

Changes made to the Draft Organics Processing Facility Feasibility Analysis based on comments received by the NRC

Below is a list of comments and questions received from the NRC on the Draft Organics Feasibility Analysis. After each comment/question (in bold text) is a brief description on how it was addressed in the final analysis.

General Comments

- 1. The Executive Summary needs beefing up. That is the part most likely to be read by most people and it is lacking important information.**

The Executive Summary in the final draft of the study has been significantly increased to include more information.

- 2. The bases for the calculations are not well documented. Factors are used whose origin is not provided so that it is difficult to judge their applicability or accuracy.**

More information has been added to the study to include some of the origins.

- 3. Options of sending the waste to YCCL and Recology are discussed but not included in the economic comparison. Since they are options open to the city, they should be compared with the others. There are endless potential combinations, but one I think deserves more attention is using the existing UCD digester with Davis waste. The interesting features of this option are the use of existing equipment and revenues from power sales.**

The final study has included more in-depth economics and details on both the YCCL and Recology options. There was not a lot of detail given in the draft about the existing AD facility at UCD because is not an available outlet for City of Davis organic wastes-it cannot accept yard materials. The final study has been updated to clarify this.

- 4. The report needs a statement about whether these options meet state mandates.**

There is some language in section 2 that summarizes current key state regulations regarding waste diversion. All options divert waste from the landfill, which is a key requirement for current mandates, however, the waste collection and outreach programs are of equal importance to achieve the diversion. The final report also clarifies how the options involving the City building a compost facility will need to go through CEQA, the State Water Resources Control Board and the Yolo Solano Air Quality Management District for approvals.

- 5. The big take-away message from the economics is that AD options cost more than compost-only options. From a cost point of view, choosing AD or not seems to be a bigger decision than who owns or operates the different kinds of facilities. Some discussion of non-economic benefits and risks would help a reader decide whether paying more for AD is worthwhile. In particular, differences in GHG emissions should be discussed.**

Technical, environmental, financial and policy aspects are discussed for each option in section 6. A GHG analysis was also added to the report.

- 6. Some of the policy and non-economic considerations should be reviewed. Of particular note is the apparent assumption that it is better for the city to own and operate its own facility as opposed to letting another entity take the waste. Doing this saddles the city with risks, responsibilities, staff needs, and debt that might not be desirable. The option of a joint waste entity should be explored as a way to reduce risks of uncontrolled costs and perhaps capturing**

economies of scale. Another item that needs to be reviewed is the value of environmental “glory” and whether the city loses diversion credit if it does not own its own facility.

Technical, environmental, financial and policy aspects are discussed for each option in section 6. Reviewing possibilities for a joint waste entity was not part of the scope of work. The phrase “environmental glory” was removed from the report and replaced with “recognition”. Owning a compost facility has no bearing on the City’s diversion credit. The City only needs to secure a contract with a compost facility that will accept all of its organics.

7. Caveats on the accuracy of the information contained in the report should be provided. A range of potential error in the cost calculations would be useful (i.e. ±25%).

While there are many calculations in this report, the purpose of this report is to provide the City with enough information to determine if further exploration is necessary. Range of error in cost calculations is not applicable for these types of projects and were not included in the scope of work. The costs were calculated using real costs obtained by a combination of the consultant’s knowledge and experience. There is not a way to provide a range of error in the technical sense. These are not statistical calculations. These are calculations on a set of assumptions and known industry knowledge, assuming the current industry environment. As is, it is reasonable to assume a 15% contingency for unknown cost factors. However, if any of the assumptions change for any reasons including, operational, political, economic, legal, etc., the cost will change accordingly. A sensitivity analysis can be performed which would consist of several “what-if” scenarios that would assumed changes to some of the critical cost factors. A sensitivity analysis would have increased the cost of the study and was not included in the scope of work.

