Supports Item No. 4
CS&B Committee Agenda
November 15, 2007

CITY OF **VANCOUVER**

POLICY REPORT
DEVELOPMENT AND BUILDING

Report Date:	October 29, 2007
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TO: Standing Committee on City Services and Budgets

FROM: General Manager of Engineering Services

SUBJECT: Enactment of a New Energy Utility System By-law

RECOMMENDATION

A. THAT Council approve the form of the Energy Utility System By-law, generally as set out in Appendix A, that sets the regulatory conditions for the establishment and operation of the Neighbourhood Energy Utility ("NEU") in Southeast False Creek ("SEFC") and instruct the Director of Legal Services to bring the bylaw forward for enactment.

B. THAT Council direct the General Manager of Engineering Services and Director of Finance to report back, prior to the NEU beginning to operate, with a schedule of levies and charges to be appended to the Energy Utility System By-law.

COUNCIL POLICY

On July 19, 2005, Council enacted the Southeast False Creek Official Development Plan. It set out that a neighbourhood energy system be developed through sustainable technologies and measures with the capacity to grow incrementally over time, both throughout SEFC and to neighbourhoods adjacent to SEFC.

On March 2, 2006, Council approved in principle the creation of the Neighbourhood Energy Utility to provide space heating and domestic hot water services to SEFC buildings. Council instructed the Director of Legal Services to seek from the Provincial Government appropriate amendments to the Vancouver Charter in support of the NEU objectives.

On December 14, 2006, Council received a report titled "Evaluation of Ownership and Operating Options for the City of Vancouver." In this report, Council approved the continued ownership and operation of the NEU by the City, along with governance principles to ensure that the NEU minimize greenhouse gas emissions while providing a cost competitive and financially viable service. In addition, Council instructed the General Manager of Engineering Services, upon enactment to amendments to the Vancouver Charter, to report back with a by-law for the regulation and operation of the NEU.

On July 24th, 2007, Council awarded the contract for the design and construction management of the SEFC Community Energy Centre to Sandwell Engineering Inc., to supply the NEU system using sewage heat recovery as the primary energy source.

SUMMARY

This report is a follow-up to the December 14, 2006 report mentioned in the preceding section.

Attached in Appendix A of this report is a by-law for the utility, without a schedule of rates and levies (which is to be developed and brought forward to Council at a later date). Given the stage of the utility development, when future heat demand for the NEU must be secured prior to development of the SEFC Community Energy Centre, it is recommended that the by-law be enacted at this time. This by-law will ensure that all SEFC buildings utilize the NEU for space heating and domestic hot water supply. In addition, this by-law contains requirements to ensure that designated buildings are designed to integrate well with the NEU service to enable efficient operations.

PURPOSE

The recommendations contained in this report are necessary to advance the regulation and operation of the NEU.

BACKGROUND

The March 2006 NEU Report described the detailed feasibility analysis for a community energy system for SEFC, pursuant to which Council approved the creation of the NEU. The NEU will provide space heating and domestic hot water services to all new SEFC buildings. Development of the NEU was considered to be an economical and technically viable contribution toward the greenhouse gas reduction objectives identified in the Southeast False Creek Official Development Plan. Creation of the NEU will also contribute toward the achievement of the City's community climate change targets.

As directed by Council on March 2006, the Director of Legal Services sought amendments to the Vancouver Charter from the Province to enable the City to regulate and operate the NEU. On December 14th, 2006, Council further instructed the General Manager of Engineering services to proceed with the development of a by-law for the NEU, conditional on the proposed amendments to the Vancouver Charter. In March of 2007, the Province enacted the requisite Vancouver Charter amendments, and staff initiated development of an Energy Utility System By-law.

Since the March 2006 NEU report, staff have advised developers that staff would recommend that utilization of the NEU be mandatory for those developments located within the SEFC Official Development Plan area. As such, all rezoning applications, development permit and building permits approved have incorporated utilization of the NEU for space heating and domestic hot water provision.

