



July 8, 2004

The Honorable Jaclyn A. Brillig  
Secretary  
New York Public Service Commission  
Three Empire State Plaza  
Albany, New York 12233

Reference: Case 03-E-0188 – Retail Renewable Portfolio Standard

On behalf of the Integrated Waste Services Association (IWSA) and its public and private members, we appreciate this opportunity to reply to comments on the Recommended Decision issued June 3, 2004 by Administrative Law Judge Eleanor Stein. The IWSA is the national trade group representing the waste-to-energy industry, including the ten waste-to-energy facilities operating in New York State that cleanly dispose of more than 11,000 tons of solid waste and generate about 300 megawatts of clean, renewable electricity.

This reply focuses on a single misconception that has been the focus of opponent's arguments against inclusion of waste-to-energy as a renewable source of power. Critics of waste-to-energy contend that the technology should be stripped of its renewable status because waste-to-energy emissions for nitrogen oxides and mercury are higher on a per-kilowatt hour output basis than coal facilities.

Emission comparisons of these two compounds appear to be the only environmental issue left to argue against waste-to-energy. The argument stands alone largely because facts clearly show that waste-to-energy has proven its environmental benefits in a large number of areas.

First, even critics agree that waste-to-energy avoids a significant amount of greenhouse gases from entering the atmosphere, as compared with other renewable energy sources and fossil fuels. The U.S. EPA analysis and numerous other studies prove that more than 33 million tons of greenhouse gases do not enter the atmosphere each year because of the operation of waste-to-energy plants.

Second, environmentalists and others concur that waste-to-energy produces much lower emissions than biomass combustion and landfill gas recovery – two technologies they support as renewable – for a long list of pollutants (*see table 1, 10/31/03 IWSA submission*):

- Waste-to-energy emissions are several orders of magnitudes (approximately a factor of 1000 less) lower in comparison with landfill gas recovery and biomass for emissions of dioxin.
- Landfill gas recovery and landfills themselves, as well as biomass facilities, emit significantly more volatile organic compounds and hazardous air pollutants, such as benzene and toluene, than waste-to-energy plants.
- Waste-to-energy also is significantly cleaner than landfill gas and biomass when comparing emissions of particulate.
- Emissions of carbon monoxide from biomass and landfill gas recovery are significantly higher than waste-to-energy emissions.

Third, the selection of emissions comparisons as the sole environmental criteria upon which a renewable selection is based is flawed. A wide array of environmental impacts should be considered, and a comparison would greatly favor waste-to-energy:

- Land use: Wind farms and solar technology require an order of magnitude more land to produce 1 megawatt of electricity as compared with waste-to-energy.
- Water Impacts: Waste-to-energy facilities require little in the way of make-up water and are zero discharge facilities. They pose none of the aquatic impacts associated with hydroelectric plants.
- Waste handling: Waste-to-energy safely disposes of 11,000 tons of New York trash that otherwise would be shipped out of state to landfills. Emissions from trucking and land disposal are eliminated. No other renewable technology offers this benefit.
- Transmission access: Waste-to-energy often is operated in or near urban areas, lessening environmental impacts of transmission and distribution.

Fourth, critic's insistence on emissions comparison of nitrogen oxides and mercury ignores the offsetting emissions avoided by use of waste-to-energy. The comparison also ignores the fact that power production is only one of two purposes for waste-to-energy. Even compared in this most unfavorable light, the attached table shows that the net average of nitrogen oxide emissions from all New York's waste-to-energy plants is comparable with coal-fired plants, the electric generating technology that waste-to-energy displaces because of its ability to provide reliable, baseload power.

Critics' final argument, that waste-to-energy's mercury emissions are as high as coal power plants, is the only environmental criteria left to discuss. In answering this concern, we point again to a comparison of mercury emissions submitted herein that shows that alternative methods of solid waste disposal and electricity production emit comparable amounts of mercury. The updated Table 1 including 2003 emission test results further shows that emissions of mercury continue to decrease from waste-to-energy facilities. Waste-to-energy operates with the most sophisticated mercury pollution controls; equipment that regulators are fighting in the courts to put on coal-fired plants. Mercury emissions from waste-to-energy plants are measured in the parts per millionth range per cubic meter of air, a unit so small that it sometimes cannot be detected by testing protocol methods. The combustion gases are cleaned to remove on average more than 90% of mercury in the exhaust. Despite these facts, critics insist on a comparison of emissions on a lb/GW basis that is misleading and exploits the fact that waste-to-energy's primary purpose is solid waste disposal, and not electrical generation.