8. Some guidance for where to go next would be useful. What’s the next step in making a decision? Are there any crucial questions need to be answered or data that need to be collected before proceeding? Is there any value in considering a phased a solution (e.g., giving the waste to Recology in the short term while a city-owned AD/compost facility is planned for the future) or should the city jump into a fully-developed solution right away?

Section 10 provides details on the next steps. This goal of this study was to provide a broad overview of the possibilities so that the City could make a decision on which option they wanted to investigate in further detail. This study is not intended to provide the City with sufficient information to choose a composting option and build it immediately. The process to design, fund, permit and build a facility may take years, which may mean that a “phased solution” may be what ends up happening.

9. Inadequate Presentation of Financials in Executive Summary - The Executive Summary is inadequate in discussing project economics. In particular, it should also include a summary analysis of annual byproduct value for each composting Technology option as well as a brief summary of the capital costs and annual operating expenses and then a summary analysis of annual net profit or loss.

The Executive Summary in the final draft of the study has been significantly increased to include more information.

10. Spreadsheets Claimed as Proprietary must be Open for Verification and Sensitivity Analyses - I am also concerned that the spreadsheets at the end of the report are apparently proprietary and the City cannot do sensitivity analysis on the assumptions and an audit on the validity of the calculations and formulas. I have never seen nor even heard of a municipal consultant's report in which these basic financial calculations and calculation of assumptions were not made available.

Was the contract signed with Clements explicit that these calculations/spreadsheets would not be provided?

It is common practice with proprietary products to not provide all the formulas for the calculations. The Scope of Work did not state that formulas were to be included, just the calculated results. As part of the increased scope of work, Clements provided a text document with all of the numbers generated from the financial pro forma. This text document does not show the calculations, formulas, or other proprietary information present in the document.

11. Inadequate Assessment of Impact of Transfer of Waste Hauling Franchise Agreement - Given the ongoing imbroglia involving the transfer of the City's Waste Handling Franchise Agreement from DWR to Recology, this impact must be analyzed much more thoroughly in this document or this report could be rendered obsolete before it is even finalized.

The transfer occurred after the original assessment was complete. Clements did add some additional language and looked into the Recology compost facility option in more depth as part of the expanded scope.

Specific Comments by Section

The page numbers listed below are references to the draft report.

Executive Summary

Page	Comment/Question
2	<p>Clarify whether the 48 tpd collected by the city includes monthly/seasonal street-collected waste. Also, state whether this includes the WWTP sludge.</p> <p>Yes, this is the average amount collected per day and it does include the monthly and the seasonal on-street collection of yard materials. It does not include sludge from the City's Wastewater Treatment Plant.</p>
5	<p>Clarify whether the costs are net or gross. In other words, are the revenues from the various products included in the costs? Also clarify whether this is an annualized cost including capital and operating expenses.</p> <p>Table 1.1 shows capital costs (gross), operating costs per year (gross and annualized costs), product revenue per year (gross and annualized), and net cost per ton (net cost of the facility on a per incoming ton basis. This includes revenues from products that the City controls).</p>
5	<p>Table doesn't include the Yolo or Recology options and the text doesn't indicate why these are excluded.</p> <p>These have been added to the updated report.</p>
	<p>Since the Executive Summary is likely to be the document of widest readership, I suggest adding a couple of things to fill out the description of the situation:</p> <p>List the capital costs of the various options and how they might be financed (revenue bonds? Will those affect the bonding capacity of the city?)</p> <p>This is outside the scope of the project. This is something that would be explored further if the City decides to go forward with further studies on building a compost facility.</p> <p>Provide a table of non-economic benefits (perhaps a version of Table 6.1) and policy considerations. For instance, there must be some benefit of considering Option B v. A, even if it isn't economic. Going in with Yolo, Recology, or UCD may be advantageous because they push operations complexities and marketing onto other entities and therefore limit the number of additional city employees/bureaucracy needed to operate the system. Product stability and reliability is another potential benefit of combining with another entity.</p>