Design activities began in August 2007 for the SEFC Community Energy Centre, which will supply the NEU distribution system with energy to meet all of the anticipated space heating and domestic hot water requirements of the SEFC neighbourhood. At the time of this report, a concept design is nearing completion for staff and public review.

DISCUSSION

The Energy Utility System By-law is attached in Appendix A. The schedule of levies and charges is not included in this by-law, because insufficient detail is available at this time related to final NEU capital costs, future electricity and natural gas prices and heat demand of future NEU customer buildings. Staff will report to Council with a recommended by-law levies and charges schedule in approximately one year, when the NEU is closer to commencement of commercial operations.

The two proposed key measures included in the attached by-law include: (1) the requirement that the NEU be utilized for 100% of the space heat and domestic hot water requirements of new SEFC buildings as well as any existing SEFC buildings that meet certain upgrade trigger mechanisms pertaining to major renovations, and (2) performance requirements for building mechanical systems. These measures are described in the text below.

1. **NEU to be Utilized for 100% of Space Heat and Domestic Hot Water by New SEFC Buildings**

   The Energy Utility System By-law proposes that all new SEFC building development and major renovations be required to utilize the NEU to provide 100% of the building space heating and domestic hot water requirements. As such, it would make connection to the NEU mandatory and would prohibit the installation of any customer building heat supply equipment, with the exception of solar thermal and waste heat recovery systems. These proposed measures would secure the heat demand for the NEU and thereby are expected to minimize the net greenhouse gas emissions for SEFC and ensure competitive energy rates for future NEU customers.

   The SEFC Community Energy Centre will be designed to deliver adequate heat capacity to serve new building development and major renovations in the SEFC neighbourhood. If the facility is built with too much energy capacity, rates charged to customer buildings connected will be less competitive with conventional gas and electric systems. In addition, to make most efficient use of the sewage heat recovery energy source, it must be designed to match the heat demand for the NEU. At this stage of the SEFC Community Energy Centre design, it is critical to establish heat demand requirements by implementation of a by-law to commit all SEFC buildings referred to in this report to utilizing the NEU. Without this by-law, there would be a risk of not achieving the greenhouse gas reduction and financial viability objectives as per Council policy.

Connection to the NEU means that customer buildings must utilize hot water radiant space heat systems. This has a cost premium compared to conventional electric baseboard heat, which is the lowest capital cost option for developers. However, in the case of SEFC, the Official Development Plan sets minimum targets that must be met for energy efficiency. For a developer to build using a conventional electric baseboard heat system, significant cost premiums would be incurred in the construction of a very high performance building envelope to compensate for the inefficiencies associated with electric baseboard heaters. Building industry professionals consulted were of the opinion that hot water radiant systems would likely be commonplace in SEFC regardless of the existence of the NEU in order to meet the afore mentioned targets. As such, connecting to the NEU means that developers can forego the capital costs of boiler systems and other heat generating equipment that will be made unnecessary by the NEU. For SEFC developers, connecting to the NEU should make for more cost effective attainment of energy efficiency targets set in the Official Development Plan versus any other heating alternatives.

It should also be noted that a number of SEFC developers have already committed to utilizing the NEU service through the rezoning and development permit process, partly based on the expectation that this would be made mandatory.

It is provided in the by-law that all buildings connected to the NEU not be permitted to incorporate on-site heat generating equipment. This is because any on-site equipment would reduce the utilization and efficiency of the NEU service. However, it is recommended that an exception to this rule be applied to buildings that utilize waste heat recovery or solar thermal systems to supplement heat supplied by the NEU. This is because the net sustainability benefit for such approaches is expected to outweigh the small reduction in the utilization of NEU-supplied sewage heat recovery. At this time, two buildings served by the NEU, including the new SEFC Community Centre and the Net Zero building, will incorporate waste heat recovery and solar thermal systems to supplement the heat supplied by the NEU. In the case of these buildings, the solar systems will also return some excess heat energy to the NEU during summer months.

