

September 6, 2012

Mr. Dale Wyrick, PE
Field Operations Director
401 Patton Ave.
Greensboro, NC 27406

Re: Greensboro Processing and Marketing of Recovered Recyclables - RFP #11-12
RFP Best and Final Offer (BFO) Evaluation Documents

Dear Mr. Wyrick:

Attached please find information supporting our review of the Best and Final Offer proposals received in response to the City's RFP #11-12 for Processing and Marketing of Recovered Recyclables.

The original proposals were received on May 29, 2012. The Greensboro City Council was briefed on the financial offerings of the original proposals at a Council Work Session on July 24, 2012. On August 6, 2012 the City Council directed City staff to accept Best and Final Offers (BFO's) from Waste Management and ReCommunity. The BFO's were received on August 20, 2012.

The Best and Final Offer solicitation included four pricing forms. Price Forms 1 and 2 addressed both a revenue share and fixed rate scenario for an anticipated 5-year contract term. Price Forms 3 and 4 were the same but for an anticipated 10-year contract term.

The Waste Management offers were identical for either a 5-year or 10-year contract term. The ReCommunity offer was very slightly better (on the order of 5% higher) for the 10-year revenue share option. Therefore, this analysis focuses on comparison of the 5-year contract term scenarios.

Following is a brief explanation of the attached documents.

- **Summary of Financial Offers** – This table summarizes the basis of each Best and Final financial offer.
- **Gross and Net Revenue Estimate Graphs** – The bar charts summarize the estimated annualized gross and net revenue over a 5-year contract period for each option considered. The only difference in the gross and net revenue graphs is the additional hauling cost burdened to the Waste Management pricing which is estimated to be about \$10-\$11 per ton for direct hauling.
- **Average Commodity Revenue (ACR) Graph** – This graph shows historical ACR data for Greensboro recyclables sold from 2002 through 2012. Two “best fit” lines are also depicted. This graph is provided for information only and is not intended to represent a prediction of future market value.

- **Assumptions and Explanations** – This document clarifies the major assumptions made in the financial modeling. The first section explains the revenue graphs, the second section describes how the additional hauling cost was estimated in order to deliver your recyclables to the Waste Management Materials Recovery Facility (MRF), and the third section describes the historical and projected average commodity revenue graph.

Based on review of the Best and Final Offers provided by ReCommunity and Waste Management, HDR finds that the ReCommunity proposal provides greater net revenue potential to the City for all scenarios modeled.

Therefore, HDR recommends that the City award the contract for processing and marketing of recovered recyclables to ReCommunity. The decision of which ReCommunity pricing option to base the future contract on (fixed rate vs. revenue share) should be discussed further at the Council Work Session planned for September 10.

If you have any questions regarding this information, please feel free to contact me.

Respectfully submitted,

HDR Engineering, Inc. of the Carolinas



Joseph Readling, PE, VP

Enclosures:

- Summary of Financial Offers
- Gross and Net Revenue Estimate Graphs
- Average Commodity Revenue (ACR) Graph
- Assumptions and Explanations

Summary of Best and Final Offers - Revenue Share

Contract Term	Proposer	Fee/Credit	ACR* Threshold	Revenue Share	Education Credit	Comments
5 Year	ReCommunity	<u>Credit</u> - \$8 per ton	\$73 - \$75 per ton	75%	\$9 per ton	<ul style="list-style-type: none"> • If the revenue share money that Greensboro would make per ton is greater than the credit per ton, then Greensboro only gets the revenue share money and not the credit. • The ACR threshold varied based on incoming tons per month.
	Waste Management	<u>Credit</u> - \$25 per ton	\$73 per ton	80%	\$1 per ton	<ul style="list-style-type: none"> • If the revenue share money that Greensboro would make per ton is greater than the credit per ton, then Greensboro only gets the revenue share money and not the credit.
10 Year	ReCommunity	<u>Credit</u> - \$8 per ton	\$69 - \$75 per ton	75%	\$9 per ton	<ul style="list-style-type: none"> • If the revenue share money that Greensboro would make per ton is greater than the credit per ton, then Greensboro only gets the revenue share money and not the credit. • The ACR threshold varied based on incoming tons per month.
	Waste Management	<u>Credit</u> - \$25 per ton	\$73 per ton	80%	\$1 per ton	<ul style="list-style-type: none"> • If the revenue share money that Greensboro would make per ton is greater than the credit per ton, then Greensboro only gets the revenue share money and not the credit.