	<p>Multiple organic sources and larger scale reduce the risk of making bad batches of compost that are problematic to dispose of. This is provided in Table 6.8 in the study.</p> <p>In conjunction with the table of non-economic benefits might be a table of risks to the city (budget or otherwise). A list of disadvantages (including some risks) is provided in Table 6.8 in the study.</p> <p>Rank the options according to GHG emissions (qualitative). AD recovers energy from the organics stream and thus offsets GHG emissions. Composting generates CO2 (aerated more than static because of the power needed). A GHG analysis that was approved by the Zero Waste Subcommittee is included in the new revision of the study in Section 8.</p>
Section 3-Approach	
9	<p>Policy considerations should be summarized in the ExSum. Perhaps a version of Table 6.1 would work. These have been added to the Executive Summary.</p>
Section 4- Feedstock Study	
10	<p>4.1.2 Toters are not used exclusively for organics collection. There's street collection. This has been updated in the final study.</p>
12	<p>Table 4.1 – Numbers don't add up. Total org line: 12674/3 do not equal 1056. The numbers in yellow are sums of the column above except for the last two. Add footnotes to explain calculation of these. This is clarified in the footnotes under table 4.1.</p>
12	<p>Students are not the reason the 4th quarter values are high. Notice that organics cart wastes are actually lower than 1st and 2nd quarters. The jump in 4th quarter numbers is primarily due to street pile pick-up. One the other hand, the absence of students is the reason the 3rd quarter is low. Again, look at the cart numbers. This has been removed from the final report.</p>
20	<p>The weight percentages seem to be based on visual assessments over 4 days. How accurate is this? How accurate does it have to be? I think a caveat that these numbers should be measured more carefully in future studies would be appropriate. The study utilized industry standard assessment methods--the same methods CalRecycle uses for their Statewide Waste Characterization Studies.</p>
24	<p>State the basis for assuming that food percentages will increase to 5 or 10%. As described in the report, this assumption is based on Clements' experience with other established organics collection programs.</p>
25	<p>I understand the reasoning behind the decision to take WWTP sludge out of consideration. However, I will point out that the biosolids in the new WWTP will have been treated by AD and should be little different from solid waste AD digestate, which is proposed to be blended into the composting system. Perception is the main obstacle. Because of the relatively small size of biosolids feed, I'm not sure it is worth re-doing any of this report. However, in the future, this organic feed should receive more attention. Clements confirmed that perception is the main obstacle. This could be included in any further studies that are done.</p>
Section 5-Products Market Assessment	
29	<p>Duplicated word (printed printed). I appreciate your comment that composting paper may not be its highest and best re-use. The duplicated word has been removed.</p>

