

NO: **R035**

COUNCIL DATE: **February 23, 2015**

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **February 19, 2015**

FROM: **General Manager, Engineering**

FILE: **5360-60**

SUBJECT: **Surrey Organic Waste Biofuel Processing Facility – Update on the Completion of the Procurement Process**

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## RECOMMENDATION

The Engineering Department recommends that Council receive this report as information.

## INTENT

The purpose of this report is to apprise Council that City staff have finalized both the Biofuel Project Agreement with Iris Solutions, to design, build, partially finance, operate and maintain the Surrey Organic Waste Biofuel Facility for a 25-year term, and the PPP Canada Financial Agreement to receive a 25% contribution of the project capital cost.

## BACKGROUND

At its Regular meeting on December 10, 2014, Council approved the recommendations of Corporate Report No. R206; 2014, which authorized staff to:

1. Approve the Biofuel Project Board's recommendation that the City award RFP No. 5587 Surrey Biofuel Processing Facility Project, to the preferred proponent, Iris Solutions, to design, build, finance, operate, and maintain the Surrey Organics Biofuel Processing Facility for a 25-year term subject to:
  - a. Staff finalizing the Project Agreement with Iris Solution by January 31, 2015; and
  - b. Staff finalizing the PPP Canada Fund Financial Agreement for the receipt of PPP Canada contribution of 25% of the project capital costs.

The report provided further detail on the RFP procurement process that led to the selection of Iris Solutions as preferred proponent, as well as outlined the 25-year public-private-partnership (P3) Project Agreement model that the City would be entering into with Iris Solutions. The report provided additional technical information on Iris' proposed facility, as well as financial impacts to the City.

A copy of Corporate Report No. R206; 2014 is attached as Appendix I.

## DISCUSSION

City staff and the project's procurement team, including procurement advisors Partnerships BC, financial advisors Price Waterhouse Cooper, and external legal counsel Dentons Law, have been working with the Iris Solutions team to reach financial close.

City staff and Iris Solutions have successfully executed the Project Agreement (PA). Under the PA, Iris Solutions will design, build, partially finance, maintain and operate the Biofuel Facility for a 25-year term. The City will retain ownership of the facility, and is required to deliver City organic waste to the facility over the term. The "tipping rate" paid by the City for organic waste disposal will form the basis for the City's repayment to Iris Solutions' capital investment and ongoing operations and maintenance costs. Iris Solutions is required to source organic waste from the commercial sector to achieve optimal processing capacity. The facility will process the organic waste and generate a renewable natural gas (RNG) as well as a high-end compost product. It is the intent of the City to use 100% of the RNG produced within its corporate operations, while the compost product will be marketed and sold by Iris Solutions.

City staff also finalized the PPP Canada Fund Financial Contribution Agreement which was successfully executed. Through this agreement, the City will receive 25% of the capital cost of the project from the PPP Canada Fund immediately following the issuance of the certificate of service commencement expected to be by late 2016/early 2017. The payment will flow through the City to Iris Solutions, and represent the City's initial repayment towards the capital investment.

Following service commencement, the City will receive a second payment of approximately \$500,000, which represents 25% of the project's total eligible "public sector implementation costs" (i.e., unique costs incurred by the City to engage a PPP procurement process, such as engaging a Fairness Advisor, P3 Procurement Advisor, etc.).

In addition to the above, City staff continue to engage in positive discussions with Fortis BC regarding terms of the "buy-sell" biomethane agreement. Under this agreement, the City would sell the biomethane generated at the facility to Fortis at a negotiated rate, and then buy back 100% of the gas as a customer of the Fortis BC Renewable Natural Gas (RNG) program. The City will use the majority of the gas produced to fuel its fleet of natural gas waste collection vehicles and its growing fleet of natural gas operations service vehicles. The remaining RNG will provide a renewable fuel to support demand from the City's new District Energy utility. Staff are currently working towards finalizing a Term Sheet with Fortis BC reflecting the terms of this agreement, and anticipate reaching a final agreement in the spring.

Staff also continues to work with the Province of BC with regards to sales of the carbon credits associated with the Biofuel Facility project. The City and the Province have already executed a Term Sheet relative to this agreement, and are proceeding onto next steps, including the completion of a Project Plan, Project Validation, and an Offset Purchase Agreement, which is anticipated in the spring.

### Project Schedule

Table 1 below provides a listing of the anticipated timing for the delivery of this project by Iris Solutions:

**Table 1 - Surrey Biofuel Facility Key Milestone Schedule**

Key Milestone Item	Responsibility Allocation (Lead)		Date
	City of Surrey	Orgaworld Canada	
Architectural Review Panel	✓	✓	February 2013
PA Financial Close	✓	✓	
P3 Canada Agreement	✓		
Design Review Process Commencement	✓	✓	
*Corporate Report Presented	✓		
PR Event	✓	✓	
Public Information Meeting	✓	✓	
*Development Permit – 1 <sup>st</sup> Reading		✓	March 2015
*Development Permit – Final Reading & Variance Approval		✓	April 2015
Building Permit Issued		✓	
Construction Commencement (Site Prep)		✓	
Commissioning	✓	✓	August 2016
Occupancy Permit Issued		✓	October 2016
Service Commencement		✓	January 2017
Issue Milestone Payment (P3 Canada)	✓		

Staff will continue to keep Council apprised on progress of this project.

**CONCLUSION**

The Engineering Department recommends that Council receive this report as information.

Fraser Smith, P.Eng., MBA  
General Manager, Engineering

RAC/BVD/clr

Appendix I - Corporate Report No. R206; 2014

# CORPORATE REPORT

NO: *R 206*

COUNCIL DATE: *December 15, 2014*

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **December 11, 2014**

FROM: **General Manager, Engineering**

FILE: **5360-01**

SUBJECT: **Award of RFP No. 5587 Surrey Biofuel Processing Facility Project**

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## RECOMMENDATION

The Engineering Department recommends that Council:

1. Approve the Biofuel Project Board's recommendation that the City award RFP No. 5587 Surrey Biofuel Processing Facility Project, to the preferred proponent, Iris Solutions, to design, build, finance, operate, and maintain the Surrey Organics Biofuel Processing Facility for a 25-year term subject to:
  - a. Staff finalizing the Project Agreement with Iris Solution by January 31<sup>st</sup>, 2015; and
  - b. Staff finalizing the PPP Canada Fund Financial Agreement for the receipt of PPP Canada contribution of 25% of the project capital costs.

