided, but does not include a highway.

“peak heat energy demand” means the maximum amount of heat energy, measured in kilowatts, required for a designated building, after completion of the installation or alteration of the building mechanical system, at any one point in time in a calendar year;

“points of delivery” mean the valves on the building side of the heat exchangers at an energy transfer station;

“registered professional” means an architect or engineer registered in the Province of British Columbia, as a member in good standing in the Architectural Institute of British Columbia or the Association of Professional Engineers and Geoscientists of British Columbia;

“service” means the delivery by the City to a designated building of heat energy by way of the district energy system; and

“Service Area A” means the geographic location or area for which the service is currently available from the City and is defined in Schedule A, Figure 1;

“Service Area B” means the geographic location or area for which the service will be available in the future from the City and is defined in Schedule A, Figure 1;

Application of and conflict with other by-laws

1.3 The requirements of this By-law are in addition to the requirements of the Building By-law and other City by-laws, except that in case of conflict between the Building By-law or other City by-laws and this By-law, this By-law will prevail.

Table of contents

1.4 The table of contents for this By-law is for convenient reference only, and is not for use in interpreting or enforcing this By-law.

Schedules

1.5 Schedules attached to this By-law form part of this By-law.

Severability

1.6 A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

SECTION 2 APPLICATION OF BY-LAW

Compulsory use of district energy system

2.1 Each owner in Service Area A of:

- (a) a new building with a floor area ratio equal to or greater than 1.0 proposed for construction or under construction for which the Building By-law requires submission of a building permit application and issuance of an occupancy permit to which the owner, as at the date of enactment of this By-law, is not yet entitled; or
- (b) an existing building with a floor area ratio equal to or greater than 1.0 where the estimated value of proposed alterations or alterations under construction which require submission under the Building By-law of a building permit application is more than \$400,000 and 50% of the building's latest assessed value according to the records of the British Columbia Assessment Authority,

must make use of the district energy system in accordance with the terms and conditions of this By-law.

Compulsory hydronic systems

2.2 Each owner in Service Area B of:

- (a) a new building with a floor area ratio equal to or greater than 1.0 proposed for construction or under construction for which the Building By-law requires submission of a building permit application and issuance of an occupancy permit to which the owner, as at the date of enactment of this By-law, is not yet entitled; or
- (b) an existing building with a floor area ratio equal to or greater than 1.0 where the estimated value of proposed alterations or alterations under construction which require submission under the Building By-law of a building permit application is more than \$400,000 and 50% of the building's latest assessed value according to the records of the British Columbia Assessment Authority,

must utilize hydronic systems that are compatible with the district energy system for all space heating and hot water heating, as described in the City's Design Criteria Manual / Energy Services Design Requirements, and in accordance with those terms and conditions of this By-law stated to be applicable to future designated buildings.

Compulsory hydronic systems where floor area ratio is less than 2.5

2.3 Where a building described in section 2.2(a) or (b) has a floor area ratio of less than 2.5, the owner will not be required to utilize hydronic systems for space heating within individual units, but hydronic systems will be required for all other space heating and hot water heating in the building.

Permissive use of district energy system

2.4 An owner of property located outside Service Area A and Service Area B but within the City may apply to the General Manager, Engineering to utilize the district energy system, if:

- (a) the General Manager, Engineering is of the opinion that the district energy system is capable of servicing the building that is the subject of the application;
- (b) the General Manager, Engineering is of the opinion that servicing the building is necessary or desirable; and
- (c) the owner enters into an agreement with the City, in form and substance satisfactory to the General Manager, Engineering, undertaking, among other matters, to wholly or partially, in the City's sole discretion, fund the capital cost of extending the district energy system to the owner's property in an amount and at a time determined by the General Manager, Engineering,

the General Manager, Engineering may approve the application, in which case the owner must utilize the district energy system in accordance with the terms and conditions of this By-law.

Exemption for early adopters

2.5 Despite sections 2.1, 2.2 and 2.3, an early adopter will be exempt from those provisions of this By-law identified in the partnering agreement entered into between the early adopter and the City.

SECTION 3 IMPLEMENTATION OF DISTRICT ENERGY SYSTEM

Authorization for district energy system

3.1 Council authorizes the design, construction, installation, maintenance, operation, repair, and management of a district energy system for the generation, storage, transmission, distribution and sale of heat energy to supply the entire heat energy demand for each designated building.

Ownership of district energy system

3.2 Ownership of the property comprising the district energy system will remain vested in the City, and is not to pass to any owner, or other person who has an interest in a designated building or designated property, and, despite any attachment or annexation to a designated building, the distribution system extension and energy transfer station are not to become part of the real property.

Role of the Collector and the General Manager, Engineering

3.3 For the purposes of this By-law, the Collector shall have charge of the levies, charges and fees and their collection and the General Manager, Engineering shall have charge and control of all properties and works in connection with the district energy system and of all connected engineering and mechanical work.

Authority for policies and criteria

3.4 The Collector and the General Manager, Engineering may establish or amend policies and criteria relating to the district energy system.

SECTION 4
BUILDING PERMIT REQUIREMENTS
FOR BUILDING MECHANICAL SYSTEM

Application to designated buildings and future designated buildings

4.1 All conditions of section 4 apply to designated buildings. All conditions of section 4 apply to future designated buildings with the exception of sections 4.2(c),4.2(h) and 4.9(e).

Building permit application

4.2 A person who applies, under the Building By-law, for a permit to authorize the installation or alteration of a building mechanical system must include in, or submit with, the application:

- (a) an acknowledgment signed by the owner that the building is a designated building or future designated building;
- (b) a certificate, signed by the registered professional who is responsible for design of the building mechanical system, estimating the:
 - (i) peak heat energy demand for space heating,
 - (ii) peak heat energy demand for domestic hot water,
 - (iii) combined peak heat energy demand for any uses other than space heating and domestic hot water,
 - (iv) annual average heat energy demand for space heating,
 - (v) annual average heat energy demand for domestic hot water, and
 - (vi) annual average heat energy demand for any uses other than space heating and domestic hot water;
- (c) a cheque in the amount of the excess demand fee referred to in section 8.1;
- (d) the proposed location of the energy transfer station;
- (e) the proposed location of the distribution system extension;
- (f) the proposed location of the distribution system extension entry points;
- (g) the proposed schedule for installation or alteration of the building mechanical system;

- (h) the proposed commencement date for the delivery of heat energy by the City to the energy transfer station; and
- (i) such other information as the Building Inspector or General Manager, Engineering may require.

Submission of copy of application

4.3 The owner must submit a copy of the building permit application described in section 4.2 to the General Manager, Engineering.

Approval of estimated maximum heat energy demand

4.4 The estimated peak heat energy demand submitted under section 4.2(b) is subject to approval by the General Manager, Engineering.

Approval of locations

4.5 The proposed location of each of the:

- (a) energy transfer station, submitted under section 4.2(d);
- (b) distribution system extension, submitted under section 4.2(e); and
- (c) entry points, submitted under section 4.2(f),

is subject to approval by the Building Inspector and General Manager, Engineering.

Approval of alternate locations

4.6 If:

- (a) the location which the owner proposes for the energy transfer station, distribution system extension, or entry points would be acceptable to the Building Inspector and General Manager, Engineering except for increased costs the City would incur to install the energy transfer station or distribution system extension in that location; and
- (b) before issuance of the building permit, the owner:
 - (i) pays the City the estimated increased costs calculated by the General Manager, Engineering, and
 - (ii) agrees to pay the City on demand any amount by which the actual increased costs calculated by the General Manager, Engineering exceed the estimated increased costs,

the Building Inspector and General Manager, Engineering may approve the alternate location.

Approval of schedule

4.7 The proposed schedule for installation or alteration of the building mechanical system is subject to approval by the General Manager, Engineering.