	<p>The 0.67 ton of compost per ton of waste is a very important number and needs to be documented better. In particular it might be affected by dissimilarities between the plant it came from and the Davis/UCD feedstock composition.</p> <p>Clements was unable to provide details on their source. There are not many composting operations in California that are willing to share this information for a study that will be posted to the public, or even share it anonymously with Clements.</p>
32	<p>Table 5.1. The revenue numbers don't seem to serve much purpose in this discussion. Delete? What would be helpful is listing the potential compost demand of each crop (i.e. the tons/acre/yr applied). That way the reader could tell if the local market is large enough to absorb the 17000 ton/yr that would be produced.</p> <p>This was not part of the scope. Clements offered to remove the table rather than increase the scope of work, but staff directed them to leave it as it was originally.</p>
33	<p>How big is a bag? Based on \$6 per ft³ and \$6 per bag, one would conclude 1 ft³ per bag. But the calculations don't bear that out. (17100 ton feedstock)(0.67 ton compost/ton feed)(2000 lb/ton)(27 ft³/cy)/(1200 lb/cy) =515,500 bags, not 855,000. Please clarify this calculation.</p> <p>A bag is equal to approximately 40 pounds. The 17,100 tons is of compost product, not feedstock.</p>
34	<p>Table 5.2 is confusing. The first column looks like the cost per ton of additive (e.g. bat guano costs \$500/ton of guano), but if you follow the numbers, column 1 is the cost of that additive per ton of compost. Please clarify in table headings. It would help if you added a column stating the amount of additive per ton of compost used in the calculation. Also, the table shows numbers for 25 and 35% profit, but those numbers are not justified anywhere. Given the expected price for custom blended compost and subtracting out manufacturing costs, can the city expect to make this much profit?</p> <p>The chart heading have been modified. The numbers given are based on Clements' experience with other compost operations and industry standards. These are general numbers—if the City decided to pursue building a compost facility, a more in-depth study would explore this further.</p>
40	<p>Line 3. Shouldn't mechanical removal of contaminants be upstream of the AD if it is to be a pre-treatment step? Typo?</p> <p>Yes, this was a typo and has been addressed.</p>
40	<p>Explain why the example is for only 50 tpd. Later on (p 67) the text implies that the UCD is waste is incompatible (or at least undesirable) for AD. Why this is, may not be evident to the reader, especially given that UCD has an AD unit for these wastes. This would be a good location to provide this information.</p> <p>Table 4.6 and 4.7 show where the 50 tons per day comes from. Further text was added to another section of the report to clarify that the UCD anaerobic digestion facility cannot accept high-solid organics—such as yard materials and animal bedding.</p>
41	<p>Please provide a reference for the specific biogas yield and % methane.</p> <p>The provided specific gas yields and percent methane content are based on in-house data where certain assumptions were made (sources used: various literature data, project experience and operational data). To determine biogas characteristics that are derived from available local feedstock characteristics, one could consider performing biomethane potential tests and perform additional data analysis. It should be noted that feedstock characteristics are greatly dependent on location (incl. maturity of organics program, population composition, type of housing stock, seasonal fluctuation).</p>

42	<p>Clarify that Figure 5.2 is for AD-C digesters. Also, is there a reference to support the increase of the food waste fraction to 5% (and then 10%)? Finally, please describe the basis of the 62.5 cfm gas rate at 10% food waste.</p> <p>The title heading above the chart specifies that it is for AD-C digesters. As described above, the assumptions for the increases in food scrap collection is based on Clements' experience with other established organics collection programs. As described in the report, a small increase in food waste has a significant impact on the biogas production due to a higher specific gas yield for food waste compared with green waste.</p> <p>HS-C AD Process: Assumptions: 10% FW of total; GW amount stays the same: GW = 12,985 tpy; FW = 1,445 tpy; Total = 14,430 tpy Specific BG yield of GW + FW = 2,276 ft³/ton => BG production/yr = 32,842,680 ft³/yr => BG flow = 62.5 scfm</p>
44	<p>The statement that the WWTP is currently flaring all of its methane is at odds with the City's website which states proudly that it is being captured and run through a 75kW co-gen unit which reduces electrical costs \$100-140 per day. In addition the city's website also says the average gas production is 26,000 ft³/d which disagrees with Figure 5.3 which estimates the gas production rate at 69,120 ft³/d. Please check this out and adjust the text as needed. It's likely that the 69,120 figure is based on the new WWTP treatment train, but then it should be referenced so that the city is not contradicting itself.</p> <p>This has been updated and checked in the final report.</p>
44	<p>Typo in Table 5.5 (digesiton)</p> <p>The typo has been fixed.</p>
46	<p>Figure 5.6. Please verify whether the BioCycle costs include the cost of producing the gas. Presumably the California commercial price (and others shown on the figure) include the whole cost of producing each KWH and not just the cost of generating a KWH from available biogas. The point is that the comparison between the bottom lines and the top ones should be on the same basis.</p> <p>These charts were produced by Biocycle and not by Clements. The details on the analysis in these charts are not within the scope of work for this project.</p>
47	<p>It would be helpful in this section (or elsewhere) to state how much electricity could be produced to give a sense of scale. Youi might express it in terms of the number of households that the facility could service. Without this, the reader can't judge whether this is a significant power source. Will it power the whole city, the WWTP, a neighborhood, or a couple of houses?</p> <p>The final study has incorporated some relative numbers into the Executive Summary on page 8.</p>
48	<p>Top line. There is a fleet of CNG vehicles locally, Unitrans. Presently, Unitrans is looking at converting to electric vehicles, but if presented with renewable CNG, an analysis of GHG emissions might favor burning the biogas in the bus rather than burning it in a generator and then using that electricity to charge bus batteries.</p> <p>The only CNG fleet that was mentioned to Clements during the project was Davis Waste Removal's fleet, which has its own fueling station. If the City decided to pursue building a compost facility, a more in-depth study would explore this further.</p>
<p>Section 6-Alternative Projects Evaluation</p>	
52	<p>Table 6.1. Feedstocks. Same as Project #3 2?</p> <p>Yes, this was a typo and it was fixed in the final study.</p>