The waste-to-energy industry has actively supported New York legislation to remove mercury-containing products in the waste stream. The legislation will soon be signed by Governor Pataki. Mercury emissions from waste-to-energy are decreasing and will continue their decline with the reduction of mercury in the waste shed. It also should be noted that mercury emissions tested at landfills include the more toxic form of mercury, methylmercury, that is not emitted from waste-to-energy plants.

Finally, the concept of a comparison using discrete, simplistic characteristics of one renewable technology to another technology, i.e., waste-to-energy versus coal-fired power plants, is specious. How many tons of solid waste do coal plants manage? The answer is obvious and the question is as unreasonable as the comparison of waste-to-energy and coal-fired plants. How many acres of land are displaced to produce one megawatt of electricity from wind or solar plants as compared with waste-to-energy plants? How many birds die because they fly into wind plants in comparison to waste-to-energy plants? All technologies may be perceived negatively. Offsetting advantages must be considered, and fairly weighted to reach decisions.

Waste-to-energy's environmental record is excellent, and stands up strong in comparison with other renewable energy sources. There is no reason to exclude waste-to-energy technology in the RPS.

Finally, we are pleased to submit two resolutions approved June 28, 2004, in Boston by the U.S. Conference of Mayors that urge states and other decision-makers to support the renewable energy benefits of waste-to-energy technology. We appreciate this opportunity to reply to concerns raised in the June 23 comments to your agency.

Sincerely,

/signed/  
Maria Zannes  
President

**Energy and Environment Committee**  
**Resolution Supporting the Recognition of Greenhouse Gas Reduction Benefits**  
**Of Waste-to-Energy and other Renewable Energy Sources**

WHEREAS many local communities and municipalities have adopted an integrated waste management approach that includes development and operation of renewable energy technologies such as waste-to-energy and electricity produced from landfill gas, and

WHEREAS each community should strive to ensure safe disposal of solid waste and electricity for its residents from clean energy sources, and

WHEREAS renewable energy sources such as waste-to-energy and electricity produced from landfill gas provide a number of environmental benefits including utilization of indigenous natural resources, reduced dependence on imported foreign energy supply, increasing domestic fuel diversity, and significant reduction in the potential for release of greenhouse gases into the atmosphere, and

WHEREAS the U.S. Environmental Protection Agency and other experts in the field of greenhouse gas emissions have studied waste-to-energy's ability to avoid the release of greenhouse gas emissions into the atmosphere and found that facilities nationwide annually avoid the release into the atmosphere of more than 40 million metric tons of carbon dioxide or its equivalent, a potent greenhouse gas, and

WHEREAS the U.S. Department of Energy, the U.S. Congress, and many states, counties, and local governments are considering the adoption of policy, legislation, and regulations to quantify the reduction or avoidance of greenhouse gas emissions from various technologies and management methods, and in some cases assign greenhouse gas credits for the reduction or avoidance of greenhouse gas emissions emitted into the atmosphere,

NOW THEREFORE BE IT RESOLVED that the U.S. Conference of Mayors recognizes the significant contribution provided by waste-to-energy and electricity produced by landfill gas in avoiding the release of greenhouse gases into the atmosphere, and

BE IT FURTHER RESOLVED that the U.S. Conference of Mayors urges the U.S. Department of Energy, the U.S. Congress, states, counties and local governments to quantify the amount of greenhouse gas emissions avoided by the use of waste-to-energy and electricity produced from landfill gas using the U.S. Environmental Protection Agency methodology or similar method, and to grant these technologies the same incentives as provided in policy, legislation and regulation to other technologies or methods that reduce or avoid release of greenhouse gases.

**Energy and Environment Committee**  
**Resolution Supporting a Generator's Title to Renewable Energy Credits and other Environmental Benefits Produced from the Generation of Renewable Energy Sources**

WHEREAS many local communities and municipalities have adopted an integrated waste management approach that includes development and operation of renewable energy technologies such as waste-to-energy and electricity produced from landfill gas, and

WHEREAS each community should strive to ensure safe disposal of solid waste and electricity for its residents from clean energy sources, and

WHEREAS renewable energy sources such as waste-to-energy and electricity produced from landfill gas provide a number of environmental benefits including utilization of indigenous natural resources, reduced dependence on imported foreign energy supply, increasing domestic fuel diversity, and significant reduction in the potential for release of greenhouse gases into the atmosphere, and

WHEREAS the U.S. Conference of Mayors fully recognizes the renewable and other environmental attributes of the generation of power by waste-to-energy and electricity produced from landfill gas, and

WHEREAS the U.S. Congress, and many states have adopted or are considering adoption of laws that establish renewable energy credits in recognition of the sustainable, indigenous and clean energy production associated with generating electricity from municipal solid waste that may be traded in renewable marketplace.