Design of building mechanical system

4.8 The design of the building mechanical system is subject to approval by the Building Inspector and General Manager, Engineering.

Design and technical requirements

4.9 The building mechanical system must comply with the following design and technical requirements:

- (a) the City's Design Criteria Manual / Energy Services Design Requirements or as stipulated by the General Manager, Engineering;
- (b) the Building By-law;
- (c) the applicable edition of the BC Building Code;
- (d) the design must not incorporate features that increase the difficulty of efficiently integrating the building mechanical system and energy utility system;
- (e) the system must achieve a minimum water temperature drop across the heat exchanger interface with the energy utility system of at least 15°C between the energy utility system hot water supply and return pipes as recorded at the meter;
- (f) the space heating system must include a variable flow operation with variable speed pumps to minimize the pumping power requirements, and to achieve the minimum water temperature drop;
- (g) all control valves, being terminal units and zone valves, must be the 2-way modulating type or the on/off type for fan coil units;
- (h) the system must not include 3-way valves that allow flow to by-pass the heating elements; and
- (i) the system must require an energy utility supply temperature of no greater than 65°C when the outdoor ambient temperature is equal to or greater than 0°C.

Approval of building permit

4.10 The building permit is subject to approval by the:

- (a) Building Inspector under the Building By-law; and
- (b) Building Inspector and General Manager, Engineering under this By-law.

No work before permit issuance

4.11 A person must not begin to install or alter a building mechanical system until the Building Inspector has issued the building permit.

SECTION 5 DESIGN AND INSTALLATION OR ALTERATION OF BUILDING MECHANICAL SYSTEM

Integration with district energy system

5.1 The design and installation or alteration of the building mechanical system must integrate the building mechanical system and district energy system in a manner that enables the building mechanical system to derive the most benefit possible from the district energy system and the district energy system to operate at peak efficiency.

Prohibited components

5.2 A building mechanical system must utilize the district energy system for all the space heating and domestic hot water requirements for a designated building, and must not incorporate any heat production equipment including but not limited to boilers, furnaces, hot water heaters or make-up air heaters, except that:

- (a) an owner who is constructing a new building or altering an existing building may incorporate, as part of the building mechanical system, a solar system to generate heat energy or equipment to acquire waste heat energy from the refrigeration or cooling system of the building or of another building in the vicinity, for the purpose of supplementing the heat energy provided by the district energy system; and
- (b) a person who is altering an existing building may retain components otherwise prohibited under this section 5.2 to the extent permitted by the Building Inspector under the Building By-law or by the Building Inspector and General Manager, Engineering under this By-law.

Installation of valves

- 5.3 The City will install the valves on the building side of the heat exchangers at the energy transfer station.

Scheduling

- 5.4 An owner must:
- (a) ensure that installation of the building mechanical system proceeds in accordance with the schedule approved under section 4.7, and any changes to the schedule approved under this section 5.4; and
 - (b) advise the Building Inspector and General Manager, Engineering within 24 hours of any proposed changes to the schedule for installation or alteration of the building mechanical system, which proposed changes are subject to approval by the Building Inspector and General Manager, Engineering.

Approval of installation or alteration of work

- 5.5 Completion of the installation or alteration of a building mechanical system in a designated building or future designated building is subject to approval by the Building Inspector and General Manager, Engineering under this By-law.

Adjustment of increased installation costs

- 5.6 Upon completion by the City of installation of the energy transfer station and distribution system extension or either of them in an alternate location under section 4.6:
- (a) after notice from the General Manager, Engineering of the amount by which the actual increased costs calculated by the General Manager, Engineering exceed the estimate, the owner referred to in section 4.6 must pay the City the difference; or
 - (b) the City must pay the owner the amount by which such actual increased costs are less than the estimate.

No occupancy permit

- 5.7 An owner is not entitled to issuance of an occupancy permit under the Building By-law for a designated building or a future designated building until the General Manager, Engineering has given approval under section 5.5, and, where applicable, the owner has paid the City any shortfall under section 5.6(a).

**SECTION 6
ENTRY ONTO AND ACCESS TO
REAL PROPERTY**

Entry with respect to district energy system

6.1 The General Manager, Engineering, and other authorized employees, contractors or agents of the City, may enter onto real property at any reasonable time for the purpose of installation, maintenance, repair, or removal of a district energy system.

Entry with respect to building mechanical system

6.2 The General Manager, Engineering, and other authorized employees, contractors or agents of the City, may enter onto real property at any reasonable time to inspect the real property and appliances and equipment, including any building mechanical system, and to enforce this By-law.

Work on entry

6.3 Without limiting the generality of sections 6.1 and 6.2, the General Manager, Engineering, and other authorized employees, contractors or agents of the City, for the purposes of those sections, may conduct investigations, expose pipes, calibrate instruments, and read and test meters.

Access to designated property

6.4 The owner of a designated property that is to receive the service must sign and deliver to the City a covenant and a statutory right of way to be registered against title to the designated property, in the format specified by the City, for the installation, operation and maintenance on the designated property of all necessary facilities for supplying the service to the designated property.

Access to intervening property

6.5 If one or more privately-owned intervening properties are located between the designated property and the district energy system, then the owner of the designated property will obtain, at the owner's sole cost, a registered easement and a statutory right of way in favour of the City, in a form specified by the City, for the installation, operation and maintenance on each intervening property of all necessary facilities for supplying the service to the designated property.

**SECTION 7
OPERATION OF DISTRICT ENERGY SYSTEM
AND BUILDING MECHANICAL SYSTEM**

Operation of district energy system

7.1 The City will maintain, repair, and manage the district energy system including the energy transfer station in each designated building up to and including the points of delivery.

No obligation to provide service

7.2 Nothing in this By-law shall obligate the City to provide the service to any person when:

- (a) the cost of laying the mains to the premises of the person to provide the service would be excessive and create an additional burden upon the revenues of the district energy system, unless the person shall pay to the City the cost of laying the mains to the person's property and other associated works; or
- (b) the capacity of the district energy system is insufficient to provide the service.

No guarantee of service

7.3 The City does not guarantee service, or any particular level of service, to any designated building.

City not liable for failure of the district energy system

7.4 The City will not be liable for the failure of the district energy system in consequence of any accident or damage to the district energy system, breakdown or malfunction of the district energy system, or any temporary stoppage from breaks, alterations or repairs, whether the failure arises from the negligence of any person in the employ of the City or any other person or through natural deterioration or obsolescence of the district energy system, or otherwise.

City's ability to change operating conditions without liability

7.5 The City reserves the right at any and all times, without notice, to change operating conditions of the service, for the purposes of making repairs, extensions, alterations or improvements, or for any other reason, and neither the City, its officers, employees, contractors or agents shall incur any liability of any kind whatever by reason of the cessation in whole or in part of the district energy system or changes in operating conditions.

Tampering with district energy system

7.6 A person must not tamper, interfere with, damage, or destroy any part of the district energy system.

Operation of building mechanical system

7.7 An owner of a designated property must maintain and repair the building mechanical system to the points of delivery including:

- (a) keeping the building mechanical system free of foreign material so as to prevent fouling of the heat exchangers at the energy transfer station; and
- (b) treating water in the building mechanical system sufficiently to prevent corrosion of the heat exchangers at the energy transfer station, and in accordance with the minimum criteria set out in Schedule B,

to the extent that the City does not need to clean any heat exchanger in the energy transfer station more often than once in each calendar year.

Damage to district energy system components

7.8 An owner of a designated property must advise the City immediately of any damage to the energy transfer system or distribution system extension.

No obstruction

7.9 An owner of a designated property must not construct any structure, which in the sole opinion of the General Manager, Engineering, obstructs access to a distribution system extension, energy transfer station, or any part of the district energy system above ground or underground.