52	<p>Table 6.1. Need some explanation in the text about the GHG credits and why the city would or would not get them depending on the project chosen.</p> <p>The term GHG credits is board, and Clements indicated that they were mainly trying to showcase that the City will not get any environmental recognition if using a non-City organics processing facility. Having your own facility gives you access to GHG grants and loans. Without your own facility, you lose access to these benefits.</p>
59	<p>Using the \$63/ton is not very conservative, especially given that we know Northern’s costs will go up. Even if it is wrong, it would be better to increase this by some nominal 10-20% amount to be conservative in the cost calculations.</p> <p>The \$63 is a real number that Clements received as an estimate from YCCL on what they expect their tipping fee to be for the organics processing.</p>
61	<p>The considerable advantages of the YCCL option are laid out well. The disadvantage, though, needs some further explanation as to why it is a disadvantage. Sure costs might go up, but presumably long-term contracts would be signed so that costs could be predicted at least over the term of the contract. It’s true that the city would lose control over other diversion options, but (1) what other diversion options are more attractive in the short run, and (2) the city could re-gain control at the end of the contract. Somewhere in the document, there should be some discussion of phasing and consideration should be given to this option as the first phase. If at the end of a 10-20 year contract there are better alternatives available, the city could move away from YCCL at that time.</p> <p>More information has been added to this section in the final study. Clements has indicated that in 20 years, the permitting and technological landscape for these facilities would be significantly different. In the last 5 years regulations, state mandates, and technology systems have already gone through multiple shifts and changes.</p>
61	<p>Another alternative that should be mentioned is the potential for creating a joint operations entity for the organics processing facility. That way, the city can exercise some degree of control and perhaps protect itself from future monopolistic price increases. In fact, based on Table 4.2, the county feedstock is pretty evenly divided among the three large cities (Davis 30%, Woodland 31%, Winters 3%, West Sac 36%). A joint powers authority with all of the cities might have advantages in terms of control. (UCD might contribute an amount equal to about half of the major cities, about 13,000 tpy, and might want to be a partner as well.)</p> <p>This was not within the scope of work for this project. This would need a much larger budget to coordinate with these Cities and review their current waste franchise agreements to review rates, potential costs, routes, site locations, etc. The expanded scope looked an option to increase the economy of scale with a large-scale composting facility.</p>
61	<p>Finally, perhaps not here, but somewhere in the report, a discussion of economies of scale should be included. A county facility that included UCD would be about 4 times the size of a facility operated by Davis alone (based on feedstock streams) and 2.5 times the size of a joint Davis/UCD facility. Are economies of scale (and spreading the risk) reflected in the economic analysis later in the report?</p> <p>This has been included in the final study. The expanded scope looked an option to increase the economy of scale for this compost facility.</p>
62	<p>The concept of some other entity “getting the glory” for diverting waste should be removed. The goal of this project should be to provide cost-effective and environmentally sustainable organic waste services to the citizens, not reap environmental glory. Besides, with both the Yolo Co and UCD alternatives, Davis would always portray itself as a partner or participant in the larger project. That would be glory enough.</p>