2. **Performance Requirements for Building Mechanical Systems**

Design criteria and minimum performance requirements for building mechanical systems are included in the by-law to ensure the functional integration between the NEU and customer building mechanical systems. The associated efficiency gains will both help to minimize the greenhouse gas emissions in SEFC and also help to ensure the affordability of NEU customer rates.

To complement this measure, the NEU is offering a customer design support process. This process includes the dissemination of design information to developers of designated buildings, direct dialogue between NEU design professionals and designated building design professionals, and a building system peer review service to better enable developers to understand the NEU integration requirements. This is a proven process that has worked well for established district energy systems in Scandinavian countries.

FINANCIAL IMPLICATIONS

By enacting this By-law, future heat demand for the NEU will be assured, which will help to minimize the financial risks and ensure maximum utility efficiency and competitive customer rates.

COMMUNICATIONS PLAN

Copies of this report have been circulated to all owners and developers of property located within the Southeast False Creek Official Development Plan area.

CONCLUSION

Enacting the Energy Utility System Bylaw will provide the basis for operation and regulation of the NEU. Key measures contained will ensure secured heat loads for the NEU, thereby ensuring financial viability of the NEU and minimizing the greenhouse gas emissions associated with space heating and domestic hot water for SEFC.

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APPENDIX A

CITY OF VANCOUVER
BRITISH COLUMBIA

ENERGY UTILITY SYSTEM BY-LAW NO. _____

ENERGY UTILITY SYSTEM BY-LAW

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BY-LAW NO. _____

A By-law to provide for the establishment and operation of an energy utility system

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

SECTION 1
INTERPRETATION

Name of By-law

1.1 The name of this By-law, for citation, is the "Energy Utility System By-law".

Definitions

1.2 In this By-law:

"applicant" means an applicant for a building permit under section 4.1;

"building" has the meaning ascribed to it by Sentence 1.4.1.2.(1) of Part 1 of Division A of the Building By-law, and includes a new building and an existing building described under subsections (a) and (b) of section 2.1;

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

"Chief Building Official" has the meaning ascribed to it by Sentence 1.4.1.2.(1) of Part 1 of Division A of the Building By-law;

"City Engineer" means the individual appointed by Council to be the General Manager of Engineering Services or a person duly authorized to carry out the powers and duties of the General Manager of Engineering Services;

"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;

"designated building" means a building to which this By-law applies by virtue of section 2.1 or 2.2;

"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 situate on, over, under, or in a parcel of real property on which a designated building is situate or in a designated building;

"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;

"energy utility system" means the energy utility 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;

"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;

"existing building" has the meaning ascribed to it by Sentence 1.4.1.2.(1) of Part 1 of Division A of the Building By-law;

"heat energy" means heat distributed or delivered by water;

"levy" means a fixed capacity fee based on the design of, and the estimated peak heat energy demand approved or varied by the City Engineer 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 a person who owns, occupies, or controls a parcel of real property, and includes a registered owner, an owner under agreement, an occupier of Crown land, a cooperative association incorporated or continued under the Cooperative Association Act

of British Columbia, and a strata corporation established or continued under the Strata Property Act of British Columbia, and, if appropriate in the context of the By-law, refers to an owner in respect of which the real property so owned, occupied, or controlled includes a designated building;

"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" has the meaning ascribed to it by Sentence 1.4.1.2.(1) of Part 1 of Division A of the Building By-law;

"service" means the delivery by the city to a designated building of heat energy by way of the energy utility system; and

"Southeast False Creek" means the area marked in bold black on Schedule A, and bounded to the north by the False Creek waterfront and Terminal Avenue, to the west by Wylie Street and Cambie Bridge, to the south by 2nd Avenue, and to the east by Main Street.