Protection of equipment

7.10 An owner of a designated property must take reasonable care of and protect all equipment installed by the City on the owner's designated property.

No unauthorized changes

7.11 No equipment such as heat exchangers, meter-sets or related equipment will be installed, connected, moved or disconnected except by the City's authorized employees, contractors or agents or by other persons acting with the City's written permission.

Application for service

7.12 An owner of a designated property must apply to the General Manager, Engineering to commence service to a designated building at least 120 days before the earlier of:

- (a) the date the owner requires service; and
- (b) the date of issuance of any occupancy permit for occupancy of the building.

Meter test

7.13 When an owner of a designated property notifies the General Manager, Engineering, in writing, that a past charge for service is excessive the General Manager, Engineering will arrange to have the meter tested at the expense of the owner.

Payment of meter testing fee

7.14 Before the City conducts the test outlined in section 7.13, the owner of the designated property requesting the test must pay the fee set out in Schedule D.

Accuracy of meter

7.15 A meter will be considered to be accurate unless the meter testing result indicates that the percentage accuracy of the meter is less than 95% or greater than 105%.

Meter found to be not accurate

7.16 If the test outlined in section 7.13 shows that the meter is not accurate, the meter testing fee will be refunded to the owner, the meter will be replaced or repaired by the City, and the excess charge for service will be refunded to the owner.

Meter found to be accurate

7.17 If the test outlined in section 7.13 shows that the meter is accurate, the meter testing fee will be retained by the City, no refunds or adjustments will be made in favour of the owner and the meter will not be replaced or repaired by the City.

Service calls

7.18 An owner of a designated property may apply to the General Manager, Engineering to temporarily interrupt service to a designated building by closing the appropriate valves or by such other means as the General Manager, Engineering may find appropriate.

Changes to energy transfer station or distribution system extension

7.19 An owner of a designated property may apply to the General Manager, Engineering to remove, relocate, or alter the energy transfer station or distribution system extension servicing a designated building.

Cost of changes to energy transfer station or distribution system extension

7.20 If the General Manager, Engineering agrees to remove, relocate, or alter the energy transfer station or distribution system extension referred to in section 7.19:

- (a) the General Manager, Engineering will give the owner an estimate of the cost;

- (b) the owner must pay the City the amount of the estimate before commencement of the work;
- (c) after completion of the work, the General Manager, Engineering will notify the owner of the actual cost;
- (d) if the actual cost is more than the estimated cost, the owner must pay the City the shortfall within 30 days after demand by the City; and
- (e) if the actual cost is less than the estimated cost, the City must pay the owner the excess except that if the owner owes the City money under this By-law at that time, the City may apply the excess against such debt.

Removal of equipment

7.21 If the supply of the service to an owner's designated building is discontinued or terminated for any reason then the City may, but is not required to, removed the energy transfer station and related equipment from the designated property.

SECTION 8 LEVIES AND CHARGES AND OTHER COSTS

Excess demand fee

8.1 Pursuant to section 4.2(c), a building permit applicant must pay the City the excess demand fee set out in Schedule C.

Imposition of levy

8.2 From and after the earlier of the date the owner of a designated building requires service, as indicated in the application referred to in section 7.12(a), and the date of issuance of any occupancy permit for occupancy of the building, the owner must pay the City the levy set out in Schedule C.

Imposition of charge

8.3 From and after the date upon which service to a designated building begins, the owner of the designated property must pay the City the charge set out in Schedule C.

Billing for levy or charge

8.4 The Collector will send a bill for the amount of each levy or charge to each owner according to the frequency set out in Schedule C, and the bill will include:

- (a) the date when payment of the amount of each levy or charge is due and payable;

- (b) the number of megawatt hours of heat energy supplied to the energy transfer station; and
- (c) the number of megawatt hours of heat energy returned from the energy transfer station.

Payment of levy or charge

8.5 The owner of a designated property must pay the City the amount of each levy or charge on or before the due date set out in each bill referred to in section 8.4.

Amount added for late payment

8.6 Council hereby imposes a penalty or loss of discount of an amount equal to 5% of any levy or charge that remains unpaid after the date it is due under this By-law.

Insertion in tax roll

8.7 The Collector may insert each levy or charge in the real-property tax roll of the designated property.

Adjustment for partial period

8.8 The Collector may pro rate the amount of a levy or charge for a partial billing period on a daily basis.

Non-registering meter

8.9 If a meter for a designated building fails to register accurately the consumption of heat energy, the Collector will estimate the consumption, and render a bill based on the average previous consumption adjusted to take into account seasonal variations, changes in occupancy, or other factors which, in the opinion of the Collector or the General Manager, Engineering, may affect the consumption of heat energy in the designated building.

Variation in matters affecting levy

8.10 With respect to a designated building:

- (a) the owner must give the General Manager, Engineering written notice at least 30 days in advance of any variation in use, occupancy, building alteration, or other matter that may affect the amount of the levy, and must include in the notice the date the owner anticipates such variation to take effect;
- (b) the owner may apply to the General Manager, Engineering to vary the estimated peak heat energy demand; or

- (c) the General Manager, Engineering may notify the owner that the General Manager, Engineering is varying the estimated peak heat energy demand,

and, if the General Manager, Engineering is of the opinion that, as a result of any such variation, the amount of the levy for the designated building should increase or decrease, the General Manager, Engineering may order such increase or decrease to take effect on a date specified by the General Manager, Engineering after taking into account the incremental costs to the City as a consequence of the variation.

Calculation of City's costs

8.11 Calculation of the costs or estimated costs the City incurs or expects to incur under this By-law will include, without duplication, amounts spent by the City using its own work force or engaging an independent contractor for gross wages, employee fringe benefits, materials, equipment rentals at rates paid by the City or set by the City for its own equipment, and fees and other charges payable to an independent contractor, plus an amount equal to 20% of those costs to cover the City's overhead and administrative expenses.

Back-billing

8.12 On discovery that service provided in the past by the City has not been billed yet to a designated property, the City may bill the cost associated to the owner of the designated property, providing details and, on submission of the bill to the owner, the amount billed will be due.

Historical billing information

8.13 An owner who requests historical billing information may be charged the cost of processing and providing the information. The cost will be charged based on the actual hours of work performed by the City in retrieving and preparing the information.

SECTION 9 APPLICATIONS AND FEES

Form of application

9.1 Each person who submits an application under this By-law must use the form of application prescribed by the General Manager, Engineering, Building Inspector, or Collector, as the case may be.

Fee for application

9.2 Each person who submits an application under this By-law must pay the applicable fee set out in Schedule D.

Returned cheques

9.3 If a person's cheque is returned to the City, that person must pay to the City on demand the amount set out in Schedule D.

**SECTION 10
OFFENCES AND PENALTIES
AND ENFORCEMENT**

Termination of service for failure to pay

10.1 Without limiting the City's other rights or remedies under this By-law, if an owner of designated property fails to pay to the City any levy, charge, fee, or cost for more than 30 days after the due date:

- (a) the Collector may serve notice upon the owner; and
- (b) such notice will:
 - (i) set out the amount owing,
 - (ii) demand payment of that amount within 10 days from the date of such notice,
 - (iii) notify the owner that failure to pay that amount within such 10 days will result in the City ceasing service to the owner's building, and
 - (iv) notify the owner that the City will not restore such service until the owner has paid to the City the amount owing together with any additional costs incurred by the City in connection with such cessation and restoration of service.

Notice of violation

10.2 An inspector or official of the City, or a By-law Enforcement Officer, may give notice to any person ordering or directing that person to:

- (a) discontinue or refrain from proceeding with any work or doing anything that contravenes this By-law; or
- (b) carry out any work or do anything to bring a building mechanical system into conformity with this By-law,

within the time specified in such notice.