	This phrase has been removed and altered to “recognition for its environmental stewardship.”
64	Agree that old Davis landfill should not be seriously considered. No edits needed.
67	See note on pg 40 concerning the need for an explanation on why UCD waste is not desirable for AD. This has been addressed in the final study.
68	Figure 6.7 doesn’t seem to show anything that Figure 6.6 doesn’t. Is it needed? Figure 6.6 shows the conceptual organics processing facility in relation to the WWTP. Figure 6.7 is zoomed in to show the details of the organics processing facility. Both site plans have the same conceptual site design.
73	Please clarify what is meant when you say AD achieves “significant diversion” if the digestate is composted. Does this mean that 60-80% of the organics are converted to gas? Why does this rely on marketing the composted residue? The residue and biogas production are not exchangeable, one is solid and one is gas. The incoming feedstock is reduced in size by 50% (Table 6.5). Volatile solids can be up to 80% of the incoming feedstock, but only ~55% is methane (e.g. biogas) (Table 5.3). Yes – the digestate will need an outlet as either: direct land application (stringent regulations), sent to composting facility, or landfill (not counted as diversion).
75	“Eisenmann has shown to achieve 80% digestate”. Does this mean 80% reduction in volume of the feedstock? Clarify. Also, how does this statement square with the 50% digestate production in Table 6.2? The 80% digestate means for every 100 incoming tons, the system produces 80 tons of digestate, or shows a 20% reduction. Table 6.2 (now Table 6.4) has been updated to use an average (75%) of typical digestate production from both AD system types. Clements has indicated that there are variations across technologies and within the same technologies across facilities. Technological data from the vendors have shown that these systems are designed to achieve 50% size reduction. Some facilities produce less than expected, some more. This can vary by day.
78	Need for a stormwater berm. Check with the city. It is likely that similar protection is required to keep surface runoff from entering the overland flow area, so an additional berm may not be needed. The WWTP informed us that this project would most likely need to obtain all new permits and would not be tied in with the WWTP existing NPDES permit(s). A stormwater berm, at a minimum, would be required. There is no levee/stormwater berm around the overland flow area, only around the Wastewater Treatment Plant.
80	In line with earlier comments, explain why it is a significant advantage for the city “to control its destiny”. At a city-owned facility, the city has control, but also has the responsibility of handling the waste. To the average citizen, turning that responsibility (and risk) over to another entity for a competitive fee would appear advantageous. I think the assumption here is that the city is exposed to some risk if it doesn’t control its destiny, but that risk isn’t apparent and some discussion of this topic is in order. There are advantages and disadvantages to a City-owned facility. This assessment focused on potential organics processing options for the City. Other than YCCL and Recology, the City would either need to develop their own facility or contract out the development/owner/operator to develop a facility within the region.
80	On pg 23 the text says that the UCD AD is operating at only 60% capacity. In the list here, though, there is no mention of Davis waste contributing to the 40% of capacity not being

