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JUN 14 2017

Patrick Wruck, Commission Secretary
British Columbia Utilities Commission
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JUN 14 2017

Routing _____

Dear Mr. Wruck:

Re: Application for an Order Pursuant to Section 88(3) of the *Utilities Commission Act*

Enclosed is an application requesting that British Columbia Utilities Commission grant an order pursuant to section 88(3) of the *Utilities Commission Act* exempting the Greater Vancouver Sewerage and Drainage District from Part 3 of the *Act* in respect of certain activities as set out in the application.

We would be pleased to answer any questions the Commission might have regarding this application. For further information, please contact Jeff Carmichael, Division Manager, Utilities Research & Innovation, at Metro Vancouver by email at Jeff.Carmichael@metrovancover.org or by phone at 604-456-8833.

Yours truly,



Carol Mason
Commissioner/ Chief Administrative Officer

CM/FN/lz

Encl: Application for an Order Pursuant to Section 88(3) of the *Utilities Commission Act* (Doc # 21732373)

21830041

**Re: APPLICATION FOR AN ORDER PURSUANT
TO SECTION 88(3) OF THE *UTILITIES COMMISSION ACT***

1. INTRODUCTION

This is an application requesting that the British Columbia Utilities Commission (“Commission”) grant an order pursuant to section 88(3) of the *Utilities Commission Act* (“UCA”) exempting the Greater Vancouver Sewerage and Drainage District (“GVS&DD”) from Part 3 of the *UCA* in respect of certain activities as set out below.

The GVS&DD is requesting an exemption because it plans to undertake activities that we understand will result in GVS&DD falling within the *UCA*’s definition of “public utility”, and we believe that an exemption from regulation as a public utility is appropriate as explained below.

For the convenience of the Commission, a draft form of order is provided in Appendix A to this application indicating the form of Order requested.

2. THE APPLICANT

The GVS&DD is a body corporate and politic existing pursuant to the *Greater Vancouver Sewerage and Drainage District Act* (“*GVS&DD Act*”).¹ The GVS&DD, the Metro Vancouver Regional District, the Greater Vancouver Water District and the Metro Vancouver Housing Corporation together form what is commonly known as “Metro Vancouver”.

Among other things, the GVS&DD operates wastewater treatment plants at Lions Gate, Iona Island, Annacis Island, Lulu Island and Northwest Langley.

The GVS&DD is deemed to be a regional district for the purposes of planning, regulating, storing and managing solid waste and recyclable material under the *Environmental Management Act*,²

¹ The *GVS&DD Act* is also known as *An Act to Incorporate the Greater Vancouver Sewerage and Drainage District*, S.B.C. 1956, c. 59. Section 3 of the Act created and constituted a body corporate and politic under the name of the “Greater Vancouver Sewerage and Drainage District”.

² Pursuant to section 7A(7) of the *GVS&DD Act*.

however, it is not deemed to be a municipality or regional district with respect to the planned activities that are the subject of this application.

Like a regional district, the powers and functions of the GVS&DD are exercised and discharged by a board (“GVS&DD Board”) consisting of elected representatives. GVS&DD Board members are from each municipality and one electoral area on the Regional Board of the Metro Vancouver Regional District.

The GVS&DD has a project at the Lulu Island wastewater treatment plant that will capture biogas and upgrade it to pipeline quality biomethane for sale to FortisBC Energy Inc. (“FEI”). The project is expected to be operational in 2017. The GVS&DD has a contract with FEI dated October 16, 2012 regarding the sale to FEI of biomethane produced at Lulu Island.³ In respect of its production and sale of biomethane to FEI, GVS&DD is exempt from regulation under the *UCA* pursuant to Commission Order No. G-126-13, which resulted from the Commission’s *Inquiry into an Exemption for Biogas and Biomethane Suppliers*.⁴ GVS&DD’s production and sale of biomethane at Lulu Island is not at issue in this application; this information is provided for context.