## BACKGROUND

In 2009, the City established a progressive vision towards the management of Surrey's organic waste:

### Vision:

*To fuel Surrey's waste trucks with renewable natural gas generated from curbside organic waste*

To achieve this vision, the Engineering Department set out three key goals:

### Goals:

1. *Introduce residential organic waste diversion at curbside*
2. *Establish a Surrey Organic Waste Biofuel Processing Facility*
3. *Achieve Goals 1 & 2 in an environmentally and economically sustainable manner*

The above Vision and the corresponding Goals were driven by 3 pivotal policy documents:

1. The City of Surrey Sustainability Charter:

In direct relation to the City's vision and goals associated with its organic waste management, the Surrey Sustainability Charter encourages ways to reduce the use of fossil fuels and to be carbon neutral, through renewable energy produced from waste-to-energy.

2. Metro Vancouver's Integrated Solid Waste and Resource Management Plan (ISWRMP):

Metro Vancouver's ISWRMP complements Surrey's Sustainability Charter as it establishes the target of diverting 70% of waste generated within the Region away from landfill by 2015, with an aspiration target of 80% diversion by the year 2020. Accordingly, one of the ISWRMP's principle requirements is that all sectors within the region separate organic waste from the garbage waste stream. This includes the implementation of residential curbside organic waste collection services by each member municipality.

3. City of Surrey Corporate Emissions Action Plan:

The City's Corporate Emissions Actions Plan sets the target of reducing corporate emissions by 20% below baseline standards, by the year 2020. The Plan recommends transitioning to renewable fuels and energy sources, when economical, to help achieve this target.

In response to the first goal of introducing residential organic waste diversion at curbside, the City initiated its new solid waste management program, named "Rethink Waste" on October 1<sup>st</sup>, 2012. The program was a great success from an environmental, financial and customer participation perspective.

The Rethink Waste program achieved a drop in the City's residential garbage tonnage by over 40% in its first three months of operation, along with an increase to waste diversion from 50% to 70% meeting the regional waste diversion goal well ahead of its 2015 target. In addition, the City's mandatory requirement to use compressed natural gas (CNG) waste collection trucks has reduced the City's corporate carbon emissions associated with its waste collection operations by approximately 23%.

The economic benefits realized through the Rethink Waste program include a combined savings of approximately \$4.5 million annually in collection and waste disposal costs. While these savings help to offset the City's \$15 million capital investment in waste carts, the City has not had to increase its solid waste levies since 2012.

In early 2014, the Federation of Canadian Municipalities chose the City of Surrey to receive its annual Sustainable Communities Award based on Surrey's Rethink Waste program, citing Surrey as a leader in innovative municipal waste management services.

### Establishing an Organic Waste Biofuel Facility

The City's second goal, and main context of this report, is to establish an Organic Waste Biofuel Processing Facility that will process the City organic waste collected at curbside, as well as commercial organic waste, and generate a renewable natural gas (RNG) and a compost material. The RNG will be used primarily to fuel the City's waste collection fleet, which currently operates on traditional natural gas. Making the switch from a fossil to a renewable fuel will significantly reduce corporate carbon emission related to waste collection service, in the order of 3,200 tonnes of carbon dioxide per year. The City's growing fleet of medium and heavy duty natural gas service vehicles, including the recently procured 21 natural gas pickup trucks, will also operate using RNG fuel. Beyond that, it is intended that any excess supply of RNG produced at the Biofuel Facility will offset natural gas demand for heating and cooling at certain City facilities, as well as sold to FortisBC's RNG program. The "digestate material", which is a byproduct of the anaerobic digestion (AD) process that will be used at the facility, will be further processed into a nutrient rich compost and fertilizer and sold wholesale to local businesses such as plant sale nurseries, greenhouses, etc.

### PPP Canada Fund

In the spring of 2011, Council authorized staff to investigate the viability of proceeding with the organics biofuel processing facility project under a public private partnership (PPP) model, with an application to the PPP Canada Fund, seeking up to 25% capital funding assistance for this project.

Under the PPP model, the City will maintain ownership of the facility and enter into a long-term contract with a private partner that would be responsible for the design, build, finance, maintenance and operation of the facility. As a requirement of the PPP Canada application process, the City developed a Business Case to investigate the technical, commercial, and financial feasibility of developing an organic waste biofuel processing facility in Surrey. The results of the Business Case formed the basis for the City's decision to commit to the required investment and proceed to the procurement stage of the project. In addition, the Business Case investigated the implications of procuring the project as a PPP as an alternative to a traditional public sector procurement approach. The results of the Business Case reflected technical, commercial and financial feasibility to proceed with the project, and reflected value for money in proceeding under a PPP model.

Under the PPP model, the project risk will be mitigated for both parties (City and private partner) on the basis that:

1. the City is providing both the land necessary to establish the facility as well as a guaranteed volume of organic waste feedstock over the life of the project; and
2. the private partner is assuming technical and commercial risk including securing private financing, sourcing commercial waste, delivering a guaranteed annual volume of RNG, and processing and marketing finished compost.