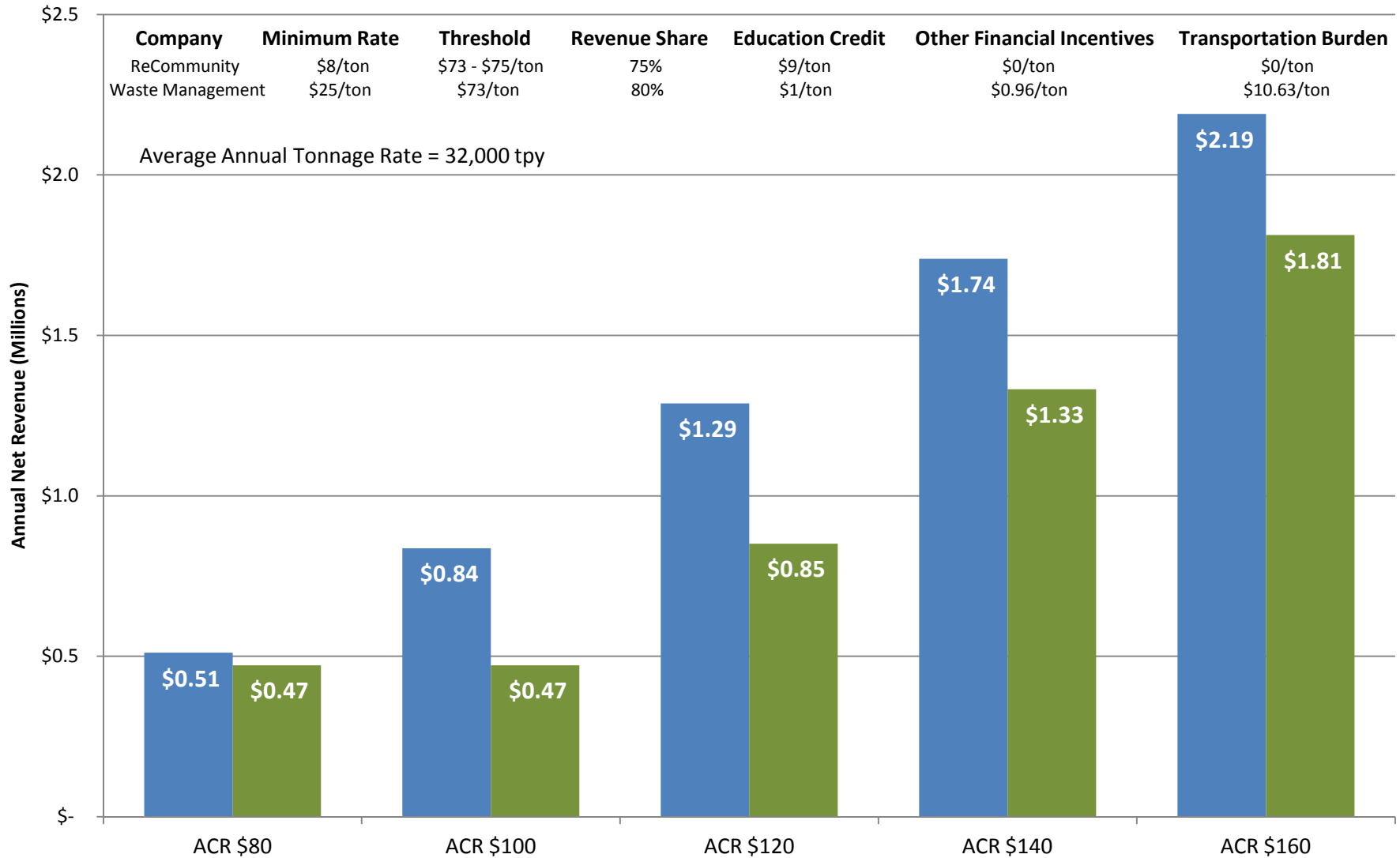
*Average Commodity Revenue

Summary of Best and Final Offers – Fixed Credit Based on ACR Range

Contract Term	Proposer	Fee / Credit	ACR* Range			Education Credit	Comments
			\$1 - \$80 per ton	\$81 - \$140 per ton	\$141 per ton +		
5 Year	ReCommunity	Credit	\$30 - \$31 per ton	\$30 - \$31 per ton	\$30 - \$31 per ton	Full-Time Recycling Coordinator	The credit varied based on incoming tons per month. 1,200 – 2,500 tons per month generates \$30 per ton and 2,501 + tons per month generates \$31 per ton.
	ReCommunity Option 2	Credit	\$8 per ton	\$15 per ton	\$55 per ton	\$10 per ton	