Service of notice

10.3 An inspector or official of the City, or a By-law Enforcement Officer, may serve a notice under this By-law:

- (a) by mailing it by registered post to an owner at the address of the owner shown on the real property assessment roll prepared pursuant to the *Assessment Act*;
- (b) by handing it to the owner or other person who is the addressee of the notice; or
- (c) if the notice refers to real property, by posting it on the real property.

Offences under By-law

10.4 A person who:

- (a) violates any provision of this By-law, or does any act or thing which violates any provision of this By-law, or suffers or allows any other person to do any act or thing which violates any provision of this By-law;
- (b) neglects to do or refrains from doing anything required to be done by any provision of this By-law; or
- (c) fails to comply, or suffers or allows any other person to fail to comply, with an order, direction, or notice given under any provision of this By-law,

is guilty of an offence against this By-law, and liable to the penalties imposed under this Section 10.

Fine for offence

10.5 Every person who commits an offence against this By-law is punishable on conviction by a fine of not less than \$250.00 and not more than \$10,000.00 for each offence, except that:

- (a) a person who commits an offence under section 7.11 that results in fouling of the heat exchangers is liable to a fine of not less than \$2000.00 for each offence; and
- (b) a person who fails to comply, or suffers or allows any other person to fail to comply, with an order, direction, or notice given under any provision of this By-law is liable to a fine of not less than \$500.00 for each offence.

Fine for continuing offence

10.6 Every person who commits an offence of a continuing nature against this By-law is liable to a fine for each day such offence continues.

Termination of service for failure to comply

10.7 Without limiting the City’s other rights or remedies under this By-law, the City may enforce compliance with the requirements of this By-law against the owner by discontinuing the service to the designated building.

**SECTION 11
LIMITATIONS ON LIABILITY**

Responsibility before and after delivery point

- 11.1 An owner of a designated property is responsible for all expense, risk and liability for:
- (a) the use or presence of energy being delivered from the district energy system to the owner's property before it passes the delivery point;
 - (b) the use or presence of energy being returned from an owner's property to the district energy system after it passes the delivery point; and
 - (c) the City-owned facilities serving the owner's property,
- 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 owner or a person for whom the owner is responsible.

Responsibility after delivery point

11.2 The owner of a designated property is responsible for all expense, risk and liability with respect to the use or presence of energy being delivered to the owner's property after it passes the delivery point.

Responsibility for energy transfer station

- 11.3 The owner of a designated property is responsible for all expense, risk and liability with respect to all energy transfer station related equipment at the owner's property unless any loss or damage is:
- (a) directly attributable to the negligence of the City, its employees, contractors or agents; or
 - (b) caused by or resulting from a defect in the equipment, and the owner must prove that negligence or defect.

For greater certainty and without limiting the generality of the foregoing, the owner is responsible for all expense, risk and liability arising from any measures required to be taken by the City to ensure that the energy transfer station related equipment on the owner's property are

adequately protected, as well as any updates or alterations to the distribution system extension on the owner's property necessitated by changes to the grading or elevation of the owner's property or obstructions placed on such distribution system extension.

Owner indemnification

11.4 The owner of a designated property will indemnify and hold harmless the City and its elected and appointed officials, employees, contractors and agents from all claims, loss, damage, costs or injury (including death) suffered by the owner or any person claiming by or through the owner or any third party caused by or resulting from the use of energy by the owner or the presence of energy in the owner's property, or from the owner or owner's employees, contractors or agents damaging the City's facilities.

**SECTION 12
ENACTMENT**

Force and effect

12. This By-law will come into force and take effect on the date of its enactment.

READ A FIRST TIME on the _____ day of _____, 2012.

READ A SECOND TIME on the _____ day of _____, 2012.

READ A THIRD TIME on the _____ day of _____, 2012.

RECONSIDERED AND FINALLY ADOPTED, signed by the Mayor and Clerk, and sealed with the Corporate Seal on the _____ day of _____, 2012.

MAYOR

CLERK

SCHEDULE A

Figure 1 – SERVICE AREA A & SERVICE AREA B

SCHEDULE B

**STANDARDS FOR TREATING WATER
IN THE BUILDING MECHANICAL SYSTEM**

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SCHEDULE C
LEVIES AND CHARGES

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SCHEDULE D
APPLICATION AND MISCELLANEOUS FEES

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CITY POLICY

No.

REFERENCE:

REGULAR COUNCIL MINUTES

APPROVED BY:**DATE:****HISTORY:****CITY COUNCIL**

TITLE: DISTRICT ENERGY EARLY ADOPTERS POLICY

District Energy System By-law, 2012, No. 17667 (the “By-law”) stipulates requirements in relation to the use of the City Centre District Energy System for individual development projects.

Every development project within Service Area A with a proposed density equal to or greater than 1.0 FAR, as illustrated on the attached Appendix, is required to install a domestic hot water system, make-up air units, and an in-suite hydronic heating system in such a manner that each of these systems can be fully connected to the City Centre District Energy (DE) System.

Every development project within Service Area B with a proposed density equal to or greater than 1.0 FAR, as illustrated on the attached Appendix, is required to install a domestic hot water system and make-up air units in such a manner that each of these systems can be fully connected to the City Centre District Energy System. Any development within Service Area B with a proposed density equal to or greater than 2.5 FAR is required to install a domestic hot water system, make-up air units, and an in-suite hydronic heating system in such a manner that each of these systems can be fully connected to the City Centre DE system.

ELIGIBILITY

Financial assistance is available for “early adopter” residential projects in Service Area A and Service Area B that have an FAR equal to or greater than 2.5 and install a domestic hot water system, make-up air units, and an in-suite hydronic heating system in such a manner that each of these systems can be fully connected to the City Centre District Energy System. An “early adopter” is a residential project that has an FAR equal to or greater than 2.5 and installs a hydronic heating system, hot water system and make-up air units in such a manner that is immediately connectable to the DE system and where the floor area of the project combined with all other projects that have been designated as “early adopter” projects is less than or equal to a total floor area of 1,500,000 ft² and subject to a building permit being issued for each such project within 3 years of the date of adoption of the By-law.

FINANCIAL ASSISTANCE AVAILABLE

Financial assistance will be provided by the DE Utility to the project proponent of up to 50% of the cost premium related to installing the hydronic systems in the project in comparison to the cost of installing a conventional electric baseboard heating system and conventional hot water and make-up air systems for the dwelling units in the same project but in any case such assistance will not exceed \$1.50 per square foot of dwelling unit area.

The provision of financial assistance will remain at the complete and absolute discretion of City Council.

PARTNERING AGREEMENT

The proponent of any project for which financial assistance is requested under this policy will be required to enter into a partnering agreement with the City in relation to such financial assistance. The partnering agreement will require City Council approval.