WHEREAS communities with waste-to-energy facilities benefit from the sale of electricity produced by municipal solid waste by receiving lower disposal costs and by sharing directly in the revenues generated by the sale of electricity.

NOW THEREFORE BE IT RESOLVED that the U.S. Conference of Mayors recognizes the significant contribution provided by waste-to-energy and electricity produced by landfill gas in meeting the demand for renewable energy, and

BE IT FURTHER RESOLVED that the U.S. Conference of Mayors urges the U.S. Administration, the U.S. Congress, the Federal Energy Regulatory Commission, Public Service Commissions and states to recognize that the waste-to-energy generator has legal title to the renewable energy credits unless otherwise stated in contract between the generator and the buyer of renewable power.

**Updated Table SMS-1  
taken from Sam Swanson Affidavit  
3-Oct-03**

Reference Information		2000 Data (b)					2004 Data				
Line	Facility Name	Estimated 2000 MW-hr	eGRID 2002 Hg as lb/GW-hr	eGRID 2002 NOX as lb/MW-hr	Weighted Average Results (c)		Estimated MW-hr	Facility Factors		Weighted Average Results	
					Hg lb/GW	NOX lb/MW		Hg as lb/GW-hr	NOX as lb/MW-hr	Hg lb/GW	NOX lb/MW
1	New York Waste to Energy										
2	Hempstead RRF	471779	0.0872	5.226	0.024	1.448	557460	0.1071	5.995	0.031	1.721
3	Dutchess										
4	Niagara Falls RRF	329548	0.3204	1.744	0.062	0.338	422072	0.1629	4.659	0.035	1.013
5	Babylon	111392	0.2065	2.946	0.014	0.193	104432	0.4445	4.205	0.024	0.226
6	Onondaga	262099	0.0249	4.479	0.004	0.690	224036	0.0697	5.287	0.008	0.610
7	Huntington	157260	0.0566	4.867	0.005	0.450	173576	0.0264	5.174	0.002	0.463
8	Islip										
9	Westchester	275204	0.5836	4.959	0.094	0.802	384095	0.2601	5.027	0.051	0.994
10	Adirondack	95011	1.1875	6.662	0.066	0.372	76286	0.3100	6.555	0.012	0.258
11	Oswego										
12	Weighted Average	1702293	0.352	4.412	0.269	4.292	1941957			0.164	5.284
	Offset emissions from avoided landfill emission factors									4.95E-03	0 (a)
	Offset emissions from avoided electrical production (coal usage)									0.0455	4.039
	Net WTE Emission factor									0.114	1.245
13	NY Coal Plants in eGRID 2002										
	AES Somerset	5120609	0.0166	2.929	85002	14998264					
	Lovett	2044645	0.0227	4.203	46413	8593643					
	AES Cayuga	2317414	0.0407	3.383	94319	7839812					
	Danskammer	2715855	0.0508	3.984	137965	10819966					
	Station	3849648	0.0547	5.673	210576	21839053					
	Rochester 7	1420264	0.0567	4.013	80529	5699519					
	Station	3833172	0.057	3.314	218491	12703132					
	AES Greenidge'	1141565	0.0632	5.218	72147	5956686					
	AES Westover	887332	0.0654	5.873	58032	5211301					
	AES Jennison	229781	0.1674	5.388	38465	1238060					
	AES Hickling	170912	0.2246	5.536	38387	946169					
	Weighted Average	23731197	0.064	4.561	0.0455	4.039					

(a) There is a reduction of NOX due to the avoided emissions from flares and/or other combustion devices however a specific value was not available. Therefore a value of zero was used as a conservative estimate.  
(b) All data is from Table SMS-1 Mercury and NOX Emission Rates from the Affidavit of Sam W. Swanson for Case 03-E-0188, dated September 24, 2003.  
(c) The weighted average for the State of New York was the overall emission factor used for comparison purposes in the affidavit.