	Waste Management	Credit	\$25 per ton	\$25 per ton	\$25 per ton	\$1 per ton	
10 Year	ReCommunity	Credit	\$30 - \$31 per ton	\$30 - \$31 per ton	\$30 - \$31 per ton	Full-Time Recycling Coordinator	The credit varied based on incoming tons per month. 1,200 – 2,500 tons per month generates \$30 per ton and 2,501 + tons per month generates \$31 per ton.
	ReCommunity Option 2	Credit	\$8 per ton	\$15 per ton	\$55 per ton	\$10 per ton	
	Waste Management	Credit	\$25 per ton	\$25 per ton	\$25 per ton	\$1 per ton	

*Average Commodity Revenue

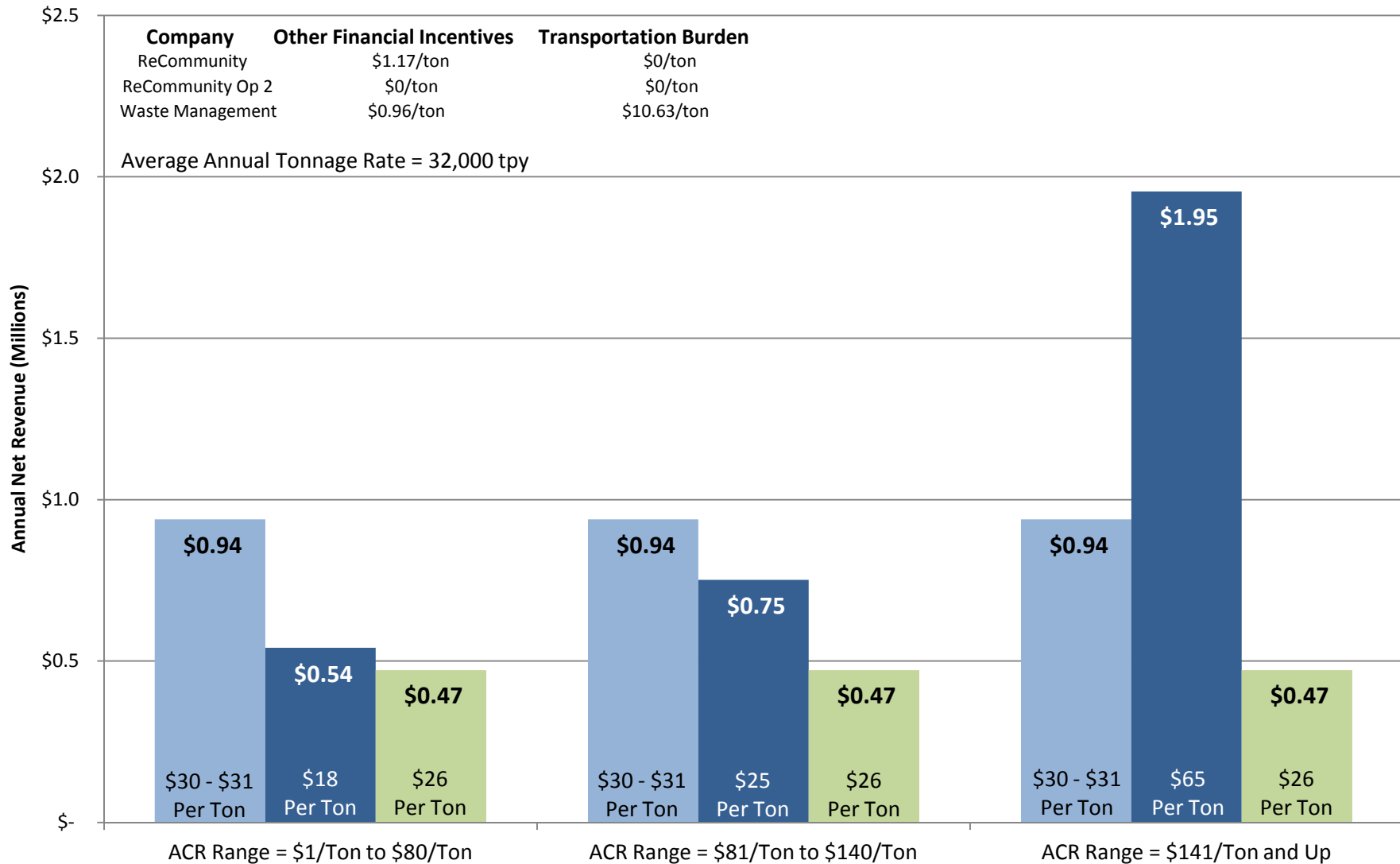
Annualized Net Revenue Estimate 5 Year Contract (Revenue Share)*