The GVS&DD also has an exemption pursuant to Commission Order No. G-60-03 with respect to the sale of electricity produced at the GVS&DD waste-to-energy facility in Burnaby.⁵ GVS&DD’s production and sale of electricity at the Burnaby facility is also not at issue in this application; this information is also provided for context.

During the Commission’s 2013 *Inquiry into an Exemption for Biogas and Biomethane Suppliers*, the GVS&DD noted for the record in its submission to the Commission that a process was underway to develop a new wastewater treatment plant for the North Shore to replace the

³ Pursuant to Order No. E-13-13 the Commission accepted the Biomethane Purchase Agreement between GVS&DD and FEI for filing under section 71 of the *UCA*.

⁴ Order No. G-126-13 establishes an exemption of general application for biomethane producers that sell to public utilities. This Order resulted from the Commission’s *Inquiry into an Exemption for Biogas and Biomethane Suppliers* initiated by Order No. G-54-13.

⁵ Order No. G-60-03 exempts Montenay Inc. and GVS&DD from Part 3 of the *UCA*, except Section 22, with respect to the sale of electricity produced at the GVS&DD waste-to-energy facility in Burnaby.

existing Lions Gate plant, and that it was exploring the potential to use other forms of energy, such as heat recovered from liquid and solid waste, that can be conveyed to users for example through district energy systems. GVS&DD also noted that the Commission's Inquiry did not address forms of energy derived from or related to breakdown of organic matter in the absence of oxygen other than biogas and pipeline quality biomethane, and that the regulatory status of a person that produces and sells other forms of energy derived from organic breakdown of organic matter may also merit Commission consideration in the future.

This application relates to GVS&DD'S planned project to recover the thermal properties of sewage and provide the heat energy to a single municipal district energy system for compensation.

3. GVS&DD'S PLANNED EFFLUENT HEAT RECOVERY PROJECT

Metro Vancouver has awarded a contract to design and build a new North Shore Wastewater Treatment Plant (the "North Shore WWTP") in the District of North Vancouver to replace the existing Lions Gate plant. The North Shore WWTP is expected to be fully commissioned by June 2021.

The North Shore WWTP has the potential to be a net producer of energy. GVS&DD is looking at an opportunity to install equipment at the North Shore WWTP to recover heat from treated effluent, transfer the heat to a high temperature hot water loop, and supply this heat to a third-party district energy system via hot water supply and return pipelines. The equipment consisting of heat pumps, distribution pumps, pipes, control systems and related equipment would be contained in a separate room (the "Energy Centre") in the operations and maintenance building on the North Shore WWTP site. The technologies involved are established and low risk. The maximum temperature of the supplied hot water is planned to be 82°C (that is, it would be hot water and not steam).

In 2014 GVS&DD issued a request for qualifications and information to assess the level of interest in using heat recovered at the North Shore WWTP for off-site purposes. The Lonsdale Energy Corporation ("LEC") was the sole qualified respondent.

The LEC is a wholly owned subsidiary of the City of North Vancouver.⁶ Since 2004, the LEC has been operating a district energy system to provide thermal energy in the form of hot water to buildings in the City of North Vancouver for heating and domestic hot water purposes.

LEC has district energy plants (called mini-plants) that service approximately 3.5 million square feet of building space in Lower Lonsdale, Central Lonsdale and the Harbourside/Marine Drive areas of the City of North Vancouver. Currently, LEC's mini-plants heat water using a combination of high efficiency condensing natural gas boilers, ground source heat pumps, heat recovery from building cooling, and solar thermal panels. The hot water is circulated to delivery points through a series of underground insulated pipes, and recirculated back to the mini-plants where the process of reheating and circulating begins again.

LEC's existing Mini-Plant #7 ("MP-7") is less than 1 km from the site of the new North Shore WWTP, and would be the location at which the LEC system would connect to hot water supply and return pipes connected to the North Shore WWTP Energy Centre. LEC has an established interest in clean energy, with solar, geo-exchange and cooling heat recovery energy systems already in place on its system.