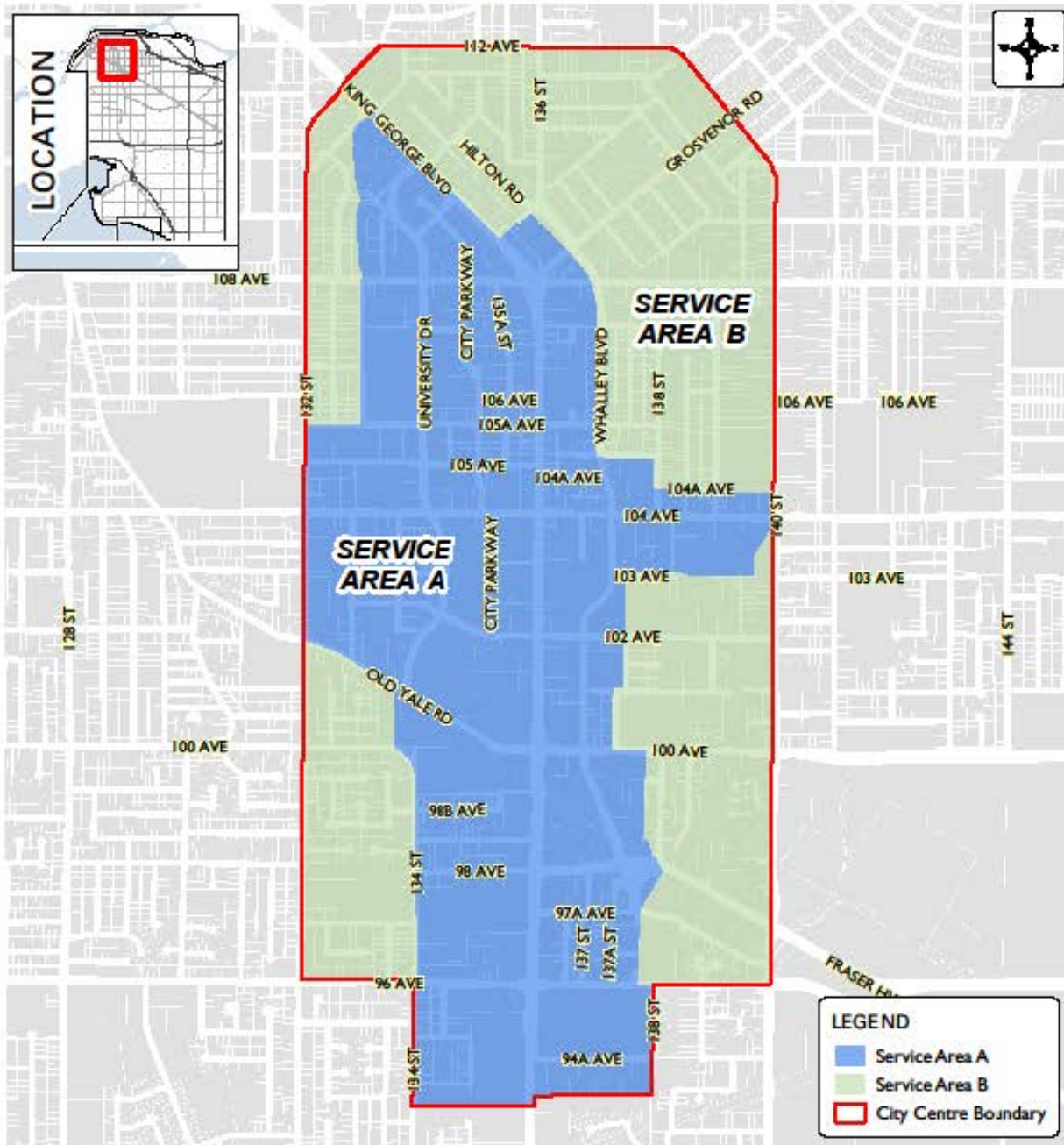
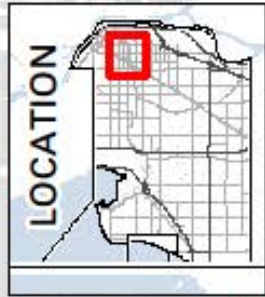
This policy is subject to any specific provisions of the Local Government Act, or other relevant legislation or collective agreement.

TO VIEW APPENDIX III

**Ro89 - “Implementation of Hydronic
Heating and Hot Water Systems in
Development Projects in the City Centre”
(May 7, 2012)**

**Please see electronic copy of Corporate
Report under Regular Council 2012**

APPENDIX IV



Produced by GIS Section: May 31, 2012, CS/AWB



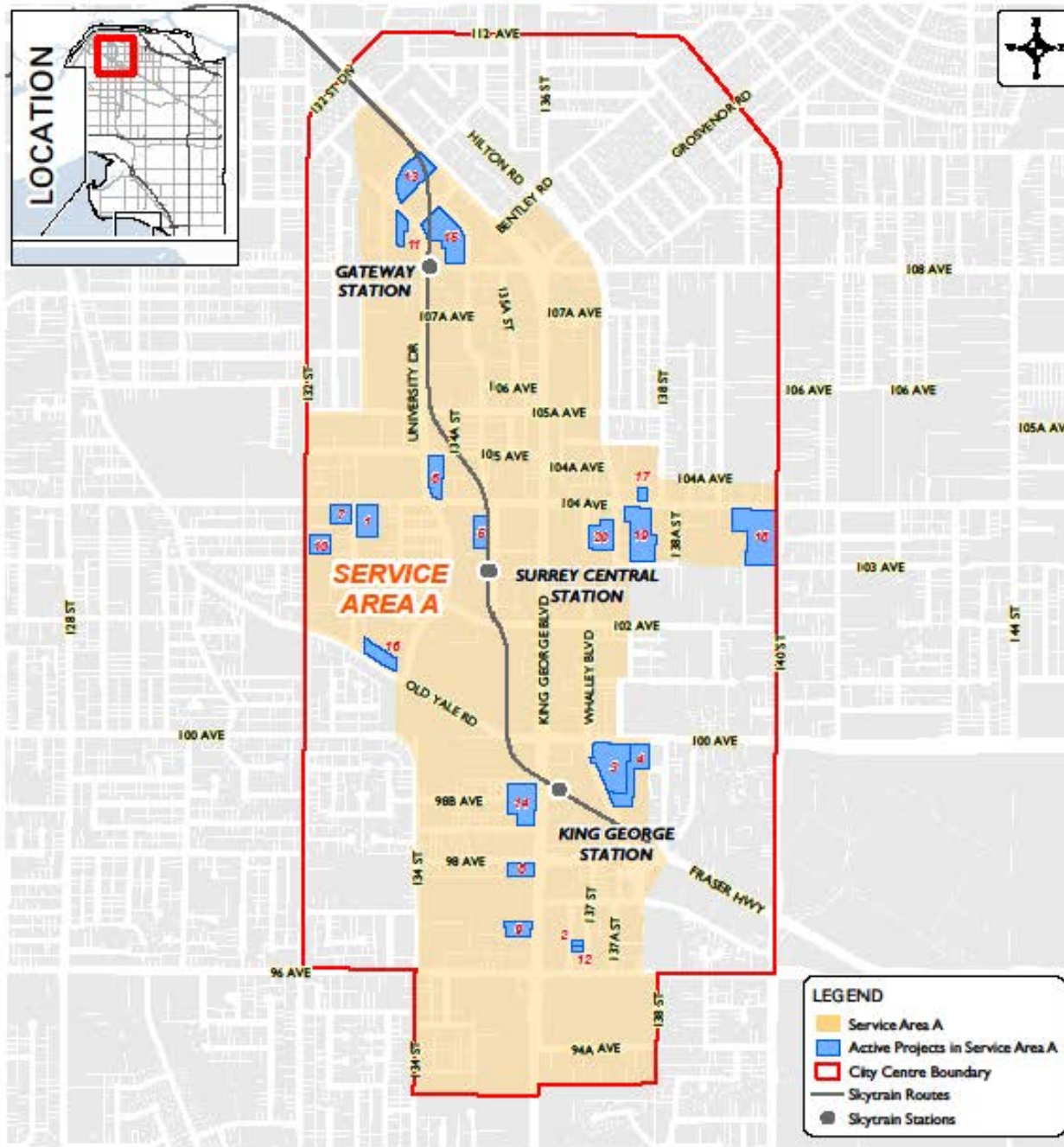
**DISTRICT ENERGY SERVICE AREA
(SERVICE AREA A & SERVICE AREA B)**

**ENGINEERING
DEPARTMENT**

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey.
This information is provided for information and convenience purposes only.
Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.