*Annual Revenue is in Net Present Value and hauling has been considered.

■ ReC Rev 5Y ■ WM Direct Rev 5Y

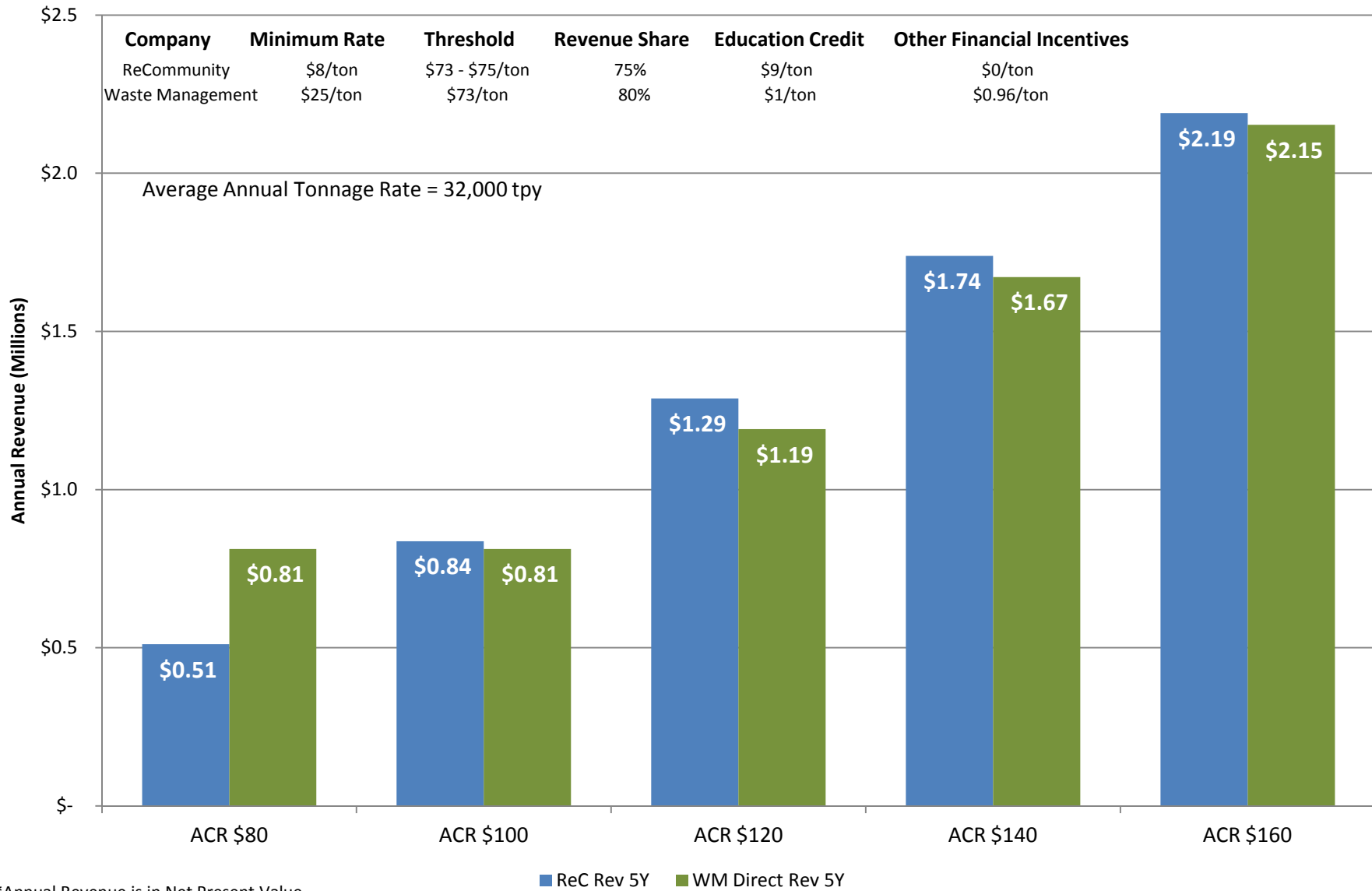
Annualized Net Revenue Estimate 5 Year Contract (Fixed Credit based on ACR Range)*



*Annual Revenue is in Net Present Value and hauling has been considered.