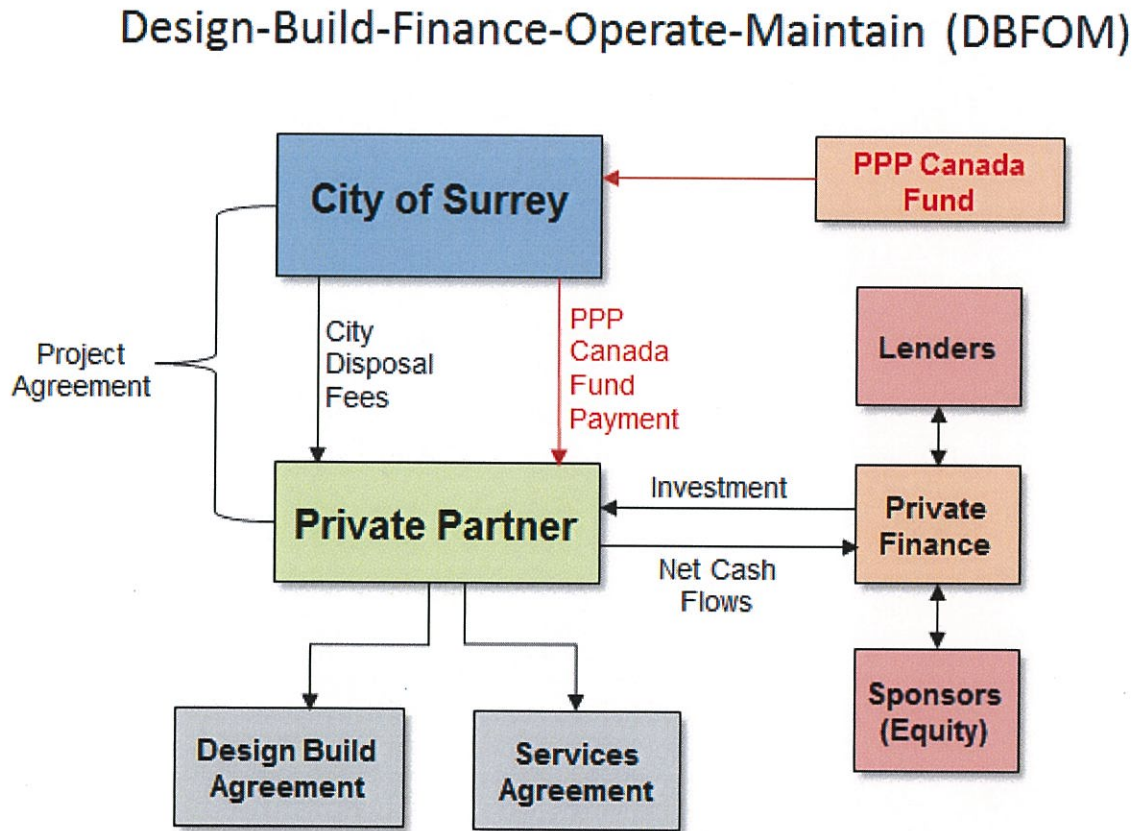
In June 2012, the PPP Canada Board recommended approval of Surrey's proposed biofuel project. Accordingly, the project was endorsed by the Federal Finance Minister in the fall of 2012, confirming PPP Canada's intention to contribute up to \$16.9 million in federal funding to the Project. This contribution represents 25% of the estimated capital costs of the project, which is the maximum percentage that P3 Canada offers for approved projects under its Program.

## DISCUSSION

The Surrey Organic Waste Biofuel Processing Facility Project has been structured as a PPP between the City and a private partner. The partnership will be governed by a Project Agreement, which sets out the respective contractual obligations and responsibilities of the parties. The scope of contractor activities in the Project Agreement includes designing, constructing, partially financing, operating and maintaining the facility for a period of construction, followed by 25 years of operations. As per its funding commitment, PPP Canada will contribute an amount equal to 25% of project capital costs once the facility is operational, to a maximum of \$16.9 million.

The PPP Canada contribution directly reduces the disposal fees paid by the City over the full 25-year term of the Project Agreement. To this end, the scope of the City's activities includes the guaranteed delivery of the City's curbside organic waste to the facility and paying the private partner a fixed disposal fee per tonne of organic waste delivered to the facility.

Figure 1: DBFO Partnership Contract Structure



Among the private partner's operating responsibilities is a requirement to produce biomethane, also referred to as renewable natural gas (RNG), from organic waste through an anaerobic digestion (AD) process where the organic waste is starved of oxygen and the natural decomposition process is expedited through the addition of microorganisms. The biogas that is naturally released from the decomposition process is then captured, "scrubbed", and the refined biomethane (RNG) is injected directly into the Fortis BC gas grid. The City retains ownership of all biomethane (RNG) produced at the Facility.



The private partner may, at its discretion, negotiate directly with third party waste haulers servicing the Industrial, Commercial and Institutional (ICI) sectors to receive ICI organic waste at the biofuel facility for processing; however the City's organic waste will be given priority over ICI waste. The private partner is also responsible for managing the sale of the compost material generated from all waste processing

### Surrey Biofuel Facility – Competitive Selection Process

On December 10<sup>th</sup>, 2012, Council approved Corporate Report R249 (attached as Appendix I), authorizing staff to proceed with a P3 procurement process for the purpose of establishing an anaerobic digestion organics biofuel processing facility in Surrey. Following Council approval, the project team, comprised of City staff and external advisors, began preparing for the competitive selection process which was carried out in two stages: a Request for Qualifications (RFQ) followed by a Request for Proposals (RFP).

An RFQ was issued by the City in May 2013, inviting interested parties to submit their qualifications to design, build, partially finance maintain and operate the facility under a 25-year contract term. Respondents were asked to identify the respective anaerobic digestion technology they would leverage for the purpose of processing City organic waste, as well as their capacity and expertise to deliver the project under the PPP model, as demonstrated through relevant reference projects. Eleven teams submitted responses to the RFQ, a record number for a PPP project in BC.

The RFQ closed in July, 2013, receiving 11 compliant submissions from both national and international consortiums. The RFQ analysis officially concluded in late February, 2014. At that time staff reported to Council that a short list of three proponent teams were invited to participate in the RFP:

#### **Iris Solutions Team**

- Orgaworld Canada Ltd.
- Shanks Group
- Stantec Consulting Ltd.
- Smith Bros. Wilson(BC) Ltd.

#### **Plenary Harvest Surrey Team**

- Plenary Group (Canada) Ltd.
- Harvest Power Canada Ltd.
- CDM Constructors Ltd.
- CDM Smith

#### **Urbaser S.A. Team**

- Urbaser S.A.
- Knappet Projects Inc.
- Urbaser Environment (Valorga)



The Surrey Biofuel Facility RFP was issued in late February 2014 and closed on October 4<sup>th</sup>, 2014. A draft Project Agreement was issued with the RFP and formed the basis for interactive dialogue with the shortlisted proponent teams. In keeping with the partnership model, the RFP and draft Project Agreement were structured to drive best value for the City and encourage innovation in both technical and commercial aspects of the project. The RFP process was highly collaborative with the City receiving and responding to approximately 200 questions from proponents. In addition, the City facilitated several commercial in-confidence meetings with each proponent team to discuss key issues and review proponent strategies in advance of their submitting formal proposals.

The RFP sets out that the proposal with the lowest contract value, within the affordability threshold, which satisfies the requirements of the RFP and the draft Project Agreement, will be awarded the project.

### Evaluation of RFP Submissions

The City received two bona fide proposals on October 3, 2014, from Iris Solutions and Urbaser S.A. The Plenary-Harvest team advised the City in advance of the RFP closing date they would not be providing a proposal.