GVS&DD and LEC have discussed non-binding principles to review the potential of entering into a formal contract for LEC to purchase this energy from GVS&DD, as follows:

- contract term of at least 20 years, with option to renew on a five-year basis
- GVS&DD to design, build, own, operate and maintain the Energy Centre and distribution piping from the Energy Centre to the North Shore WWTP property line
- LEC to design, build, own, operate and maintain hot water supply and return distribution piping between the North Shore WWTP property line and LEC's facilities at MP-7, and any alterations to LEC's district energy systems

⁶ Refer to <http://www.cnv.org/city-services/lonsdale-energy> for information on the Lonsdale Energy Corporation.

- contract to specify GVS&DD's performance requirements related to pumping and pipe capacity, water temperature and pressure, service interruption, planned and unplanned maintenance, monitoring
- thermal energy supplied to LEC to be metered
- GVS&DD does not intend to profit beyond cost recovery
- greenhouse gas ("GHG") reduction benefits to be allocated among the parties based on their respective contribution to project life-cycle costs
- contract to be contingent on GVS&DD obtaining acceptable exemption from provisions of the *UCA*, and on approval by GVS&DD Board and the City of North Vancouver's Council

If GVS&DD and LEC successfully reach agreement, the contract will specify the respective obligations of the parties, allocation of costs, term, and performance requirements and standards for the provision of heat energy to LEC.

Appendix B to this application provides a diagram showing the location of the site where the North Shore WWTP will be built, LEC's MP-7 and the anticipated route of the connecting hot water supply and return pipelines.

The effluent heat recovery project is an important opportunity within the North Shore WWTP project; however, GVS&DD expects that the heat recovery component will only proceed if GVS&DD and LEC are able to reach agreement on satisfactory terms for the provision of the recovered heat energy and GVS&DD obtains a satisfactory exemption from the *UCA*. Otherwise, the Energy Centre component will not be included in the final design and construction of the North Shore WWTP.

4. NEED FOR EXEMPTION UNDER SECTION 88(3)

If GVS&DD constructs and operates the proposed effluent heat recovery project and provides heat energy to LEC in accordance with the terms outlined above, it would fall within the *UCA* definition of “public utility” according to the following analysis:

- with reference to the definition of “public utility”, GVS&DD would be a “person..., who owns or operates in British Columbia, equipment or facilities for (a) the production,... sale,... or provision of... any other agent for the production of light, heat, cold or power to or for... a corporation [that is, the LEC] for compensation”,⁷ and
- no existing exclusion⁸ or exemption⁹ from public utility status would apply in respect of such activity.

The *UCA* provides a solution for the situation where a person falls within the definition of “public utility”, but regulation as a public utility is not warranted. Specifically, section 88(3) of the *UCA* provides as follows:

88(3) The commission may, on conditions it considers advisable, with the advance approval of the minister responsible for the administration of the *Hydro and Power Authority Act*, exempt a person, equipment or facilities from the application of all or any of the provisions of this Act or may limit or vary the application of this Act.

In the Commission’s final report dated December 27, 2012 regarding its *Inquiry into the Offering of Products and Services in Alternative Energy Solutions and Other New Initiatives* (the

⁷ Water heated to a maximum 82°C is not steam (nor is it electricity or natural gas), but it would appear to be “any other agent for the production of... heat”.

⁸ None of the exclusions in paragraphs (c) to (g) of the *UCA*’s definition of “public utility” would apply. As noted in section 2, above, GVS&DD is governed like a regional district but it is not deemed to be a municipality or regional district with respect to the proposed effluent heat recovery project.

⁹ None of the existing exemptions issued under section 22 or section 88(3) of the *UCA* would apply.