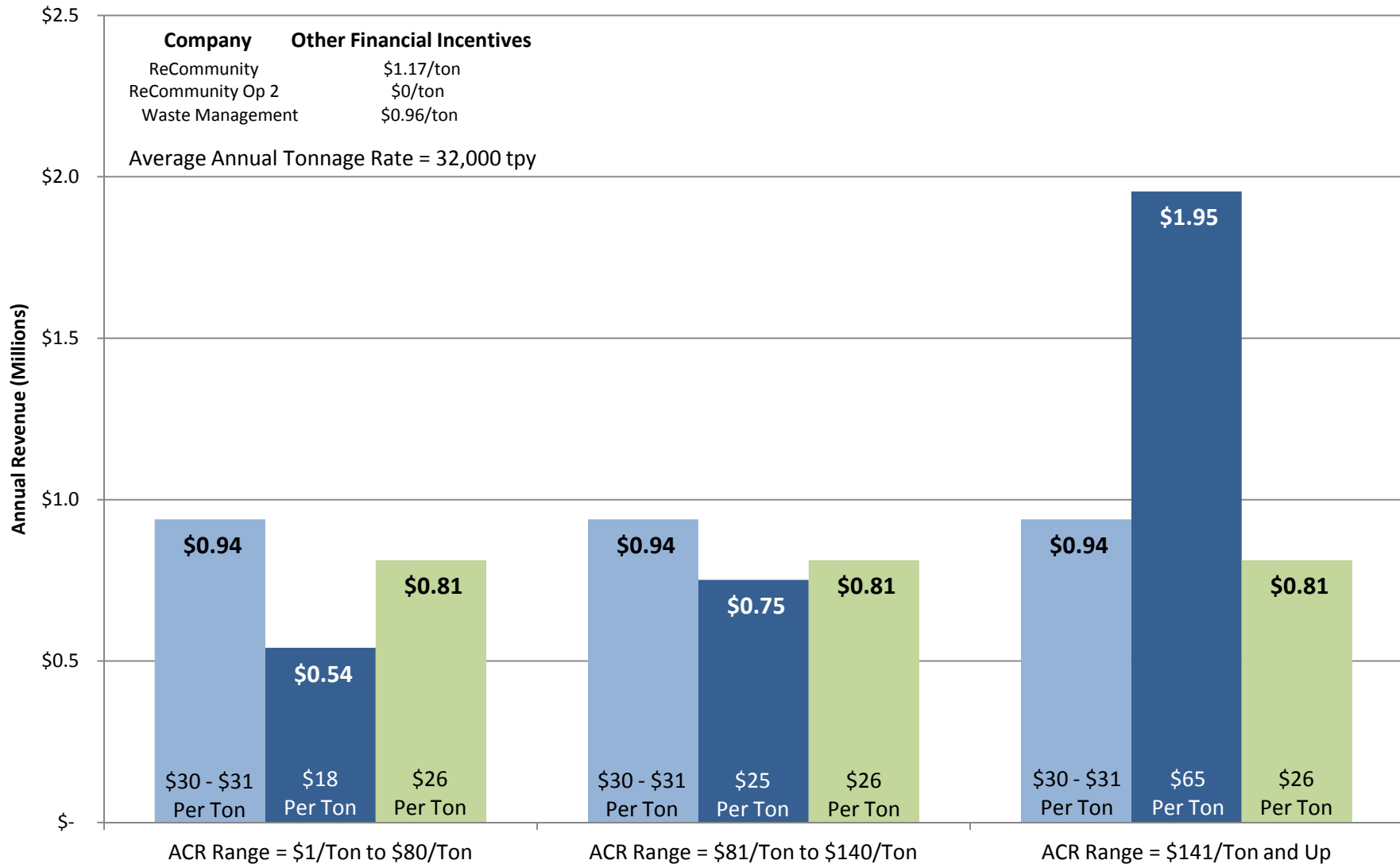
■ ReC Flat 5Y ■ ReC Flat 5Y Op2 ■ WM Direct Flat 5Y

