February 14, 2005

Mr. Fernando Berton – IWM Specialist
California Integrated Waste Management Board (CIWMB)
1001 I Street
Sacramento, CA 95812 via email fberton@ciwmb.ca.gov

Subject: **Comments on the February 2005 Draft Conversion Technologies Report to the Legislature**

Dear Mr. Berton:

Thank you for allowing me to comment on the subject report. In draft form it is an excellent work product and a compilation of valuable information that supports the Board's "Zero Waste" initiative by identifying new technologies that when (and it should not be "if") adopted in the statutes, will most certainly advance California in terms of further diversion of municipal solid waste (MSW) from landfill disposal.

General Observations:

I understand the genesis of the report and although it does represent a number of very positive Key Findings, they do not consistently flow through to the Conclusions and Recommendations. As the report gets closer to its final form, I hope Staff and the Board will take an unbiased look at the Key Findings, will take ownership of Conclusions that are supported by those Key Findings, and will culminate with Recommendations to the Legislature that are specific, supportive and progressive.

Panda Development Group is a renewable energy developer who recognizes California as providing a significant opportunity for diverting and converting MSW to electricity or liquid fuels. California needs new electricity generation resources; it has a state-wide initiative for more biofuel production and use; it reportedly disposed of more than 39 million tons of waste in its landfills in 2003 (80% of which was organic in nature); and its population is expected to increase by 1.3% annually for the foreseeable future. Although the current statutes and applicable Public Resource Code (PRC) sections have been huge project development barriers, a golden opportunity now exists, supported by the results of the AB2770 study, to remove these barriers so project development can begin utilizing currently available technologies to convert these internal waste stream resources into useful energy resources. This is an opportunity that fully supports energy self-sufficiency within California

PANDA DEVELOPMENT GROUP 4100 SPRING VALLEY, SUITE 1001 DALLAS, TEXAS 75244
T: 972.980.7159 F: 972.980.6815 www.thepandagroup.com

which is exactly what the Governor desires. It is extremely important that the Board and ultimately the Legislature embrace this opportunity and expeditiously act in such a way that sends out clear signals to the marketplace.

Developers understand the challenges, costs and risks of siting, permitting and financing projects, but legislative uncertainty and the tendency to hold on to old concepts and past thinking when trying to address new technologies and progressive thinking, send out mixed signals which will always stifle new development and therefore progress.

There are a number of conversion technologies (CTs) that work and are in commercial operation; there is more than enough MSW to go around; California needs the primary end products from these conversion technologies; and California needs to divert more MSW from the ever-increasing landfill waste streams. Let's then promote and enact legislation that fully supports the means to achieve the desired results or nobody will ever get started.

Specific Comments:

The following comments are based on a review of the currently published information on this subject, and focus on key subject points, not specific report or statute sections:

- Replace the statute definition for "Transformation" (not really a clear term) with a definition for "MSW Combustion" that best reflects the process of the current (and possibly future) waste-to-energy (WTE) facilities.

- Re-title the statute definition for "Biomass Conversion" (also not really a clear term) to "Biomass Combustion", which better reflects the process of the current (and future) wood waste burning facilities.

- Add a new statute definition for "Conversion Technology" which encompasses all known and acceptable non-combustion thermal, chemical, or biological processes that can convert MSW waste streams into beneficial products. The definition can specifically exclude recycling, composting, combustion, and landfilling, but rightfully should not exclude anaerobic digestion since it more closely aligns with CTs even though it can produce composted material as one of its beneficial products. Additionally, the definition should be written to accommodate processes that use multiple technologies and new technologies yet unknown.

- Delete the statute definition for "Gasification" as it is technically incorrect and now will be unnecessary given the new definition for "Conversion Technology".

- Update the CIWMB integrated waste management hierarchy to more appropriately reflect:
  - 1st – Source Reduction
  - 2nd – Reuse & Beneficial Use (i.e. recycling, composting, conversion)
  - 3rd – Destruction & Disposal (i.e. combustion, landfilling)

- Remove the technology bias from the facility certification process. The report documents several positive benefits (e.g. net energy savings, reduced emissions) from using CTs as another beneficial use of MSW. Although domestic environmental data are lacking (and I encourage the Board to invest in the collection of this data from Europe & Japan), the fact that CTs have been in successful commercial operation outside the USA should be sufficient to incorporate these same CTs into the CIWMB facility certification process without bias. The State of California has a very complex and thorough permitting process; let the other agencies evaluate & drive the air permitting and waste discharge permitting processes and limits applicable to each project. The checks & balances already exist and are comprehensive.

- Be specific on CT facility jurisdictions. In certifying a CT facility, the CIWMB's jurisdiction on the MSW waste streams should end at the point where the MSW is unloaded at the facility, at which point the waste stream becomes feedstock (i.e. fuel). CIWMB jurisdiction may resume if and where facility residuals are reloaded for landfill disposal.

- Allow full diversionary credit for CT facilities. **ALL** reuse and beneficial use of MSW waste streams should be afforded 100% diversion credit since the whole point is to "divert' waste streams from going to the landfills. All current source reduction and recycling programs must stay in place. As the composting market has historically only put a dent in diverting the organic waste streams, alternative daily cover (ADC) was subsequently added to provide another 100% diversion credit outlet. As reported for 2003, composting facilities processed 10 million tons of organic material, 46% of which went for ADC, and yet the statewide diversion rate was only 47%, 3% less than the target. How beneficial is the use of ADC if it ultimately ends up in the landfill? Where's the landfill diversion in this case? CTs by design need upstream recycling in place to extract the metals, glass & some of the plastics from the waste streams, but the post-recycling waste streams now destined for the landfills can be put to beneficial use and therefore should get 100% diversion credit. Even if the CT feedstock is afforded 100% diversion credit and is then negatively adjusted by the CT residual tonnage that does ultimately go to the landfill, the fact remains that something significant of beneficial use is produced in the form of electricity, liquid fuels, or compost.

- Establish a level playing field in the market and don't lose sight of the "Zero Waste" goal. It appears the market feedstock supply exceeds the needs of the composting industry, and the report suggests that the impact of adding CT facilities will not negatively impact recycling or

composting, but in fact may have a positive affect. The local markets will self-adjust; they always do. Actually the biggest marketing concern is the potential impact to the recycling export market if China ceases to be the primary buyer.

In summary, the opportunity exists to advance California to the next step towards the ultimate goal of "Zero Waste". This step could put CTs on the forefront and allow them the opportunity to become permitted facilities that can fairly compete in the landfill diversion market. All it takes is 1) a few statute definition changes, 2) the acceptance of CTs on the waste management hierarchy as a beneficial use, and 3) a full and proper diversionary credit for CTs that do in fact divert solid waste streams from landfill disposal. Please don't let the old ways stand in the path to the future.

Please direct any questions regarding these comments to me at 972-361-1310 or jzamlen@thepandagroup.com.

Respectfully submitted,

John R. Zamlen – Senior Director
Panda Development Group