“AES Inquiry Report”), the Commission recommended the use of section 88(3) exemptions where regulation is not warranted, as follows:

“The definition of public utility is set out in the *UCA* but, given the discussion on the economic purposes of regulation, applying the legal definition of public utility does not always lead to an outcome that makes the most economic sense. The Panel notes that the *UCA* was developed at a time when many of the technologies at issue in this Proceeding were not contemplated. The current energy market requires a practical definition of public utility. There would be greater clarity if the Government were to amend the *UCA* to exclude regulation of activities where competitive forces are found to provide sufficient protection to the public. Given the current lack of clarity in the *UCA* the Commission Panel recommends the use of exemptions, which are contemplated under the *UCA*, where the Commission finds regulation is not warranted.”¹⁰

GVS&DD believes that economic regulation is not needed in respect of the North Shore WWTP effluent heat recovery project and provision of heat energy to LEC, and that exemption from regulation as a public utility is appropriate as discussed in the next section.

5. PUBLIC INTEREST IN GRANTING THE EXEMPTION

Although GVS&DD would fall within the *UCA* definition of “public utility”, it should be exempt from public utility regulation because regulation would provide no public benefit. GVS&DD would not be a natural monopoly with respect to the provision of energy to LEC and any contract between GVS&DD and LEC will be subject to approval by their respective elected governing bodies.

The effluent heat recovered at the North Shore WWTP would have one buyer (namely LEC) under a long-term contract. The LEC operates a municipal utility and is not subject to the *UCA*

¹⁰ AES Inquiry Report, pages 15-16.

or regulation by the Commission. The LEC's rates, expenditures, plans and any policies it might have are subject to approval by the City of North Vancouver's Council.

The LEC has an established district energy system with diverse sources of heat, namely a combination of high-efficiency condensing natural gas boilers, ground source heat pumps, heat recovery from building cooling, and solar thermal panels. LEC is not under any compulsion to contract with GVS&DD, and will make its own informed decision whether to do so in consideration of the energy needs of City residents, the economics and environmental attributes of GVS&DD's energy versus LEC's other options, and the City's clean energy and GHG reduction priorities. In short, the City of North Vancouver's Council will decide the extent to which LEC will source energy from effluent heat recovery at North Shore WWTP versus other readily available sources.

The Commission made the following determinations in its AES Inquiry Report:

"Regulation exists to protect the public from potential monopolistic behaviour on the part of a public utility while ensuring the continued quality of an essential service.

It is the regulator's function to prevent the abuse of monopoly power, so that customers have access to the utility product or service at a fair price, but at the same time allow the utility the opportunity to earn a fair return on its investment so that it can continue to operate and attract the capital required to sustain and/or grow its business."¹¹

"Regulation exists to protect consumers against the abuse of monopoly power but, in the Commission Panel's view, the superior protection for consumers is the competitive marketplace. ... This is consistent with the first principle outlined in this Section, to only regulate where required. Competitive forces are

¹¹ AES Inquiry Report, page 8.

generally accepted as provided societal benefits and consumer protection more efficiently and effectively than economic regulation. ...

Regulation is costly, time-consuming, and limited by informational asymmetries. It is only in natural monopoly situations where consumer protection is needed that these limitations are outweighed by the benefits of regulation.

Based on the above, the Commission Panel finds as a fundamental principle that regulation is only appropriate where required and is driven by the inability of competitive forces to operate with greater efficiency and effectiveness than a sole service provider.”¹²

Regulation is not needed to protect the public from potential monopolistic behaviour on the part of GVS&DD with respect to the provision of heat energy to LEC. Nor is regulation needed to ensure LEC can access quality service at a fair price, or to ensure continued financial wellbeing of GVS&DD. The elected governing bodies of the LEC and GVS&DD will protect the public interest in all of these respects, as they are required to do.

Exempting GVS&DD will allow GVS&DD and LEC to pursue a contract on terms that are mutually acceptable to their governing bodies, ensure certainty of contract and avoid unnecessary regulatory burden.