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 Certification of Professionals By-law, except that, despite Sentence 1.5.1.2.(1) of the Building By-law, in case of conflict between the Building By-law or Certification of Professionals By-law and this By-law, this By-law is to 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 energy utility system

2.1 Each owner in Southeast False Creek of:

(a) a new building 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 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 the greater of $95,000 or 100% of the building's latest assessed value according to the records of the British Columbia Assessment Authority;

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

Permissive use of energy utility system

2.2 An owner outside the boundaries, but in the vicinity, of Southeast False Creek may apply to the City Engineer to make use of the energy utility system, and if the City Engineer is of the opinion that:

(a) the energy utility system is capable of servicing the building that is the subject of the application; and

(b) servicing the building is necessary or desirable;

the City Engineer may approve the application, in which case the owner must make use of the energy utility system in accordance with the terms and conditions of this By-law.

SECTION 3
IMPLEMENTATION OF
ENERGY UTILITY SYSTEM

Authorization for energy utility system

3.1 Council authorizes the design, construction, installation, maintenance, repair, and management of an energy utility system for the generation, storage, transmission, and

distribution of heat energy to supply the entire heat energy demand for each designated building, including all space heating, domestic hot water, and heat for ventilation make-up air.

Construction of energy utility system

3.2 Council authorizes the design, construction, and installation, according to the requirements of this By-law and scheduling determined from time to time by the City Engineer, of the:

(a) community energy centre in Southeast False Creek;

(b) distribution system in streets in locations approved by the City Engineer;

(c) distribution system extensions in locations approved by the City Engineer under section 4.4 or 4.5; and

(d) energy transfer stations in locations approved by the Chief Building Official and City Engineer under section 4.4 or 4.5.

Ownership of energy utility system

3.3 Ownership of the property comprising the energy utility system is to remain vested in the city, and is not to pass to any owner, or other person who has an interest in a designated building, 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.

SECTION 4
BUILDING PERMIT REQUIREMENTS
FOR BUILDING MECHANICAL SYSTEM

Building permit application

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

(a) an acknowledgment signed by the owner that the building is a designated building;

(b) a certificate, signed by the registered professional who is responsible for design of the building mechanical system, estimating the peak heat energy demand;

(c) the proposed location of the energy transfer station;

(d) the proposed location of the distribution system extension;

(e) the proposed location of the entry points;

(f) the proposed schedule for installation or alteration of the building mechanical system; and

(g) such other information as the Chief Building Official or City Engineer may require.

Submission of copy of application

4.2 An applicant must submit a copy of the building permit application to the City Engineer.

Approval of estimated maximum heat energy demand

4.3 The estimated peak heat energy demand submitted under section 4.1(b) is subject to approval by the City Engineer.

Approval of locations

4.4 The location of each of the:

(a) energy transfer station, submitted under section 4.1(c);

(b) distribution system extension, submitted under section 4.1(d); and

(c) entry points, submitted under section 4.1(e);

is subject to approval by the Chief Building Official and City Engineer.

Approval of alternate locations

4.5 If:

(a) the location which the applicant proposes for the energy transfer station, distribution system extension, or entry points would be acceptable to the Chief Building Official and City Engineer 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 City Engineer, and

(ii) agrees to pay the city on demand any amount by which the actual increased costs calculated by the City Engineer exceed the estimated increased costs;

the Chief Building Official and City Engineer may approve the alternate location.

Approval of schedule

4.6 The proposed schedule for installation or alteration of the building mechanical system is subject to approval by the City Engineer.

Design of building mechanical system

4.7 The design of the building mechanical system is subject to approval by the Chief Building Official and City Engineer.

Approval of building permit

4.8 The building permit is subject to approval by the:

(a) Chief Building Official under the Building By-law; and

(b) Chief Building Official and City Engineer under this By-law.

No work before permit issuance

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

SECTION 5
DESIGN AND INSTALLATION OR ALTERATION OF BUILDING MECHANICAL SYSTEM

Integration with energy utility system

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

Prohibited components

5.2 A building mechanical system must utilize the 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 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 energy utility 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 Chief Building Official under the Building By-law or by the Chief Building Official and City Engineer under this By-law.