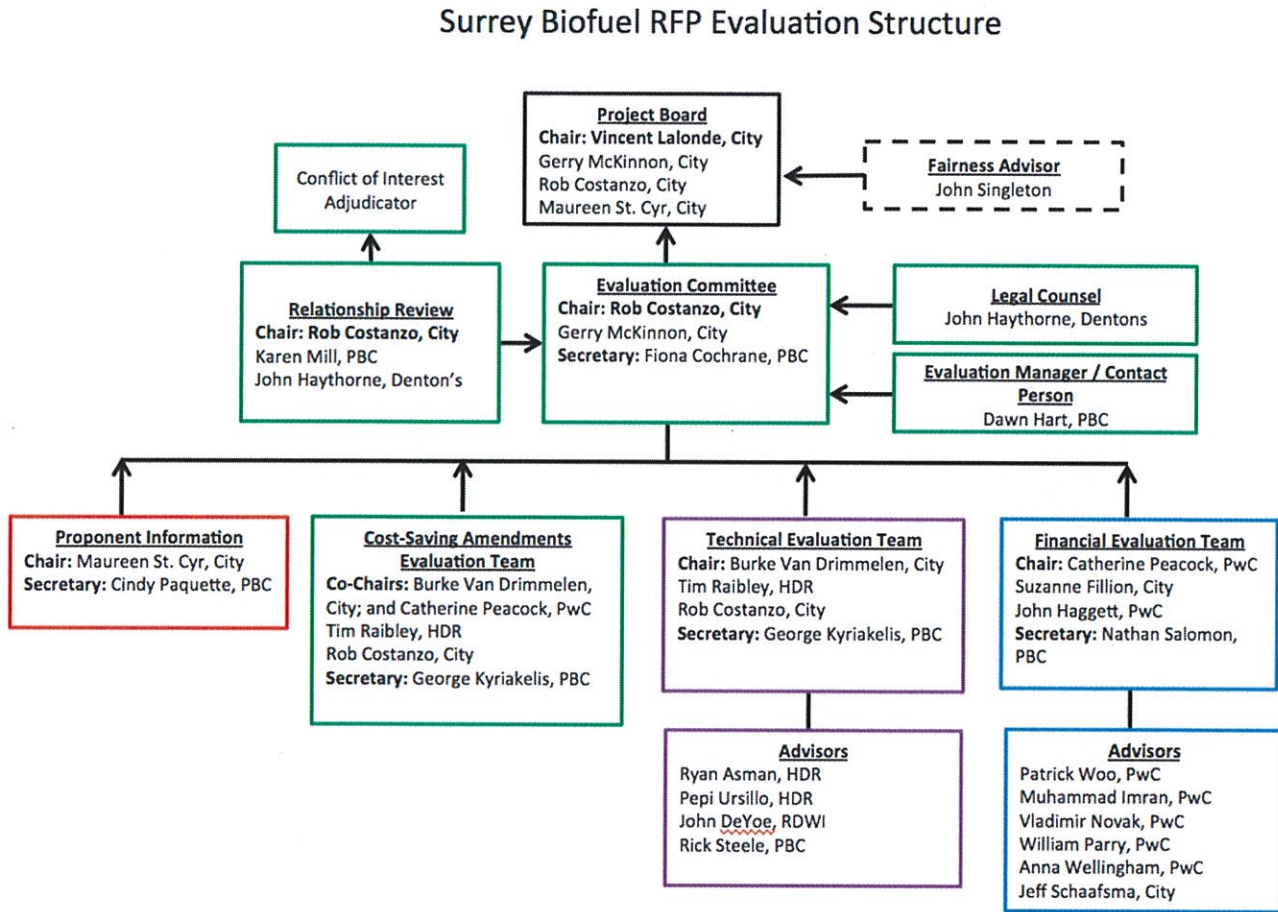
An Evaluation Committee, comprised of senior Engineering Department staff and senior Partnerships BC representatives, was appointed by the City to evaluate all proposals in accordance with the RFP. The Evaluation Committee was assisted by a technical evaluation team and a financial evaluation team comprised of subject matter experts within the City and external advisors. During the evaluation, the Evaluation Committee sought clarification and carried out investigations as required and as permitted under the RFP to satisfy itself that the RFP requirements had been satisfied.

Iris Solutions offered the lowest contract value, calculated in accordance with the RFP, and was identified by the Evaluation Committee as the recommended preferred proponent.

The Evaluation Committee presented its recommendation to the Project Board, comprised of the City Manager, Assistant City Solicitor, Deputy General Manager of Engineering, and Operation Manger in addition to members of the Evaluation Committee, on November 28, 2014. The Project Board accepted the Evaluation Committee's recommendation and is seeking approval from City Council to finalize the Project Agreement with Iris Solutions.

A Fairness Advisor was appointed by the City to monitor the entire competitive selection process. The Fairness Advisor was provided with full access to all documents and information related to the evaluation process and was kept fully informed by the Evaluation Committee of all documents and activities associated with the RFP. The Fairness Advisor has issued a written report of their findings that is attached as Appendix II and will be publicly posted at Partnerships BC's website at [www.partnershipbc.ca](http://www.partnershipbc.ca)

Figure 2: Surrey Biofuel Facility RFP Evaluation Team Org Chart



### Iris Solutions Proposal

Iris Solutions is proposing a facility capable of processing approximately 115,000 metric tonnes of organic waste primarily through anaerobic digestion and some in-vessel composting. The facility will accommodate all of the City’s curbside organic waste and organic waste that Iris will secure from the commercial sector. As the City’s organic waste collected at curbside increases in volume, it will displace the commercial waste delivered to the facility.

Based on the anticipated yearly biomethane volume from the Iris Solutions proposal, the City intends to use this within the City’s Solid Waste Services, Fleet Services, and a certain number of City Facilities. To accommodate this arrangement, the City intends to enter into an off-take arrangement with Fortis BC whereby a percentage of the biomethane will be sold to Fortis and then purchased back by the City at an agreed upon rate, net a small infrastructure fee retained by Fortis BC. If excess biomethane is produced above forecasted annual volumes, FortisBC may purchase this gas from the City to supplement their RNG program.

The alternative to dealing with FortisBC would be to upgrade, compress and store the RNG onsite which would create the following opportunities:

1. Transmitting high volumes of RNG into transportable storage tanks that would be delivered directly to the end users such as the garbage collection fleet and City fleet and/or;



2. Establish an RNG public fueling facility on the 1.3 hectare (3.3 acre) City owned site located immediately to the north of the biofuel site in Port Kells whereas the City would sell the gas to the open market.

A combination of the above approach can also be considered.

The image below reflects the proposed architectural design of the Iris facility, located on the 6.6 acre parcel of land at 9752 – 192<sup>nd</sup> Street. Iris Solutions has indicated that the facility will be fully operational by November, 2016.