Annualized Gross Revenue Estimate 5 Year Contract (Revenue Share)*



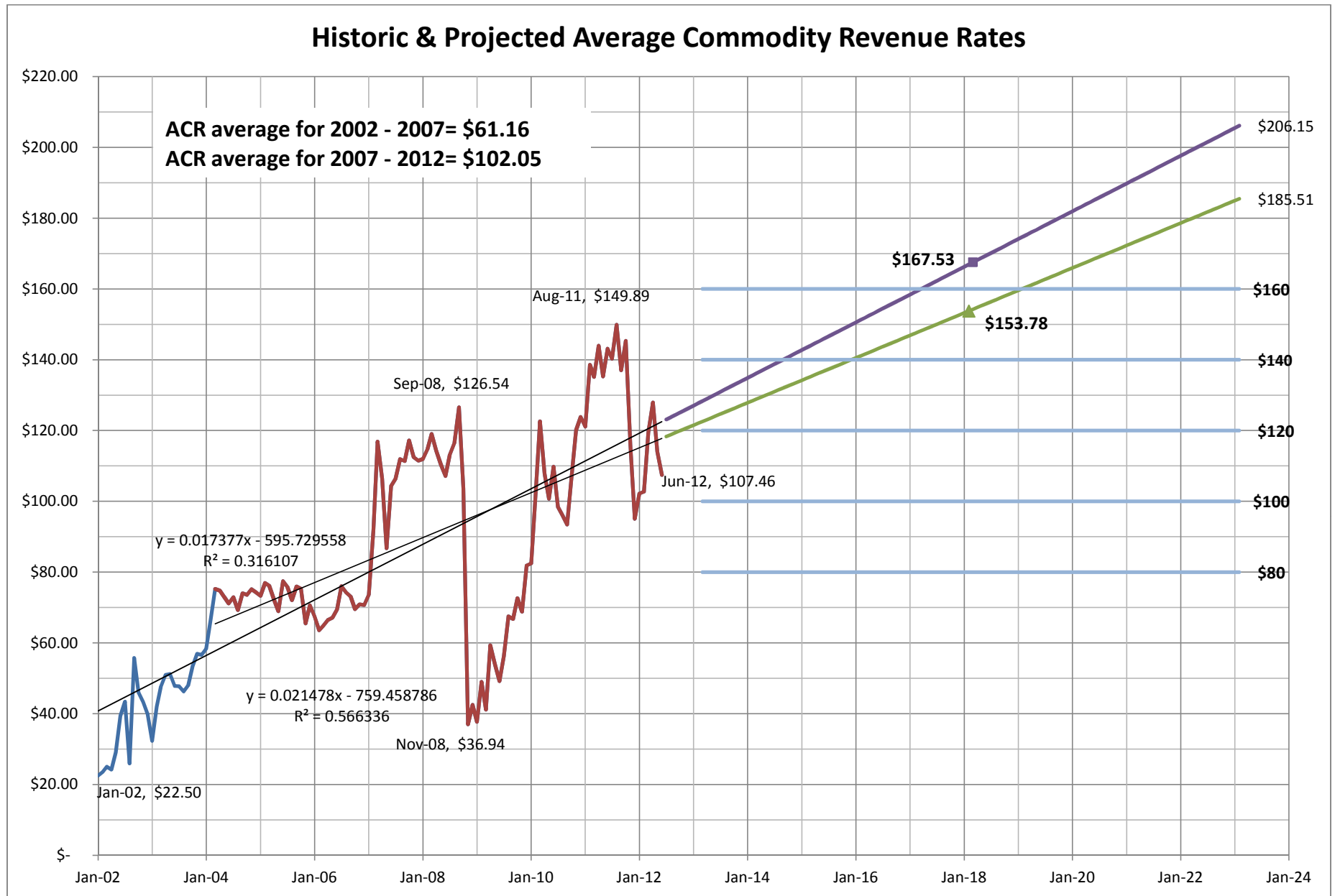
*Annual Revenue is in Net Present Value.

Annualized Gross Revenue Estimate 5 Year Contract (Fixed Credit based on ACR Range)*



*Annual Revenue is in Net Present Value.

