On June 30, 2001, the City Council of Edmonton, Alberta finalized the terms of its purchase of the Edmonton municipal solid waste (MSW) composting facility at the cost of $97 million from TransAlta Corporation. An international electricity utility headquartered in Alberta, Canada, TransAlta explained that its decision to sell the highly automated facility was based on "the need to continue in its core business of generation of electricity." The $100 million composting facility was originally developed as a public-private partnership, built and operated by TransAlta Corporation under a 30-year agreement with Edmonton. (See BioCycle, November 2000).

For its part, the city of Edmonton had several reasons for purchasing the composting facility which has been operating since mid-March of 2000 and whose overall performance has been highly rated. Edmonton officials cite these reasons for arranging the purchase from the utility company:

**Immediate and Ongoing Savings** – The city's combined operating and financing cost will be lower than contract payments under the initial 30-year agreement with TransAlta. It's expected that $140 million will be saved over the course of the old agreement with TransAlta.

**Full Compost Sales Revenue** – Under the old agreement, the city shared revenue from compost sales on a 50/50 basis with TransAlta or any subsequent owner. As sole owner, all revenues will flow to the city.

**Full Carbon Credit Benefit** – With ownership of the facility, the city receives the full carbon credit benefit from its operation and all future potential value.

**Flexibility in Managing Waste Streams** – With ownership, the city is able to direct portions of the waste streams to future alternative processing systems if economically feasible, or use portions of the waste stream to help establish new businesses in Edmonton. The old contract with TransAlta tied the city to delivering all residential waste to the facility.

**No Remaining Beneficial Risk Sharing with Private Owner** – The risk to be borne by TransAlta under the agreement was in developing and proving technology to meet Edmonton conditions. This risk no longer exists since the plant functions as intended.

The remaining significant risks, impact of changing legislation and changing waste composition, are all the city's responsibility. The contractual requirement to pay tipping fees for a guaranteed minimum tonnage would remain even if these risks resulted in reduced requirement for processing. This disadvantage is eliminated with city ownership.

**Enhancement of Centre of Excellence Initiative** – Private ownership has hindered the potential of the facility to enhance the Centre of Excellence initiative, in particular, advancing the "Smart City" image in cooperation with education and research institutions and promotion of local businesses. This potential of the facility to enhance the Centre of Excellence initiative would be realized under city ownership. (The Edmonton Waste Management Centre of Excellence is a partnership of several educational and research institutions, the City of Edmonton, and private sector consulting engineering firms. It provides expertise and facilities for the purposes of pure and applied research into all aspects of solid waste and wastewater management. Its Web site is at www.ewmce.com.)

**Business Opportunities** – Three revenue opportunities have emerged for the operator of the facility. One is the development of premium, granulated soil amendments. Another is the operation of a cogeneration plant at the site to produce energy from residual waste streams in the facility. The third is marketing the composting operation to other cities and governments around the world. As owner, the city would benefit financially from these business opportunities.

Garry Spotowski

Canadian city purchases composting plant for $97 million, projecting major savings over the course of its original agreement with TransAlta.
OPERATING PERFORMANCE

The facility reached full throughput in October 2000 and has essentially maintained that level. For the first eight months of full operation (November 2000 to June 2001 inclusive), the plant processed approximately 100,000 metric tons of MSW and 16,000 dry metric tons of biosolids to make approximately 50,000 metric tons of compost.

Of note, the amount of household hazardous waste (HHW) in the incoming waste is lower than expected which means that Edmonton’s HHW collection programs are successful and the compost is at less risk of contamination. (Household hazardous waste is collected at collection depots called Eco Stations, which are open year-round, five days/week. They are also recycling depots for household recyclables and solid waste collection depots for bulky items like refrigerators and couches that are unfit for regular garbage collection. More info on Eco Stations is available at www.gov.edmonton.ab.ca/waste.)

The plant’s biofilters have been working well so far. Odors have not been an issue. The quality of the product is better than expected. Aesthetically, it is first rate, with a rich, earthy texture and practically no visible contaminants.

As expected, the plant is diverting about 50 to 60 percent of input from the landfill, though a more complete picture will emerge when the plant has operated at full capacity for a full year, which would be early November 2001. The amount of organics in the waste stream varies greatly with the seasons.

MANAGEMENT CHANGES

Allan Yee, senior project engineer with Edmonton, has been appointed to become general supervisor of the composting facility. An operating contractor — Earth Tech — has been hired to run the project. Earth Tech assumed responsibility for operations on August 1, 2001. Under the terms of the purchase agreement, TransAlta will assist in operating the plant with Earth Tech and the city of Edmonton during a two month transition period.

Serious marketing efforts are getting underway for the estimated 50,000 metric tons of finished compost produced to date. The largest sales have been to a soil bioremediation company and a bulk soil retailer at $10/metric ton. Due to high interest, some compost has been retailed to Edmonton area residents.

This year, some will be placed on farm lands (not mine lands) owned by TransAlta, as this provision of the original agreement has been retained. Starting next year, more aggressive marketing will see more compost sold into key target markets, especially agriculture, predict Edmonton officials. The city of Edmonton is also assessing several proposed marketing partnerships.

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