Design and technical requirements

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

(a) the design must not incorporate features that increase the difficulty of efficiently integrating the building mechanical system and energy utility system;

(b) the system must provide the heat energy requirements for all domestic hot water and space heating for the designated building supplied from the energy transfer station within the designated building;

(c) 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;

(d) 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;

(e) 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; and

(f) the system must not include 3-way valves that allow flow to by-pass the heating elements.

Installation of valves

5.4 The city is to install the valves on the building side of the heat exchangers at the energy transfer station.

Scheduling

5.5 An applicant must:

(a) ensure that installation of the building mechanical system proceeds in accordance with the schedule approved under section 4.6, and any changes to the schedule approved under this section 5.5; and

(b) advise the Chief Building Official and City Engineer 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 Chief Building Official and City Engineer.

City's scheduling

5.6 To the extent the City Engineer considers it necessary, convenient, or financially prudent, the city is to co-ordinate its schedule for construction of any distribution system extension or energy transfer station for a designated building with the applicant's schedule for installation or alteration of the building mechanical system.

Approval of installation or alteration of work

5.7 Completion of the installation or alteration of a building mechanical system is subject to approval by the Chief Building Official and City Engineer under this By-law.

Adjustment of increased installation costs

5.8 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 4.5:

(a) after notice from the City Engineer of the amount by which the actual increased costs calculated by the City Engineer exceed the estimate, the owner referred to in section 4.5 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

5.9 An owner is not entitled to issuance of an occupancy permit under the Building By-law for a designated building until the City Engineer has given approval under section 5.7, and the owner has paid the city any shortfall under section 5.8(a).

SECTION 6
ENTRY ONTO REAL PROPERTY

Entry with respect to energy utility system

6.1 The City Engineer, and other employees of the city, may enter onto real property, at any reasonable time, for the purpose of installation, maintenance, repair, or removal of an energy utility system.

Entry with respect to building mechanical system

6.2 The City Engineer, and other employees 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 City Engineer, and other employees of the city, for the purposes of those sections, may conduct investigations, expose pipes, calibrate instruments, and read and test meters.

SECTION 7
OPERATION OF ENERGY UTILITY SYSTEM AND BUILDING MECHANICAL SYSTEM

Operation of energy utility system

7.1 The city is to maintain, repair, and manage the energy utility system for Southeast False Creek including the energy transfer station in each designated building up to and including the points of delivery.

No guarantee of service

7.2 The city does not guarantee service, or any particular level or quality of service, to any designated building.

Alteration, interruption, or cessation of service

7.3 The city reserves the right, at any time and without notice, to increase, decrease, interrupt, or cease service to a designated building.

Tampering with energy utility system

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

Operation of building mechanical system

7.5 An owner must maintain and repair the building mechanical system to the points of delivery including keeping the building mechanical system sufficiently clean to prevent fouling of the heat exchangers at the energy transfer station and so that the city does not need to clean any heat exchanger in the energy transfer station more often than once in each calendar year.

Connection to energy transfer station

7.6 An owner must apply to the City Engineer to connect the building mechanical system to the energy transfer station.

Application for service

7.7 An owner must apply to the City Engineer to commence service to a designated building.

Application for meter test

7.8 An owner may apply to the City Engineer to test a meter at the energy transfer station.

Conduct of meter test

7.9 The City Engineer is to notify an owner referred to in section 7.8 of the date and time the meter test is to occur, and the owner is entitled to be present for the test.

Results of meter test

7.10 If the City Engineer finds that a meter, upon testing, is inaccurate in its measurement of heat energy by more than 2%:

(a) the owner is entitled to return of the meter testing fee paid under section 9.2; and

(b) the Collector is to estimate the resulting overpayment or shortfall, and settle with the owner accordingly, except that no such settlement is to extend beyond 12 months before the month in which the test takes place.