**Figure 3: Proposed Surrey Biofuel Facility (looking northeast)**



The Engineering Department recommends finalizing the Project Agreement with Iris Solutions by January 31<sup>st</sup>, 2013.

The City will pay for its share of the facility through a fixed per tonne waste disposal rate for City organic waste delivered to the facility, over the 25-year contract term. This tipping rate will be subsidized through revenues generated from the sale of the biomethane produced at the facility.

In addition to biomethane revenue, Engineering staff is currently in negotiations with the Province of BC for the sale of carbon credits derived from the considerable environmental benefits attached to this Project. Revenue generated through the sale of carbon credits will further assist the City in meeting its goal of delivering the project in the most economically and environmentally sustainable manner possible.

#### Financial Impact to City

Through the sale of biomethane and other possible economic drivers associated with this project, the implementation of the Surrey Biofuel Facility will have no impact on the current annual Solid Waste rate being paid by Surrey single-family households. This adheres to the City's goal of delivering a totally integrated (closed-loop) organic waste management solution in an economically viable manner.

Presently, the City receives no direct benefits from disposing its organics to a contracted private facility (as per our present practice) with respect to the use of renewable energy or receiving back compost for City use. In this case, the current contractor retains 100% of the profits from the energy they produce with only a portion of their processed compost making its way back into the City of Surrey community via local retailers (mainly local nurseries).

Market forecasting suggests that the regional cost of organic waste disposal likely will escalate over the next 5-10 years. In this regard, the City's rate offered via Iris Solutions' proposal is competitive and provides the City long-term price certainty against an uncertain regional organic waste disposal market.

Engineering staff recently conducted a cost analysis of the organic waste processing industry disposal costs in Southern Ontario, Canada. The Southern Ontario experience was selected as this region of the province of Ontario is approximately 10 years ahead of the Metro Vancouver Region with respect to organic waste diversion. The range of organic waste disposal costs in Southern Ontario's case presently ranges from \$90 per tonne to \$141 per tonne, with an average rate of \$124 per tonne. We believe that the Metro Vancouver region is experiencing similar trends with respect to the evolution of organic waste processing and associated disposal costs. This analysis is included as Appendix III.

### CO<sub>2</sub> Reductions

Through this project, the City will be reducing corporate and community emissions by an estimated 40,000 tonnes per year. This will be achieved through the diversion of organic waste from landfill, and the fuel switch to renewable natural gas for certain aspects of the City's operations including waste collection, fleet, and facility operations. These emissions reductions will be the equivalent of taking approximately 8,500 cars off the road per year.

As noted previously in this report, the City's Corporate Emissions Actions Plan sets the target of reducing corporate emissions by 20% by the year 2020. The forecasted emissions reduction impact of the fuel switch within the City's waste collection fleet and operations fleet, from traditional natural gas to RNG, will cause the City to achieve this goal by 2017.

### Next Steps

1. City staff will enter into negotiations with Iris Solutions on finalizing the Project Agreement. The target deadline to successfully finalize negotiations and enter into a Project Agreement with Iris Solutions is January 31<sup>st</sup>, 2015.
2. City staff will finalize the Financial Contribution Agreement with PPP Canada. The target deadline to finalize the PPP Canada contribution is January 31<sup>st</sup>, 2015.
3. City staff will continue to negotiate the terms of the "buy-sell" biomethane agreement with Fortis BC and the BC Government for carbon credit sales.
4. Based on the proposed project schedule submitted by Iris Solutions, the design process will commence following the successful finalization of steps 1 and 2 above. Construction is set to commence in late March 2015 with Service Commencement anticipated by late November 2016.

## SUSTAINABILITY CONSIDERATIONS

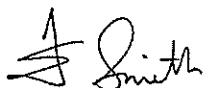
### Sustainability Charter Objectives Met:

- **SC5: Plan for the Social Well Being of Surrey Residents**  
*Contribute to the social sustainability for which the City has primary responsibility*
- **EC5: “Green” Infrastructure and Sustainability Grants**  
*Maximize the utilization of available funding to support the development of green infrastructure in the city.*
- **EC8: Energy Security**  
*Promote the use of low-impact, renewable energy sources; Minimize energy requirements; Reduce reliance on fossil fuels; and Promote community energy solutions.*
- **EN1: Energy Efficiency**  
*Take steps to achieve energy efficiency and demonstrate community sustainability leadership to reduce energy consumption and also to reduce production on Greenhouse gases*
- **EN2: Waste Reduction**  
*Minimize consumption and waste generation and promote zero waste by introducing waste to energy conversion opportunities where practical.*
- **EN3: Vehicle Fleet Programs**  
*Take steps to minimize the impacts of fleet transportation on the environment*

## CONCLUSION

The Engineering Department recommends that Council approve the Biofuel Project Board's recommendation that the City award RFP No. 5587 Surrey Biofuel Processing Facility Project, to the preferred proponent, Iris Solutions, to design, build, finance, operate, and maintain the Surrey Organics Biofuel Processing Facility for a 25-year term subject to:

- a. Staff finalizing the Project Agreement with Iris Solution by January 31<sup>st</sup>, 2015; and
- b. Staff finalizing the PPP Canada Fund Financial Agreement for the receipt of PPP Canada contribution of 25% of the project capital costs;



Fraser Smith, P.Eng.  
General Manager, Engineering

VL/RAC/ras/clr

Appendix I: December 10<sup>th</sup>, 2012 Corporate Report R249: Implementation Process Related to the Surrey Organics Biofuel Processing Facility

Appendix II: Surrey Biofuel Processing Facility Fairness Advisor Report RFP No. 5587

Appendix III: Ontario Case Study – Source Separated Organic (SSO) Waste Disposal Evolution

NO: R249 COUNCIL DATE: December 10, 2012

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**REGULAR COUNCIL**

TO: Mayor & Council DATE: December 3, 2012  
FROM: General Manager, Engineering FILE: 5360-60  
SUBJECT: Implementation Process Related to the Surrey Organics Biofuel Processing Facility

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**RECOMMENDATION**

The Engineering Department recommends that Council:

1. Authorize staff to proceed with a Public-Private Partnership (P3) procurement process to establish an Organics Biofuel Processing Facility in Surrey, all as generally described in this report; and
2. Approve the award of a contract to Partnerships British Columbia in the amount of \$794,500, excluding HST, for the provision of Procurement Advisory services to the Organics Biofuel Processing Facility Project Team (the "Team") and Project Management services under the direction of the Team.