G:\MAPPING\GIS\MAPS
CORPORATE REPORTS\Eng-Utilities
AW-DistrictEnergyServiceArea.mxd

APPENDIX V



Produced by GIS Section: May 31, 2012, CS/AW8



ACTIVE PROJECTS IN SERVICE AREA A

ENGINEERING DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey.
 This information is provided for information and convenience purposes only.
 Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office.

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 AW-Active Project in Service Area A.mxd

APPENDIX VI

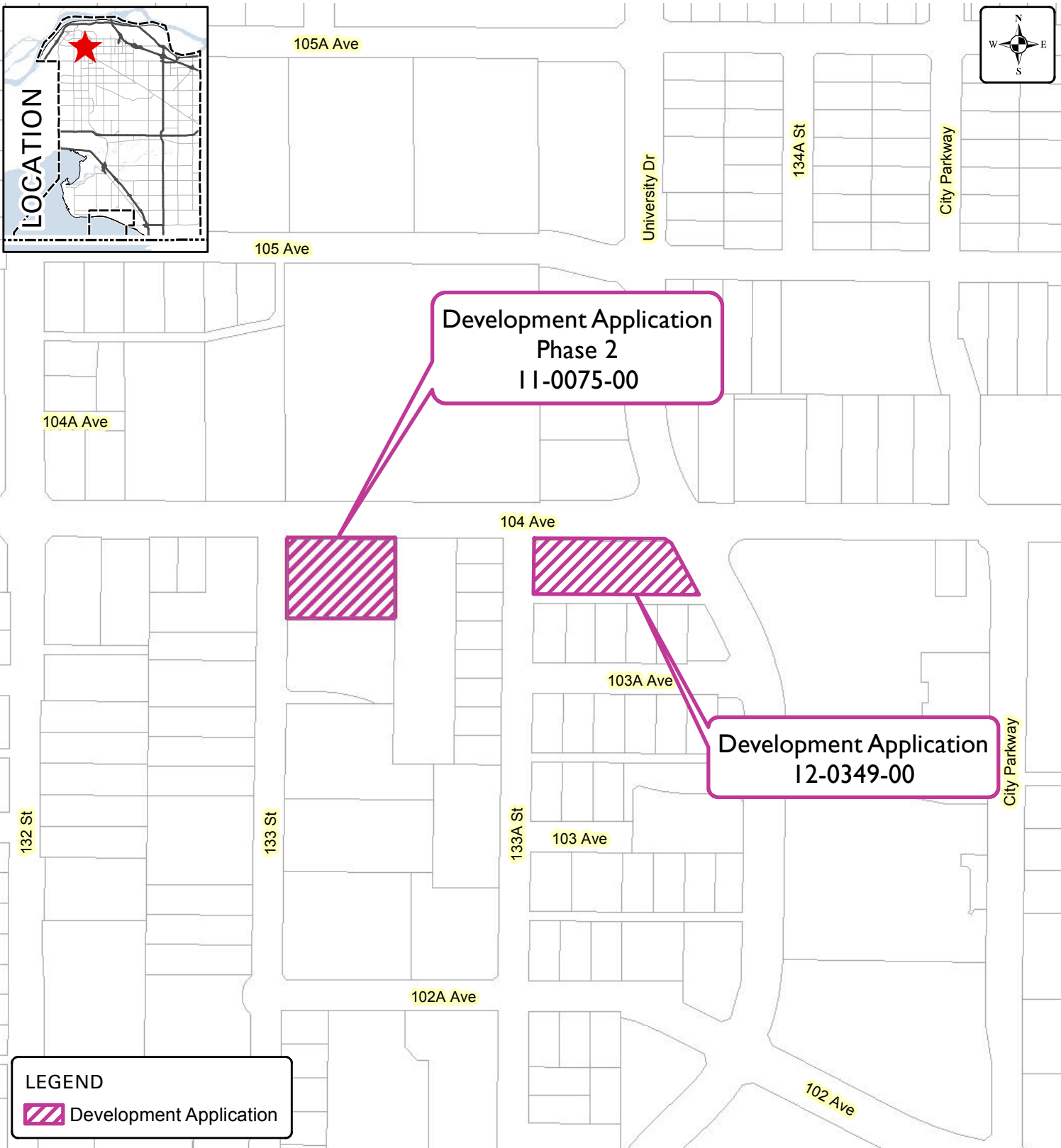
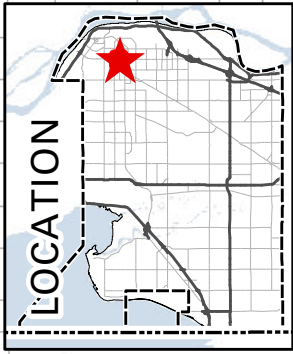
Development Applications within Service Area A Summary

ID No.	Project #	Address	Developer	Description	Development Permit Application Status
1	11-0075-00	13286 – 104 Avenue	Rize - LHC Building Inc.	Rezoning from RF to CD (based on RMC-150); Development Permit in order to permit the development of two high-rise apartment towers containing approximately 450 apartment units and 21 ground-oriented units, for a total of 471 units.	Issued on May 7, 2012
2	10-0324-00	9647 – 137 Street	Parmit Nagra	Rezoning from RF to C-5; Development Permit and Development Variance Permit in order to permit the development of a two-storey medical office with basement.	Issued on March 12, 2012
3	10-0258-00	13718 – 100 Avenue	Concord Pacific	One 39-storey apartment tower containing 430 units and one 42-storey apartment tower containing 449 units and 7 ground-oriented townhouses.	Issued on July 25, 2011
4	08-0312-00	13778 – 100 Avenue	King George Developments	One 46-storey apartment building and one 20-storey apartment building containing a total of 551 units.	Issued on December 12, 2011
5	11-0334-00	13450 – 104 Avenue	Century Group	Proposal to rezone to CD in order to construct a new mixed-use development adjacent to the new City Hall. The project will include underground parking, a 20-storey hotel (160 suites), retail, 5 levels of office use and 36 levels of multiple residential units.	Initial Review
6	11-0333-00	13409 – 104 Avenue	Bosa Developments	To consolidate 6 lots in order to construct a mixed-use development with two residential towers, street oriented townhouses, retail, and a central street over 4 levels of underground parking. The towers are 24 and 37 storeys.	Initial Review
7	10-0025-00	13242 – 104 Avenue	Mr. Lin	To rezone from RF to CD (RM-70) and develop 112 units.	Initial Review

ID No.	Project #	Address	Developer	Description	Development Permit Application Status
8	09-0177-00	13586 – 98 Avenue	Kenstone Properties	Partial Discharge Land Use Contract No. 420; Rezoning from C-35 to CD (based upon RMC-150); Development Permit in order to permit the development of a mixed-use development, consisting of a 206-unit high-rise apartment building, 6 townhouses and ground-level retail/commercial space.	Third Reading on January 10, 2011
9	09-0145-00	9677 King George Boulevard	Tony Russo	OCP Amendment from Commercial to City Centre; Rezoning from C-8 to CD (based on RMC-50 and RMS-2); Development Permit in order to permit the development of a mixed-use high rise development within an 18-storey building, consisting of retail uses, medical offices, a care facility and multiple residential housing.	Third Reading on November 1, 2010
10	09-0011-00	10316 – 132 Street	Prosper Development Inc.	To rezone from RF to CD in order to develop a 91-unit 4-storey apartment building.	Initial Review
11	07-0393-00	10925 University Drive	0793260 B.C. Ltd.	To rezone from CD By-laws 12660 & 10464 to a new CD by-law in order to permit development of a 28-storey 186-unit apartment building.	Initial Review
12	07-0392-00	9637 - 137 Street	Jak Redenbach	Rezoning from RF to C-5; Development Permit and Development Variance Permit in order to permit the development of a medical office.	Third Reading on July 28, 2008
13	06-0147-00	13424 King George Boulevard	Seagate Properties	Rezoning from RF and CHI to CD (based on RM-135) and Development Permit in order to permit the development of two high-rise residential towers and podium townhouse units in Surrey City Centre.	Third Reading on June 16, 2008
	08-0207-00	9905 King George Boulevard	Century Group	Development Permit to allow a 31-storey tower with 18 townhouse units, 4 levels of parking.	Initial Review