Service calls

7.11 An owner may apply to the City Engineer to temporarily interrupt service to a designated building by closing the appropriate valves or by such other means as the City Engineer may find appropriate.

Changes to energy transfer station or distribution system extension

7.12 An owner may apply to the City Engineer 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

7.13 If the City Engineer agrees to remove, relocate, or alter the energy transfer station or distribution system extension referred to in section 7.12:

(a) the City Engineer is to 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 City Engineer is to 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.

SECTION 8
LEVIES AND CHARGES AND OTHER COSTS

Imposition of levy

8.1 From and after the date upon which service to a designated building begins, the owner must pay the city the levy set out in Part 1 of Schedule B.

Imposition of charge

8.2 From and after the date upon which service to a designated building begins, the owner must pay the city the charge set out in Part 2 of Schedule B.

Billing for levy or charge

8.3 The Collector is to send a bill for the amount of each levy or charge to each owner according to the frequency set out in Part 3 of Schedule B, and the bill is to include the date when payment of the amount of each levy or charge is due and payable.

Payment of levy or charge

8.4 The owner of a designated building 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 8.3.

Insertion in tax roll

8.5 The Collector may insert each levy or charge in the real-property tax roll with respect to the parcel of real property on which the designated building to which the levy or charge applies is situate.

Adjustment for partial period

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

Non-registering meter

8.7 If a meter for a designated building fails to register accurately the consumption of heat energy, the Collector is to 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, may affect the consumption of heat energy in the designated building.

Variation in matters affecting levy

8.8 With respect to a designated building:

(a) the owner must give the City Engineer 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 City Engineer to vary the estimated peak heat energy demand; or

(c) the City Engineer may notify the owner that the City Engineer is varying the estimated peak heat energy demand;

and, if the City Engineer 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 City Engineer may

order such increase or decrease to take effect on a date specified by the City Engineer after taking into account the incremental costs to the city as a consequence of the variation.

Calculation of city's costs

8.9 Calculation of the costs or estimated costs the city incurs or expects to incur under this By-law is to 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.

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 City Engineer, Chief Building Official, 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 C.

SECTION 10
OFFENCES AND PENALTIES AND ENFORCEMENT

Notice of violation

10.1 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

10.2 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

10.3 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

10.4 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 $2,000.00 for each offence, except that:

(a) a person who commits an offence under section 7.5 that results in fouling of the heat exchangers is liable to a fine of not less than $500.00 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

10.5 Every person who commits an offence of a continuing nature against this By-law is liable to a fine not exceeding $50.00 for each day such offence continues.