**DISCUSSION**

In late June 2011, Engineering staff submitted an application on behalf of the City to P3 Canada for capital funding consideration towards the development of an organic biofuel processing facility in Surrey. As part of the application development process a business case team was assembled that included the following representatives:

- Engineering staff overseeing the business case;
- Representatives of Partnerships British Columbia (PBC);
- Technical Advisors from Golder Associates; and
- Financial Advisors from Ernst & Young.

The business case team developed a detailed business case for the proposed facility, which was submitted to P3 Canada in January 2012.

The business case was based on the development of an 80,000 metric tonne per year anaerobic digestion (AD) facility that will process into a renewal fuel grade natural gas the City's curb side organic waste and organic waste from Institutional, Commercial and Industrial (ICI) sector sources.

In accordance with P3 Canada guidelines, the business case team focused on the analysis of proven and established technologies for organic biofuel processing. Two separate technologies were identified as being most conducive to maximizing the yield of gas from the type of organic waste feedstock that would be available to the facility. These two distinct technologies, called "wet AD" or "dry AD", have been used in European and Asian markets to process municipal organic waste into renewable natural gas.

The business case that was prepared determined that the capital costs of the biofuel facility will be approximately \$68 million. The business case examined the merits of such an investment in light of alternative strategies for dealing with the same organic waste stream. The business case also established the most appropriate project procurement and delivery model by means of an evaluation of qualitative and quantitative metrics and set out a preferred long-term transaction structure that will allocate key project risks to the party most able to manage such risks cost effectively. The business case concluded that the project should be procured using a design, build, finance, operate and maintain delivery model.

The P3 Canada Board has now recommended approval of Surrey's proposed biofuel project. Accordingly, the project was endorsed by the Federal Finance Minister and a public announcement regarding the availability of capital funding to the project was jointly delivered by the City of Surrey and P3 Canada on September 20, 2012. P3 Canada confirmed its intention to contribute up to \$16.9 million in federal funding to the Project. This represents 25% of the estimated capital costs of the project, which is the maximum percentage that P3 Canada offers for approved projects under its Program.

## **NEXT STEPS**

### **Project Governance Structure**

As a requirement of P3 Canada, the business case team was required to develop a project budget as well as an execution plan that includes a governance structure and a critical path schedule related to establishing the biofuel facility (the "Project").

The governance structure for the Project and the related roles and responsibilities of the various parties are outlined in Appendix I.

### **Estimated Project Costs – Indirect Capital Costs**

The Project budget, including the costs related to all external advisors engaged on the Project team, is documented in Table 1. This budget represents the indirect capital costs of the project to the City and will be subject to ongoing reviews.

These costs are eligible for cost sharing with P3 Canada. The City will be reimbursed by P3 Canada for 25% of these costs (excluding legal advice and honouraria).



**Table 1: Project Management Budget**

Item	Indirect Capital Cost Item	Budget
1	Project Director	\$194,500
2	Procurement Advisor (incl. Communications)	\$600,000
3	Rate Setting Advisor (JCRA)	\$30,000
4	Financial Advisor	\$187,500
5	Legal Advisor	\$225,000
6	Technical Advisor	\$221,000
7	Quantity Surveyor	\$25,000
8	Fairness Advisor	\$75,000
9	Waste Auditor	\$35,000
10	Environmental Advisor	\$20,000
11	Unsuccessful Proponent Honourarium (2x \$200K)	\$400,000
12	<b>Sub-total procurement phase</b>	<b>\$2,013,000</b>
13	Contingency	\$201,300
14	Budget allocation for construction phase	\$475,000
15	<b>Total Project Management Costs</b>	<b>\$2,689,300</b>
16	<b>P3 Canada Funding Contribution (25%)*</b>	<b>(\$516,075)</b>
17	<b>Net Project Management Costs</b>	<b>\$2,173,225</b>

\*Excludes Item 5 Legal Advisor and Item 11 Honourarium costs

A budget allocation for advisory services during the construction phase is included under Item 14. The scope of advisory services required to support the City of Surrey during construction of the facility will be reviewed prior to financial close.

#### Assembly of the Project Team

PBC was an integral part of the business case team, acting as project manager and P3 advisor in the process of developing the business case. They were retained based on their extensive public private partnership experience and to demonstrate to P3 Canada that the BC government supported the Project. PBC is a company owned by the Province of British Columbia and governed by a Board of Directors reporting to its sole Shareholder, the Minister of Finance. The Company is incorporated under the British Columbia Business Corporations Act.

PBC provides services relating to the planning, delivery and oversight of major infrastructure projects, specifically those involving the use of private sector expertise, services and capital.

PBC has developed best practice procurement policies and procedures that are strongly preferred by P3 Canada. To this end, PBC will assist in ensuring that the following conditions are met:

- *the Project will be undertaken generally in accordance with Partnerships BC's (PBC) best practices methodology, processes and templates including, but not limited to, use of an affordability limit and documentation; and*
- *the procurement activities of the Eligible Recipient are consistent with best practice procurement policies and procedures established by leading Canadian P3 agencies such as PBC, to ensure that the procurement process is competitive, fair and transparent and*

*is consistent with the Agreement on Internal Trade and Canada's International trade obligations and all other applicable provincial and municipal laws, policies and procedures.*

PBC has submitted a quote with respect to providing Project Advisory and Project Management services for the Project in the amount of \$794,500, excluding HST. As a BC government agency, PBC does not compete with the private sector on procurement processes. The Agreement on Internal Trade (AIT) includes a provision that excludes public bodies from the broader requirements of AIT. PBC is a public body for the purposes of the AIT. Part of the benefit of this relationship is conflict of interest does not exist as PBC exclusively represents government with a view to maximizing the public interest from P3 arrangements.

### **Project Schedule**

Table 2 provides a listing of key dates associated with the delivery of the Project:

**Table 2: Key Procurement Dates**

<b>Procurement Milestone</b>	<b>Anticipated Timing</b>
Procurement Strategy review by Project Board	January 2013
RFQ Release	March 2013
RFP Release	May 2013
Technical Submissions Due	October 2013
Financial Submissions Due	November 2013
Preferred Proponent selected	December 2013
Financial Close / Start of Construction	Q1 2014
Commissioning of Biofuel Facility	Q3 2015

An RFP is to be issued in mid-May 2013, which will drive the timing of all subsequent activities. The following must be addressed prior to issuance of the RFP:

- Site rezoning is to be initiated in December 2012, with anticipated completion by April 2013;
- Confirmation that environmental requirements have been addressed;
- Methane off-take negotiations are to be concluded to a sufficient level to provide a reasonable level of certainty for proponents; and
- Completion of the waste composition study to establish seasonal variations in organic waste content so that results are available to proponents.