ID No.	Project #	Address	Developer	Description	Development Permit Application Status
15	08-0112-00	13479 - 108 Avenue	Dundee Capital / Station Tower Developments Ltd.	Rezoning from CD (By-law Nos. 10464 & 12660) to CD (based on C-35 and RMC-150) and Development Permit in order to permit the development of two office buildings and two high-rise apartment towers.	Third Reading on November 3, 2008
16	06-0262-00	13333 Old Yale Road	Townline	To rezone to CD to accommodate renovation of existing care facility and to build a new 7-storey building totalling 9454 sq. m.	Initial Review
17	11-0172-00	13769 - 104 Avenue	Highten Development Corporation	To permit the development of a 3-storey tilt-up concrete building with commercial on the ground floor and 2 floors of offices.	Initial Review
18	10-0193-00	13932 - 104 Avenue	China Cereals and Oils Corp.	To permit the development of a one-storey with mezzanine commercial development.	First Reading on May 7, 2012
19	09-0189-00	13777 - 103 Avenue	633 Oakview Investment Ltd.	Generalized Development Permit for a phased mixed-use development with commercial uses and approximately 504 residential units.	Initial Review
20	08-0262-00	10342 - 136A Street	Janda Tower Corporation	DP for 234 residential units and 8651.2 sq.m. of commercial area	Initial Review

APPENDIX II



LEGEND
 Development Application

Produced by GIS Section: 22-Aug-2014, EM9



Development Application
11-0075-00 & 12-0349-00

ENGINEERING
DEPARTMENT

APPENDIX III

PARTNERING AGREEMENT

This Agreement dated as of October 1, 2014.

BETWEEN:

BOSA PROPERTIES (104) INC.

Inc. # BC0950069

1201-838 West Hasting Street, Vancouver, British Columbia V6C 0A6

(“**Bosa**”)

AND:

CITY OF SURREY

13450 104 Ave, Surrey, British Columbia V3T 1V8

(the “**City**”)

WHEREAS:

- A. Bosa is the registered owner of lands and premises in the City of Surrey legally described as:

lot 1 Section 27 Block 5 North Range 2 West New Westminster District Plan EPP30184 (“**Lot 1**”);
- B. Bosa is proposing to construct one multi-unit residential towers on Lot 1 (the “**Development**”) and obtained development permit No. 7912-0349-00 (the “**DP**”) from the City therefor on September 23, 2013 and Building Permit No. 13 - 47179 - 00 - 0 (the “**BP**”) from the City therefor on _____;
- C. The City enacted *District Energy System Bylaw, 2012, No. 17667* (the “**Bylaw**”) on June 25, 2012;
- D. The City adopted the District Energy Early Adopters Policy No. H-54 (the “**Policy**”) on June 11, 2012;
- E. Section 2.1 of the Bylaw requires Bosa to make use of the District Energy System (“**DES**”) in accordance with the Bylaw;
- F. The Policy defines an Early Adopter (“**EA**”) as a residential project that has a floor area ratio equal to or greater than 2.5 and installs a hydronic heating and domestic hot water systems in such a manner that is immediately connectable to the DES and where the floor area of the project combined with all other projects that have been designated as EA’s is less than or equal to a total floor area of 1,500,000 ft² and subject to a building permit being issued for each such project within 3 years of the date of adoption of the Bylaw;

- G. The Policy stipulates that EA's are eligible to receive financial assistance from the City, subject to the terms and conditions of a partnering agreement with the City; and
- H. The Development qualifies as an EA within the meaning of the Policy and Bosa is entering into such partnering agreement with the City as contemplated by the Policy.

WITNESSES that in consideration of the mutual covenants contained herein, the parties agree as follows:

1. **Definitions.** All capitalized terms not defined herein will have the meaning ascribed to such terms in the Bylaw and the Policy.
2. **Works by Bosa.** Bosa covenants and agrees to have the Development comply with section 2.1 of the Bylaw, by designing and installing hydronic heating and domestic hot water systems in the Development that are compatible with the DES and comply with the Policy.
3. **Assistance of the City.** The City acknowledges and agrees that:
 - (a) since the DP and BP have been issued within 3 years of the enactment of the Bylaw, Bosa has a competitive real-estate disadvantage as a result of designing and constructing the Development in order to comply with section 2.1 of the Bylaw;
 - (b) Bosa as an EA and having entered into this Agreement, is eligible for financial assistance in accordance with the Policy; and
 - (c) accordingly, the City will assist Bosa in its endeavours to comply with section 2.1 of the Bylaw, such assistance to be in the form of:
 - (i) up to 50% of the cost premium related to installing the hydronic systems in the Development in comparison to the cost of installing a conventional electric baseboard heating system and conventional hot water and make-up air systems for the residential dwelling units in the same project;
 - (ii) such assistance will not exceed \$1.50 per square foot of residential dwelling unit area; and
 - (iii) the total amount of assistance will not exceed \$287,514.00 (the "**Payment**").
4. **Notice of Assistance.** Bosa agrees and acknowledges that the City, after receiving Council approval to execute this partnering agreement, will give public notice in accordance with Sections 24 and 94 of the Community Charter of its sole intention to provide assistance to Bosa as contemplated in this Agreement.
5. **Conditions Precedent.** Bosa acknowledges the receipt and sufficiency from the City of the sum of \$10.00 which will be non-refundable. In return and despite anything set out in this Agreement, the obligation of the City under this Agreement will be subject to the following conditions:

- a) The City, on or before October 10, 2014, delivers written notice to Bosa that City Council authorizes the General Manager of Engineering to execute this Agreement;
- b) The City, on or before October 31, 2014, delivers written notice to Bosa that public notice has been provided in accordance with Section 4; and
- c) The City, on or before July 30, 2017, delivers written notice to Bosa that the Occupancy Permit for the development has been issued.

(Collectively the “**City Conditions**”)

The City Conditions are for the sole and exclusive benefit of the City. Despite anything set out in this Agreement, if:

- d) the City does not deliver to Bosa any notice referred to in Section 5 within the stipulated time limit; or
- e) the City delivers to Bosa any such notice but the notice confirms to Bosa that the applicable City Condition has not been satisfied and the City has not waived it

then this Agreement will be void and neither the City nor Bosa will have any further obligation to the other under this Agreement.

- 6. **Payment.** The City Agrees to make the Payment to Bosa 30 days after receipt of an invoice from Bosa after the issuance of the occupancy permit for the Development.
- 7. **No Representations.** It is understood and agreed that the City has made no representations, covenants, warranties, guarantees, promises or agreements (verbal or, otherwise) with Bosa other than those in this Agreement.
- 8. **Assignment.** This Agreement may not be assigned by Bosa without the express written consent of the City, such consent not to be unreasonably withheld.
- 9. **Notices.** Any notice or other communication required or contemplated to be given or made by any provision of this Agreement shall be given or made in writing and either delivered personally (and if so shall be deemed to be received when delivered), or mailed by prepaid registered mail in any Canada Post Office (and if so shall be deemed to be delivered on the fourth business day following such mailing, except that, in the event of interruption of mail service notice shall be deemed to be delivered only when actually received by the party to whom it is addressed or telecopied (and if so shall be deemed to be received when telecopied), so long as the notice is address as follows:

To Bosa :
Bosa Properties (104) Inc.
Inc. # BC0950069
1201-838 West Hasting Street
Vancouver, BC V6C 0A6

To the City at:
City of Surrey
13450 104 Avenue
Surrey, BC V3T 1V8

Attention: General Manager, Engineering
Fax No.: (604)-591-8693

or to such other address of which a party from time to time notifies in writing the other party.