SECTION 11
ENACTMENT

Force and effect

11. This By-law is to come into force and take effect on the date of its enactment.

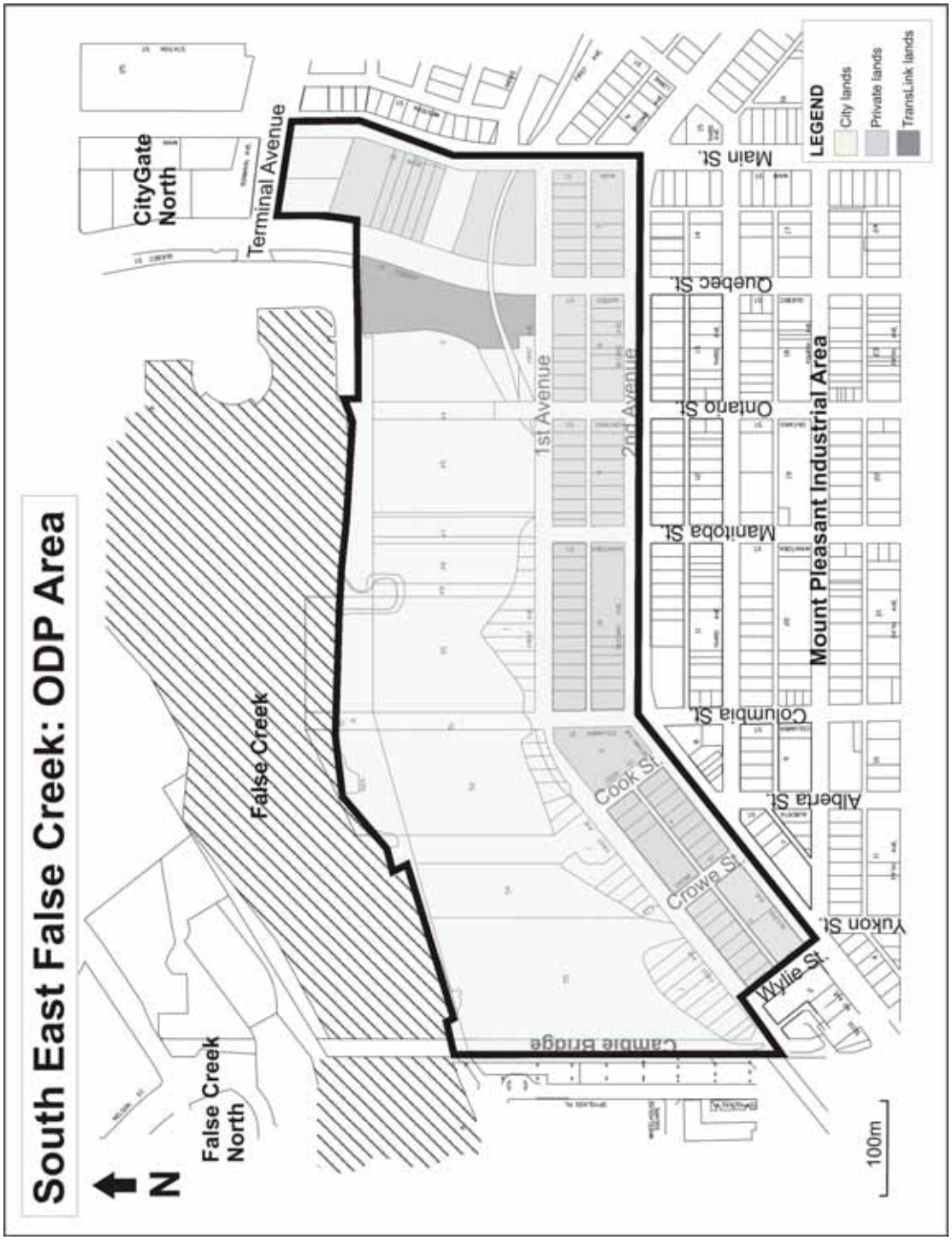
ENACTED by Council this day of , 2007

_____
Mayor

_____
City Clerk

SCHEDULE A

BOUNDARIES OF SOUTHEAST FALSE CREEK



SCHEDULE B

LEVIES AND CHARGES

PART 1 – Levy

$0.00

PART 2 – Charge

$0.00

PART 3 – Billing frequency particulars

SCHEDULE C

APPLICATION FEES

Section	Application	Fee
2.2	Application for voluntary use of energy utility system	$0.00
4.1	Building permit application that includes building mechanical system in addition to building permit application fee under Building By-law	$0.00
7.6	Application to connect building mechanical system and energy transfer station	$0.00
7.7	Application for service to designated building	$0.00
7.8	Application for meter test	$0.00
7.11	Service call during city's normal business hours	$0.00
7.11	Service call outside city's normal business hours	$0.00
7.12	Application to remove, relocate, or alter energy transfer station or distribution system extension servicing	$0.00
8.8	Application to vary peak heat energy demand	$0.00

EXPLANATION

Energy Utility System By-law

On October 15, 2007, Council approved the creation of an energy utility system for Southeast False Creek. This By-law implements the scheme.

Director of Legal Services
November 15, 2007

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