Further reports will be provided to Council with recommendations at appropriate stages in the proponent selection and Project Agreement approval process.

## CONCLUSION

The Engineering Department recommends that Council:

- Authorize staff to proceed with a Public-Private Partnership (P3) procurement process to establish an Organics Biofuel Processing Facility in Surrey, all as generally described in this report; and
- Approve the award of a contract to Partnerships British Columbia in the amount of \$794,500, excluding HST, for the provision of Procurement Advisory services to the Organics Biofuel Processing Facility Project Team (the "Team") and Project Management services under the direction of the Team.



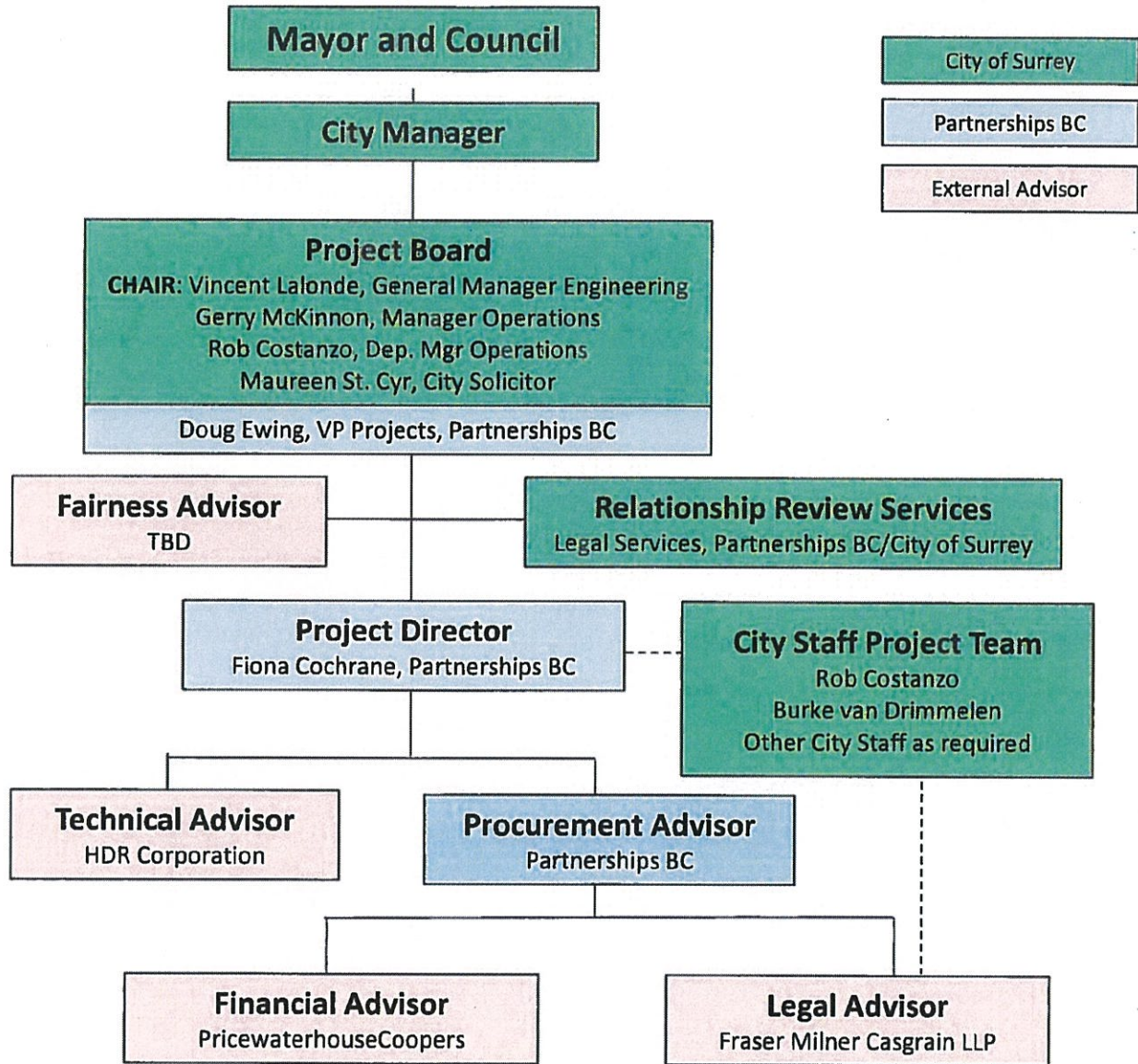
Vincent Lalonde, P.Eng.  
General Manager, Engineering

VL/RAC/brb

Appendix I: Biofuel Processing Facility Project Governance Structure and Related Roles & Responsibilities

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Biofuel Processing Facility Project Governance Structure, Roles & Responsibilities



## **ROLES & RESPONSIBILITIES**

### **Mayor & Council**

- Approves moving forward with implementation of the Project based on the related business case and Project Schedule.
- Approves expenditures in excess of \$500,000.
- Approves the Project Agreement with the preferred proponent.

### **City Manager**

- Liaises between Mayor and Council and the Project Board.
- Approves expenditures up to \$500,000.
- Vettes information being submitted to Mayor and Council for completeness.

### **Project Board**

The Project Board guides the Project from procurement through implementation. The roles, responsibilities and decision authorities of the Project Board are as follows:

- Provides direction to the project team on matters of strategic importance to the Project and its procurement and implementation, including scope, budget, schedule and communications.
- Approves project scope and budget.
- Approves expenditures of up to \$300,000 and refers expenditures that exceed this threshold to City Manager and/or Mayor and Council.
- Approves a Communications Plan for the Project.
- Approves the issuance of the RFQ and approves the short list of proponents for the RFP competition.
- Approves the issuance of the RFP.
- Approves the RFP evaluation results and approves the results of the negotiations with the preferred proponent for referral to the City Manager and Mayor and Council for approval.

### **Fairness Advisor**

The Fairness Advisor is an independent third-party whose role is to observe and/or monitor the procurement process and to report as to the fairness of the procurement process. A clean report by an independent, credible, knowledgeable third party that attests to the fairness of the procurement process enhances the integrity of the public procurement process by providing comfort to the proponents that the process is credible and provides equal opportunity for all to compete. The Fairness Advisor reports directly to the Project Board. The reports are also made publicly available throughout the procurement process.

A Fairness Advisor will be engaged by the Project team approximately one month in advance of RFQ release.