10. **Interpretation.** Wherever the singular or the masculine is used throughout this Indenture, the same shall be construed as meaning the plural or the feminine or body corporate or politic where the context or the parties hereto so require.
11. **Enurement.** This Agreement shall ensure to the benefit of and be binding upon the parties hereto, their respective heirs, executors, administrators and assigns.
12. **Further Assurances.** The parties hereto shall do and cause to be done all things and execute and cause to be executed all documents which may be necessary to give effect to the intention of this Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date first written above.

CITY OF SURREY

Witness as to City Signature

Authorized Signatory
City of Surrey
Engineering Department

BOSA PROPERTIES (104) INC

Witness as to Early Adopter

Authorized Signatory
Colin Bosa

APPENDIX IV

PARTNERING AGREEMENT

This Agreement dated as of October 1, 2014.

BETWEEN:

RIZE-LHC BUILDING 2 INC.

1055 Dunsmuir Street, Suite 3204, Vancouver, British Columbia V7X 1L4

Inc. # BC0950069

13388 104 Avenue, Surrey, British Columbia V3T 1V6

(“Rize”)

AND:

CITY OF SURREY

13450 104 Ave, Surrey, British Columbia V3T 1V8

(the “City”)

WHEREAS:

- A. Rize is the registered owner of lands and premises in the City of Surrey legally described as:
 - Insert Legal description -(“Lot 1”);
- B. Rize is proposing to construct one multi-unit residential towers on Lot 1 (the “Development”) and obtained development permit No. 7911 – 0075 - 00 (the “DP”) from the City therefor on September 23, 2013 and Building Permit No. BP 14 - 26039 - 00 - 0 (the “BP”) from the City therefor on _____;
- C. The City enacted *District Energy System Bylaw, 2012, No. 17667* (the “Bylaw”) on June 25, 2012;
- D. The City adopted the District Energy Early Adopters Policy No. H-54 (the “Policy”) on June 11, 2012;
- E. Section 2.1 of the Bylaw requires Rize to make use of the District Energy System (“DES”) in accordance with the Bylaw;
- F. The Policy defines an Early Adopter (“EA”) as a residential project that has a floor area ratio equal to or greater than 2.5 and installs a hydronic heating and domestic hot water systems in such a manner that is immediately connectable to the DES and where the floor area of the project combined with all other projects that have been designated as EA’s is less than or equal to a total floor area of 1,500,000 ft² and subject to a building permit being issued for each such project within 3 years of the date of adoption of the Bylaw;

- G. The Policy stipulates that EA's are eligible to receive financial assistance from the City, subject to the terms and conditions of a partnering agreement with the City; and
- H. The Development qualifies as an EA within the meaning of the Policy and Rize is entering into such partnering agreement with the City as contemplated by the Policy.

WITNESSES that in consideration of the mutual covenants contained herein, the parties agree as follows:

1. **Definitions.** All capitalized terms not defined herein will have the meaning ascribed to such terms in the Bylaw and the Policy.
2. **Works by Rize.** Rize covenants and agrees to have the Development comply with section 2.1 of the Bylaw, by designing and installing hydronic heating and domestic hot water systems in the Development that are compatible with the DES and comply with the Policy.
3. **Assistance of the City.** The City acknowledges and agrees that:
 - (a) since the DP and BP have been issued within 3 years of the enactment of the Bylaw, Rize has a competitive real-estate disadvantage as a result of designing and constructing the Development in order to comply with section 2.1 of the Bylaw;
 - (b) Rize as an EA and having entered into this Agreement, is eligible for financial assistance in accordance with the Policy; and
 - (c) accordingly, the City will assist Rize in its endeavours to comply with section 2.1 of the Bylaw, such assistance to be in the form of:
 - (i) up to 50% of the cost premium related to installing the hydronic systems in the Development in comparison to the cost of installing a conventional electric baseboard heating system and conventional hot water and make-up air systems for the residential dwelling units in the same project;
 - (ii) such assistance will not exceed \$1.50 per square foot of residential dwelling unit area; and
 - (iii) the total amount of assistance will not exceed \$260,488.50 (the "**Payment**").
4. **Notice of Assistance.** Rize agrees and acknowledges that the City, after receiving Council approval to execute this partnering agreement, will give public notice in accordance with Sections 24 and 94 of the Community Charter of its sole intention to provide assistance to Rize as contemplated in this Agreement.
5. **Conditions Precedent.** Rize acknowledges the receipt and sufficiency from the City of the sum of \$10.00 which will be non-refundable. In return and despite anything set out in this Agreement, the obligation of the City under this Agreement will be subject to the following conditions:

- a) The City, on or before October 10, 2014, delivers written notice to Rize that City Council authorizes the General Manager of Engineering to execute this Agreement;
- b) The City, on or before _____, delivers written notice to Rize that public notice has been provided in accordance with Section 4; and
- c) The City, on or before _____, delivers written notice to Rize that the Occupancy Permit for the development has been issued.

(Collectively the “**City Conditions**”)

The City Conditions are for the sole and exclusive benefit of the City. Despite anything set out in this Agreement, if:

- d) the City does not deliver to Rize any notice referred to in Section 5 within the stipulated time limit; or
- e) the City delivers to Rize any such notice but the notice confirms to Rize that the applicable City Condition has not been satisfied and the City has not waived it

then this Agreement will be void and neither the City nor Rize will have any further obligation to the other under this Agreement.

- 6. **Payment.** The City Agrees to make the Payment to Rize 30 days after receipt of an invoice from Rize after the issuance of the occupancy permit for the Development.
- 7. **No Representations.** It is understood and agreed that the City has made no representations, covenants, warranties, guarantees, promises or agreements (verbal or, otherwise) with Rize other than those in this Agreement.
- 8. **Assignment.** This Agreement may not be assigned by Rize without the express written consent of the City, such consent not to be unreasonably withheld.
- 9. **Notices.** Any notice or other communication required or contemplated to be given or made by any provision of this Agreement shall be given or made in writing and either delivered personally (and if so shall be deemed to be received when delivered), or mailed by prepaid registered mail in any Canada Post Office (and if so shall be deemed to be delivered on the fourth business day following such mailing, except that, in the event of interruption of mail service notice shall be deemed to be delivered only when actually received by the party to whom it is addressed or telecopied (and if so shall be deemed to be received when telecopied), so long as the notice is address as follows: To Rize:

Rize-LHC Building 2 Inc.
1055 Dunsmuir Street
Suite 3204
Vancouver, BC V7X 1L4

Attention: Andy Tam
Fax No.: (604) 681-7505

To the City at:
City of Surrey
13450 104 Avenue
Surrey, BC V3T 1V8

Attention: General Manager, Engineering
Fax No.: (604)-591-8693

or to such other address of which a party from time to time notifies in writing the other party.

- 10. **Interpretation.** Wherever the singular or the masculine is used throughout this Indenture, the same shall be construed as meaning the plural or the feminine or body corporate or politic where the context or the parties hereto so require.
- 11. **Enurement.** This Agreement shall ensure to the benefit of and be binding upon the parties hereto, their respective heirs, executors, administrators and assigns.
- 12. **Further Assurances.** The parties hereto shall do and cause to be done all things and execute and cause to be executed all documents which may be necessary to give effect to the intention of this Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date first written above.

CITY OF SURREY

Witness as to City Signature

Authorized Signatory
City of Surrey
Engineering Department

RIZE

Witness as to Early Adopter

Authorized Signatory
Early Adopters Name: