
To: Zero Waste Committee

From: Brent Kirkpatrick, Lead Senior Engineer, Solid Waste Operations, Solid Waste Services

Date: July 10, 2020 Meeting Date: July 17, 2020

Subject: **Waste-to-Energy Facility 2019 Financial Update**

RECOMMENDATION

That the Zero Waste Committee receive for information the report dated July 10, 2020, titled "Waste-to-Energy Facility 2019 Financial Update."

EXECUTIVE SUMMARY

The Metro Vancouver Waste-to-Energy Facility continues to be an environmentally sound, low-cost regional disposal option. In 2019, the Waste-to-Energy Facility processed 253,148 tonnes of municipal solid waste, at a net unit cost of \$57.45 per tonne for operation and maintenance, a 9% cost reduction from 2017 to 2019. Waste-to-Energy Facility costs were reduced in 2018 and 2019 from the beneficial use of bottom ash in the construction of the replacement Coquitlam Transfer Station. Waste-to-Energy Facility debt costs reduced to zero in 2019 with the retirement of debt associated with the 2003 electricity turbo generator.

PURPOSE

The purpose of this report is to provide the Zero Waste Committee with a 2019 financial update for the Metro Vancouver Waste-to-Energy Facility located in Burnaby.

BACKGROUND

Annually, results of the operation of the Waste-to-Energy Facility and contract with Covanta Burnaby Renewable Energy, ULC (Covanta), including tonnages, expenditures, revenues, service level and performance, and unit costs, are provided to the Zero Waste Committee and Board for information.

2019 WASTE-TO-ENERGY FACILITY FINANCIALS

Table 1 provides the past three years of expenditures for the Waste-to-Energy Facility.

Table 1: 3-Year Expenditures for the Waste-to-Energy Facility

	2017	2018	2019
Operating Cost	\$20,575,965	\$19,617,423	\$20,539,052
Debt Charges *	\$1,700,248	\$879,800	\$0
Total Expenditure	\$22,276,213	\$20,497,223	\$20,539,052
Tonnage	259,748	253,123	253,148
Unit Cost / Tonne **	\$85.76	\$80.98	\$81.13

* Debt charges are payments for principles and interests on long term financing.

** Includes debt servicing costs.

Operating costs include operations and maintenance of the Waste-to-Energy Facility and ash management (additional information on ash management provided below in table). No debt charges were incurred in 2019 due to completion of debt payments for the 2003 turbo generator installation.

Table 2: Metro Vancouver's Bottom Ash and Fly Ash Disposal costs for the Waste-to-Energy Facility

	2017	2018	2019
Fly Ash Disposal	\$1,368,291	\$1,385,142	\$1,453,703
Bottom Ash Disposal	\$1,211,348	\$257,461	\$559,382
Disposal Costs / Tonne of Incoming Waste	\$9.93	\$6.49	\$7.95

Ash management costs have decreased over the last two years with the beneficial use of bottom ash in the construction of the replacement Coquitlam Transfer Station starting in October 2017. In 2019, bottom ash was used as part of the transfer station construction until August 5, 2019. Metro Vancouver has initiated procurement for long-term beneficial use of bottom ash.

Table 3 below outlines Metro Vancouver's portion of offsetting revenues. Electrical revenue in 2019 was slightly higher compared to 2017 and 2018, due to reduced down time at the facility. The 2019 metal revenue includes the first full year of operation of the non-ferrous metals recovery system.

Table 3: Metro Vancouver's Portion of Electrical and Metal Revenues for the Waste-to-Energy Facility

	2017	2018	2019
Electrical Revenue	\$5,642,942	\$5,584,341	\$5,793,404
Metals Revenue	\$140,325	\$191,495	\$199,889
Tonnage	259,748	253,123	253,148
Unit Revenue / Tonne	\$22.26	\$22.82	\$23.68

Table 4 shows net cost per tonne for the Waste-to-Energy Facility from 2017 to 2019. A 9% reduction in net costs was achieved from 2017 to 2019.

Table 4: 3-Year Net Unit Cost for Operation and Maintenance of the Waste-to-Energy Facility (including debt servicing)

	2017	2018	2019
Unit Cost / Tonne (from Table 1)	\$85.76	\$80.98	\$81.13
Unit Revenue/ Tonne (from Table 3)	\$22.26	\$22.82	\$23.68
Net Unit Cost/ Tonne	\$63.50	\$58.16	\$57.45

ALTERNATIVES

This is an information report, therefore no alternatives are presented.

FINANCIAL IMPLICATIONS

2019 Waste-to-Energy Facility costs benefited from the elimination of debt payments related to the 2003 turbo generator installation and reduced ash management costs with the beneficial use of bottom ash in the construction of the replacement Coquitlam Transfer Station. Metro Vancouver continues to work with Covanta to minimize facility costs and overall, the Waste-to-Energy Facility continues to be a low-cost regional disposal option.

CONCLUSION

Expenditures in 2019 for the Waste-to-Energy Facility totaled \$20.5 million, resulting in an expenditure of \$81.13 per tonne. Metro Vancouver's portion of electrical and metals revenues totaled \$5,993,303 or \$23.68 per tonne. Based on the plant processing 253,148 tonnes of municipal solid waste, the net unit cost per tonne for operation and maintenance of the Waste-to-Energy Facility in 2019 was \$57.45 per tonne. Tipping fee revenues are accounted for separately and are not included in this analysis.

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