■ ReC Flat 5Y ■ ReC Flat 5Y Op2 ■ WM Direct Flat 5Y



Historic and Projected ACR graph

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ASSUMPTIONS AND EXPLANATIONS – BEST AND FINAL OFFERS**NET & GROSS REVENUE GRAPHS**

1. Background
 - a. Data for the graphs are based on the Best and Final Offers (BFO's) presented in Addendum Number 2, Price Forms 1 and 2 (5 year contract) and Price Forms 3 and 4 (10 year contract).
 - b. Values shown are the annualized net present value over the contract term.
 - c. A Consumer Price Index (CPI) average annual percent increase of 2.48% was used to determine the net present value. A separate fuel escalator was used as described below.
 - d. The recycling tonnage rate was assumed to increase at an average annual rate of 2.6%. Average annual tonnage over a five year contract is therefore estimated to be about 32,000 tons and the average annual tonnage over a 10 year contract is about 34,200 tons.
 - e. Average Commodity Revenue (ACR) is the average current market price of all materials within one ton of recyclables, weighted by percentages of each material and grade that make up the recyclables stream. The model assumes that the ACR value is static (i.e., not escalated) throughout the entire contract term.
 - f. Two price offerings were requested in the BFO Addendum 2.
 - i. Revenue Share: Price Forms 1 and 3 (5 and 10 year contract terms), were based on proposers offering a floor price to the City (\$/ton) with a revenue share offer (% of ACR) when monthly commodity sales are above a proposer-set minimum ACR threshold. For the Revenue Share graphs, the ACR was modeled at \$80, \$100, \$120, \$140, and \$160/ton, and are represented by ACR \$80, ACR \$100, etc.
 - ii. Fixed Price: Price Forms 2 and 4 (again, the only difference in the price forms is the contract term), was based on a fixed rate offer to the City (\$/ton, no revenue share). Three ranges of ACR's were used (\$1 to \$80/Ton, \$81 to \$140/Ton and \$141/Ton and Up) allowing proposers to increase their fixed rate offer to the City as the average commodity revenue increased.
2. Specific offerings
 - a. ReCommunity is the City's current service provider. They offered six different pricing schemes, represented by the light blue and dark blue shaded bars.
 - b. Waste Management (WM) offered four different pricing schemes, represented by the green shaded bars. HDR previously evaluated two hauling scenarios, direct haul and use of the City's MSW transfer station to get the City's recyclables to the WM MRF near Winston-Salem. The average additional direct hauling cost varies between \$10.20 and \$10.63 per ton, depending on the length of the contract. The second scenario is based on the city delivering recyclables to the city's transfer station on Burnt Poplar road, transferring the material in to large trailers, and then hauling the material to the WM MRF. HDR estimates that additional hauling and transfer station operations cost per ton averages \$13.59 to \$14.61 per ton depending on the length of the contract. These estimates include \$3.00 per ton to load the material into the larger trailers, which is about half the per ton cost for the city to transfer MSW through the facility. The WM BFO proposed a price of \$16.22 per ton for hauling (exclusive of loading), which is higher than the HDR estimate. Therefore, the transfer station haul option has not been considered further.

3. Other Financial Incentives

- a. For the ReCommunity fixed rate offers that do not include an education payment, they offered a full-time recycling coordinator valued at between \$35,000 and \$40,000 per year. HDR monetized the full-time recycling coordinator financial incentive in the model at a value of \$37,500 per year.
- b. For the ReCommunity fixed rate offer (Option 2), an education/marketing credit of \$10.00 per ton was offered and was monetized in the model.
- c. For the ReCommunity revenue share option, an education/marketing credit of \$9.00 per ton was offered and was monetized in the model.
- d. Waste Management offered several financial incentives which were monetized in the model. They include:
 - i. An education/marketing credit of \$1.00 per ton
 - ii. Annual eCycling Event - \$2,500 per year
 - iii. 10 Big Belly Solar trash compactors – a one-time incentive valued at \$66,000
 - iv. Education and Outreach infusion grant – a one-time incentive valued at \$75,000
- e. Waste Management also offered outreach and education services including 12 scheduled facility tours annually, 4 annual public speaking events, and an education facility for use at the MRF. Additionally, WM offered a fee-for-service residential recycling incentive program, known as Recycle Bank. While these additional incentives have merit, they were not monetized in the model because it is not apparent that they differentiate in any substantial way from the ReCommunity BFO.

ADDITIONAL HAULING COSTS

1. To accurately compare each option, additional hauling costs needed to be estimated for the Waste Management options (WM Direct and WM TS). As stated above, due to the estimate higher cost, the transfer station hauling options is not being considered further. The information below documents the assumptions made by HDR for both hauling options.
2. City Fuel Cost Assumptions
 - a. The initial fuel cost for City-purchased diesel is \$3.19 per gallon of diesel and increased by 7.43% per year.
 - b. The collection vehicles get 2.03 miles per gallon (mpg, this is a historical value tracked by the City) while on route and 3.5 mpg while direct hauling to Winston-Salem.
3. Labor Cost Assumptions
 - a. The City's routing model was used to estimate the additional time, mileage, and fuel needed to haul residential recyclables to each proposer's destination.
 - b. There are 4 days in a week.
 - c. 1 truck per route and 1 employee per truck.
 - d. 8 initial routes.
 - e. Employees are paid \$22 per hour which includes benefits.
4. Additional Truck Costs
 - a. Based solely on the routing model for residential collections, the additional travel time per truck to and from the WM MRF near Winston-Salem (WM Direct option) was estimated by City staff to be 1.5 hours per truck per day, or $8 \times 1.5 = 12$ additional staff hours per day for the fleet. This warrants the addition of another truck and a ninth residential route to accommodate the fact that each truck will be spending more time traveling to and from the MRF or drop off site and less time collecting recyclables.

- b. A new truck would be required in the first month of service for WM (direct hauling to the Winston-Salem facility).
 - c. The capital cost for a new collection vehicle is estimated at \$240,000.
- 5. Global adjustment for direct hauling to Winston-Salem
 - a. HDR used the City's data from the residential routing to estimate the additional haul cost for the WM Direct option, including fuel, labor, and additional truck(s). This additional hauling cost needed to be "scaled up" to represent the total recyclable stream (i.e., commercial, multi family, and other recycling routes the city services in addition to the residential routes). Using the city's data on total residential trips to the MRF compared to the total number of trips for all routes, the scale factor was estimated to be 1.4. Therefore, the additional hauling cost for the residential routes was multiplied by 1.4 to represent the additional cost of hauling all recyclables to Winston-Salem.
- 6. Transfer Station Costs
 - a. The Waste Management proposal suggested it might save money if the City utilized its MSW transfer station on Burnt Poplar road to transfer the recyclables to larger trucks before hauling to the WM MRF in Winston-Salem. This option was considered, however due to the additional cost being greater than the direct haul option, the transfer station option was not modeled.
 - b. The cost to process a ton of recyclables at the transfer station was assumed to be \$3.00 per ton. This is about half the current cost per ton to transfer MSW. Transferring the recyclables through the facility was assumed to be an incremental additional cost since staff and equipment are existing.
 - c. Transfer cost was escalated by the average annual CPI.
- 7. Hauling Costs from the Transfer Station
 - a. The Base haul cost was assumed to be \$2.858 per mile. This value is from the Hilco MSW proposal submitted May 10, 2012 for the 50-100 mile round trip option. Per the Hilco offer, for every 8 cents the current price of fuel is over the fuel benchmark of \$2.00 per gallon, the base cost per mile adjusts by 1%.
 - b. Since the round trip distance to the WM MRF is only about 30 miles, the Hilco value quoted for the 50-100 mile MSW option is likely a low value.
 - c. The cost of diesel fuel for an independent hauler was assumed to start at \$4.00 per gallon and increased by 7.43% per year.
 - d. The payload was assumed to be 13 tons per load.

HISTORIC AND PROJECTED ACR RATES GRAPH

1. Average Commodity Revenue (ACR) is the average current market price of all materials within one ton of recyclables, weighted off of percentages of each material and grade that make up the recyclables stream.
2. The historical ACR rates over the last 10 years are derived from data collected by ReCommunity (formerly FCR) for the materials processed and marketed from their Greensboro MRF.
3. The ACR from January 2002 through March 2007 averaged \$61.16 per ton.
4. The ACR from April 2007 through June 2012 averaged \$102.05 per ton.
5. Two "best fit" lines were estimated. The purple line is an extrapolation of the best fit line for the entire 10 year history. The green line is an extrapolation of the best fit line from March 2004 through June 2012. Assuming the historical values are projected into the future, the mid-point ACR (i.e., the ACR value at the end of the first five years of a ten year contract) is estimated to be \$167.53 for the purple line and \$153.78 for the green line.

6. The ACR projection lines are provided solely for reference and are not intended to be a prediction of future market performance.