As noted in section 2, above, the Commission has previously approved two exemptions for GVS&DD with respect to the production and sale of biomethane at the Lulu Island wastewater treatment plant and electricity at the Burnaby waste-to-energy facility.

6. PROPOSED TERMS OF EXEMPTION

GVS&DD requests that the exemption encompass Part 3 of the *UCA* with respect to the production and sale to the LEC of heat energy at the North Shore WWTP. GVS&DD’s requested form of order is essentially the same as the Order No. G-60-03 exemption the Commission

¹² AES Inquiry Report, page 14.

approved for GVS&DD with respect to the sale of electricity produced at the waste-to-energy facility in Burnaby. The requested form of order is provided in Appendix A.

7. CONTACT INFORMATION

We would be pleased to answer any questions the Commission might have regarding this application. For further information, please contact:

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**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-



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IN THE MATTER OF
the *Utilities Commission Act*, R.S.B.C. 1996, Chapter 473

and

Greater Vancouver Sewerage and Drainage District
Application for an Exemption from Part 3 of the *Utilities Commission Act*

BEFORE: _____, Commissioners May ●, 2017

ORDER

WHEREAS:

- A. On [Date], the Greater Vancouver Sewerage and Drainage District (GVS&DD) filed an application for an exemption pursuant to section 88(3) of the *Utilities Commission Act* (the Act) in respect of GVS&DD'S planned project to recover the thermal properties of sewage and provide the heat energy to the Lonsdale Energy Corporation (LEC) municipal district energy system;
- B. The GVS&DD is a body corporate and politic existing pursuant to the *Greater Vancouver Sewerage and Drainage District Act*. Among other things, the GVS&DD operates wastewater treatment plants at Lions Gate, Iona Island, Annacis Island, Lulu Island and Northwest Langley. GVS&DD is building a new North Shore waste water treatment plant (the North Shore WWTP) in the District of North Vancouver to replace the existing Lions Gate plant, and is considering installing equipment at the North Shore WWTP to recover heat from treated effluent and supply this heat to the LEC district energy system via hot water supply and return pipelines;
- C. The LEC is a wholly owned subsidiary of the City of North Vancouver. LEC operates a municipal district energy system that services certain buildings in the City of North Vancouver. Currently, the LEC district energy system heats water using a combination of high efficiency condensing natural gas boilers, ground source heat pumps, heat recovery from building cooling, and solar thermal panels. Heat from the North Shore WWTP would be an additional source of energy for LEC;
- D. Any contract between GVS&DD and LEC with respect to supply of heat energy from the North Shore WWTP will be on terms that are mutually acceptable to their respective elected governing bodies;
- E. GVS&DD will fall within the Act's definition of "public utility" as a result of providing such heat energy to LEC, and section 88(3) of the Act provides that the Commission may, on conditions it considers advisable, with the advance approval of the Minister responsible for the administration of the *Hydro and Power Authority Act*, exempt a person, equipment or facilities from the application of all or any of the provisions of the Act;
- F. The Commission considered the Application and is satisfied that an order, under section 88(3) of the Act, granting the exemption as set out in this order is in the public interest; and

.../2

**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER G-**

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G. [Reference regarding Ministerial Order approving exemption].

NOW THEREFORE pursuant to section 88(3) of the *Utilities Commission Act*, the Commission approves for the Greater Vancouver Sewerage and Drainage District (GVS&DD) an exemption from Part 3 of the Act, except section 22, with respect to construction and operation of equipment at the GVS&DD's North Shore waste water treatment plant that recovers heat energy from treated effluent and with respect to the sale of this energy to the Lonsdale Energy Corporation.

DATED at the City of Vancouver, in the Province of British Columbia, this ____ day of _____, 2017.

BY ORDER

DRAFT

Project Scope

District of North Vancouver City of North Vancouver