	<p>utilized. In fact, due to the campus waste being less valuable for AD (as implied on pg 67), it would seem advantageous for the campus to replace some of its waste going to AD with city waste. Can you explain why using the campus AD is not mentioned as an alternative here?</p> <p>The UCD AD is not an option for the City’s waste. The UCD AD system does not accept yard materials nor comingled yard materials and food scraps. It is a liquids digester. This has been clarified in the final study.</p>
81	<p>Figure 6.16 gives no context. No one knows where 28068 is. Can you show where this facility is in relation to identifiable landmarks or say in the text (e.g. east of Pedrick Rd X miles south of the Primate Center or X miles south of Hutchinson Dr.)? It would help the reader understand the sensitive receptors discussion.</p> <p>The full address of the facility is given and described relative to the location of the main campus, and the location is marked out in Figure 6.17, so no edits were made.</p>
85	<p>Same comments here as those on pg 61 and 62 when discussing the YCCL alternative.</p> <p>Already addressed.</p>
88	<p>The air emissions regulations discussion here doesn’t seem consistent with the discussion on pg 79. There you say that the San Joaquin Valley Air Pollution Control District (SJVAPC) has BACT-certified static pile composting with 6-inches of finished compost cover that provides 60/60 (VOC/NH3) reductions. Here you say that SJVAPCD has adopted rules that provide 80/50 reductions, and imply that these levels might be required. Please check for consistency.</p> <p>On pg. 79 (now page 83), Clements discusses two different compost systems: (1) static pile composting with 6-inch compost cap that provides 60% reduction in VOCs & NH3; and (2) covered aerated static pile composting that provides 80% reduction in VOCs and 75% reduction in NH3. YSAQMD requires BACT, and SJVAPCD has certified both of these technologies as BACT, however, it is ultimately up to YSAQMD to determine if it will follow both system (1) and (2) or only (2). YSAQMD does not have a rule that requires a certain level of air contaminant reduction (i.e., requires 80% VOC reduction). The requirements of BACT are to be “Achieved in practice” and “Technologically feasible” (cost-benefit ratio for cost per emission reduction). This is described in the report.</p>
89	<p>Could not sudden changes in tipping fees be mitigated by negotiation of long-term contracts? Again, I think the “glory” and “credit for diversions” argument is specious. The city must meet state requirements for waste diversion and the accounting entity is the city. Isn’t the accounting based on city waste generation? Who owns the actual diversion facility doesn’t matter. What matters is whether the city-generated waste is diverted.</p> <p>Yes, there are a number of possibilities that could be negotiated in long-term contracts. The study was intended to have a broad view of options available to the City.</p>
Section 7-Project Economics	
90	<p>Table 7.1 is for Davis-owned facilities, I understand. But the range of Davis options includes YCCL and Recology. Shouldn’t costs for these options be included for comparison?</p> <p>This table was removed from this section, but the one that is in the Executive Summary has been updated to include more information.</p>
93	<p>It should be pointed out that the electricity made at this plant would be renewable, and therefore might command a premium price on the market. Using the city’s average electricity cost is perhaps too conservative?</p> <p>Clements has indicated that this is not the case for electricity. The “premium price” is dependent on Power Purchase Agreement (PPA) and some renewable energy systems PPA’s are not being renewed at the premium rates.</p>

<p>94</p>	<p>I know that there are endless options and limited budget, but I think that the option of using UCD’s existing AD unit with high-quality city feedstock in conjunction with composting would be sufficiently different and attractive to warrant at least a cursory economic analysis. In the compost-only UCD alternatives, is the existing AD unit simply going to be written off as a loss?</p> <p>The existing UCD AD will continue to serve UCD. The UCD AD system cannot handle the City’s organic waste.</p>
<p>94</p>	<p>The big take-away message from Tables 7.3 and 7.4 is that there is a big cost difference between compost-only options and AD-compost options. In fact that difference seems bigger than the effects of who owns and operates the facility. So I think it would be worthwhile to end the report with a summary of the non-economic benefits and risks that would help a reader decide. In particular, differences in GHG emissions should be discussed. The extra money from going to AD does reduce net GHG emissions. Another item that was brought up in Section 4.3.2 is state regulations. It would be helpful to a decision-maker to know if and how well each of the options discussed meets state mandates.</p> <p>The Expanded Scope provided a GHG analysis. Each option would satisfy the diversion mandates as they could handle all of the City’s organic wastes.</p>