### **Relationship Review Committee**

A Relationship Review Committee will comprise members of the Project team with the legal and procurement knowledge required to assess and determine, on an as required basis, whether any relationships that have been disclosed among members of the Project team and members of potential or shortlisted proponent teams give rise, or might give rise, to an unfair advantage to one or more teams.

The Relationship Review Committee will be engaged:

- prior to both the RFQ and RFP evaluations to screen relationships disclosed by evaluators in relation to Respondent or Proponent team members; and
- on an as needed basis if and when such requests for determinations are made by Project team members, interested market participants, Respondents or Proponents.

### **Project Director**

The Project Director is accountable for directing and managing the Project team. The roles, responsibilities and decision authorities of the Project Director are as follows:

- Provides direction to the project team on matters of strategic importance to the Project and its procurement, including scope, budget, schedule and communications;
- **The day to day management of the project; and**
- Reports to the Project team comprising both internal City of Surrey staff members and external specialist advisors.

### **Procurement Advisor – Responsibilities include:**

- leads development and execution of procurement strategy;
- leads development of RFQ and RFP documents and processes, including evaluation;
- coordinates project team in development of the Project Agreement (or contract);
- coordinates involvement of Fairness Advisor;
- liaises with external legal counsel to ensure alignment of Project documents with City of Surrey policies and requirements;
- coordinates with other City of Surrey departments on information requests and confirmations; and
- supports Project and procurement activities.

### **Technical Advisor – Responsibilities include:**

- leads development of technical specifications for the Project Agreement;
- establishes technical qualifications of bidders at RFQ;
- assists with development of technical submission requirements for RFP; and
- participates in RFQ and RFP evaluations.

**Financial Advisor – Responsibilities include:**

- advises on development of commercial and financial terms in the Project Agreement;
- establishes financial qualifications submission requirements for each of the RFQ and the RFP; and
- participates in the evaluation of submissions related to the RFQ and the RFP.

**External Legal Advisor – Responsibilities include:**

- leads drafting of Project Agreement and schedules;
- ensure legal consistency throughout all procurement documents; and
- advise as required on processes, commercial terms and other legal matters.



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November 28, 2014

City of Surrey  
14245 - 56th Avenue  
Surrey, BC V3X 3A2

**Attention: Vincent Lalonde**  
**City Manager and Project Board Chair**

Dear Sirs/Mesdames:

**Re: Surrey Biofuel Processing Facility**  
**Fairness Advisor Report RFP No. 5587**

I was appointed Fairness Monitor for the procurement phase of the Surrey Biofuel Processing Facility Project on February 28, 2013. The procurement phase was divided into two components: a Request for Qualifications (“RFQ”) to be followed by a Request for Proposals (“RFP”). My report on the RFQ process was delivered on February 25, 2014. This is my report on the RFP process.

Prior to the commencement of the RFP phase, I was provided with and reviewed a copy of the RFP, including its appendices. This involved a review and consideration of the Evaluation Guidelines and the draft Project Agreement.

During the course of the RFP phase either I or my alternate, Stephen Berezowskyj, attended in person or by telephone conference more than 40 sessions dealing with various aspects of the Project. This included Collaborative meetings with each of the proponents submitting to the RFP and meetings with the Evaluation Teams and Evaluation Committee during its evaluation and scoring of the proposals.

In addition to these meetings, I was copied on all correspondence exchanged between the Contact Person and the proponents and between PartnershipsBC and Surrey and the Evaluation Teams. I also received copies of and reviewed Requests for Clarifications issued to the proponents and Requests for Information issued by the proponents, and the responses to each.

Upon conclusion of the evaluation process I was presented with and reviewed a copy of the Evaluation Committee’s report to the Project Steering Committee.

Based on my review of the foregoing documentation and my observations of the various meetings mentioned above, I am satisfied that the procurement process for RFP 5587 was fair, transparent and robust. I did not observe any bias being shown to any one or more of the proponents and I found all those involved with the evaluation process to be keenly aware of the need to abide by the terms and conditions of the RFP and principles of fairness.

When fairness issues surfaced, as they are bound to do in a project of this complexity and nature, I was satisfied that they were resolved with all due dispatch and in a fair and equitable manner.

In the result, I have found that the procurement process for the Surrey Biofuels Project was conducted in a fair and transparent manner throughout. The participants in the process are to be commended for their adherence to fairness principles and for successfully completing their assigned tasks in an exemplary manner.

Respectfully submitted,

A handwritten signature in black ink, consisting of a large, sweeping oval followed by several smaller, overlapping loops and a final flourish.

---

John R. Singleton, Q.C.

## APPENDIX III

### Ontario Case Study – Source Separated Organic (SSO) Waste Disposal Evolution

#### Pre-2000

- Municipal organic waste collection programs consisted primarily of green waste (yard and garden)
- Green waste was being sent to open air windrow composting facilities.
- The Greater Toronto Area (GTA) had one primary processor accepting the majority of GTA municipal organics and processing via open windrow (similar to Harvest Power)
- **Tipping rates were in the range of \$30-\$50/tonne**

#### 2000-2005

- Province implements waste diversion target of 60%
- Municipalities including Toronto, Ottawa, Hamilton, York, London, and Durham all begin implementing residential SSO programs, diverting food waste from the garbage stream.
- Additional traditional compost facilities come online to meet growing processing demand.
- Both the regulators (primarily municipalities hosting these facilities) and the waste processing industry recognized very quickly that traditional open windrow composting could not manage the odours associated with the SSO feedstock.
- Open air compost facilities were being forced to retrofit, reject SSO feedstock, or close down.
- **Tipping rates began to increase based on the higher cost of operation.**

#### 2005-2010

- As organic diversion rates continued to grow, so did processing capacity demand, however the processing industry began to build enclosed composting systems that allowed them to better manage odour.
- **Tipping rates for these enclosed compost facilities are on average \$105/tonne.**

#### 2010-Present

- Odour concerns prevail at in-vessel composters, facility owners forced to implement more robust and expensive odour management systems (i.e. City of London Facility).
- Anaerobic digestion facilities built to provide improved odour management, along with the revenue potential associated with the biogas generated at these facilities.
- **Tipping rates for these AD facilities are estimated to be in the range of \$110-\$135.**
- Tipping rates for both in-vessel composting and AD are impacted not only by the capital expenditure and operational expenditure of the facility itself, but also the market demand for organics processing in the respective region (high demand, higher tipping rates).

Municipality	In-Vessel Compost	Anaerobic Digestion	Tipping Rate
Toronto		✓	\$121/tonne
Ottawa	✓		\$90/tonne
London	✓		\$135/tonne
Durham County	✓		\$133-\$141