



June 23, 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 comment 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.

The Recommended Decision contains two significant errors. First the RD excludes a vital existing renewable energy source – waste-to-energy. Second, the RD suggests that New York’s renewable portfolio standard should ignore existing renewable sources, thus threatening to erode the essential foundation now in existence for development of a RPS.

Waste-to-Energy is Clean, Renewable Energy

The RD questions the environmental benefits of waste-to-energy and ignores the technology’s strengths in comparison to other sources accepted as renewable in New York. The following table, its data taken from the U.S. Environmental Protection Agency’s most recent published inventories, is most illustrative. Critics of waste-to-

energy and the RD itself refuse to address the environmental impacts and emissions of other renewable resources, and chose to ignore any attempt at a comprehensive comparison with waste-to-energy. The reason for such ignorance appears to be that the facts, under scrutiny, fully support waste-to-energy's environmental superiority over other renewable energy sources.

**Renewable Energy Sources
Emissions per Megawatt-hour Generated (1)**

Reported in lbs per megawatt hour

Pollutant	Waste to Energy	Wood Waste	Landfill Gas To Energy
Particulate	0.085	0.62	0.8
NOx	5.6	4.4	4.2
SO2	0.49	0.50	0.00036
HCl	0.32	0.38	0.00034
CO	1.0	12	7.8
Dioxins/Furans	0.009E--05	3.34E-05	2.07E-05
Total Hazardous Air Pollutants (3)	Nondetect	0.68	0.45
Non-Methane Organic Compounds	0.01 (2)	Incl. In Total HAPs	2.12
Benzene	Nondetect	0.084	0.01
Toluene	Nondetect	0.018	0.15
Lead	0.00058	0.0010	Nondetect
Mercury	0.00027	0.000070	0.0000046
Cadmium	0.000040	0.000082	Nondetect
CO2	3635	3900	4449

Footnotes:

(1) Emissions listed on this table are derived from EPA emissions data bases, EPA AP-42 factors or Dioxin Reassessment, depending on best available agency data. Emissions reflect energy generation only, and do not include fugitive emissions from landfills. Waste-to-energy and biomass are not considered sources of fugitive emissions.

(2) Waste-to-energy typically tests at non-detect levels for NMOC, but an assumed value of 1 ppmdv at 7% O2 was used in this table as the worst case.

(3)The scope of HAPs reported for each source is based on EPA AP-42. HCl is not included in this column, but is reported separately on this table.

As the comparison shows, waste-to-energy emissions are lower than other accepted renewable sources in most cases when compared on the basis of megawatt-hour generated, particularly comparisons of volatile organic compounds such as benzene, toluene, and other hazardous air pollutants. Emissions of dioxin from landfill gas and wood waste biomass facilities, for example, are 1000 times higher than dioxin emissions from waste-to-energy. Instead of a comprehensive evaluation of environmental impacts and emissions, critics select one or two pollutants to make a case against waste-to-energy, and ignore overwhelming evidence of waste-to-energy's lower emissions. For example, critics claim that mercury

emissions from waste-to-energy are higher than coal facilities on an output basis. However, the record shows that if a ton of waste is combusted in a waste-to-energy facility versus a landfill equipped with energy recovery, more mercury – in a more toxic form – may be emitted by the landfill with energy recovery. (IWSA submission, 10/31/03)

Comparing waste-to-energy emissions to a coal-fired power plant, or even a natural gas-fired power plant, is a flawed assumption, as it does not take into account the avoided emissions from the safe disposal of trash by combustion in the waste-to-energy facility. Consider the ramifications if an existing waste-to-energy facility were to close; the emissions per ton of MSW disposed, i.e., sent to a landfill, would increase and additional air pollution would result from the need for new electric generating capacity. The resulting emissions would be far greater than if the waste-to-energy facility continued to operate.

Waste-to-energy is unique among power production facilities in that it provides for municipal solid waste disposal in addition to power production. Trash is reduced in volume by about 90%. Less land is needed for disposal. In 2003, the U.S. Environmental Protection Agency completed a comprehensive review of compliance test reports for every waste-to-energy facility in the country and concluded that the facilities are a “clean, reliable, renewable source of energy” that produce electricity “with less environmental impact than almost any other source of electricity.” (IWSA submission, 9/22/03)

New York’s facilities have the most advanced emissions control equipment commercially available including scrubbers to control acid gas, fabric filters to control particulate, selective non-catalytic reduction (SNCR) to control nitrogen oxides, and carbon injection to control mercury and organic emissions.

Waste-to-energy technology nationwide reduces eleven million metric tons of carbon equivalents, or 33 million metric tons stated as CO₂, that otherwise would be released into the atmosphere on an annual basis, according to an analysis using the U.S. EPA’s Decision Support Tool, and eight years of reporting by the IWSA to the U.S. Department of Energy under its Voluntary Reporting of Greenhouse Gases. (IWSA submission, 4/20/03; and 9/22/03.) A detailed, project analysis of a facility’s contribution to solving the threat of global warming has been completed for a 1500-ton-per-day waste-to-energy facility in the northeast. Researchers used information regarding alternative landfill disposal, plant emissions, trash composition and other plant-specific data and analyzed the information using the EPA Decision Support Tool. The study determined that about 270,000 tons of carbon dioxide equivalent emissions are avoided annually because of this one plant’s operations. Furthermore, waste-to-energy as an alternative to land disposal and power generation from coal prevents the release of nearly 24,000 tons of nitrogen oxides and 2.6 million tons of volatile organic compounds. (IWSA submission 9/22/03)

Communities with waste-to-energy facilities have a recycling rate of 33% as compared with the national average of 28%. In New York, communities with waste-to-energy plants recycle at a rate of 38%. Onondaga County hosts a waste-to-energy facility and holds the highest recycling rate in New York with more than 65% of the waste stream being recycled. (IWSA submission 9/22/03)

The RPS is Vital to Waste-to-Energy in New York

The ten waste-to-energy plants in New York represent approximately 400 full-time jobs. The facilities annually contribute \$100 million into the state's economy. Local governments own several facilities and benefit 100% from energy sales. Facilities that are privately owned share up to 90% of the energy revenues with the communities they serve. Without exception, the energy revenues at all ten plants are a key part of the economic matrix that supports the facility. These facilities depend upon two sources of revenue: garbage disposal fees and electricity revenues. If the energy revenues are threatened, disposal fees or local taxes will need to be raised to compensate.

Waste-to-energy plants' primary function is a vital public service: clean, safe, efficient garbage disposal. Facilities cannot compete in an open market with traditional power plants such as natural gas and coal-fired generators. Waste-to-energy can compete on an even playing field with other renewable generation.

A decision to exclude waste-to-energy from the RPS threatens the investments made by New York local officials and skewers the energy and disposal marketplace.

Waste-to-Energy is Renewable: Precedent and Support

The RD suggests that there is not sufficient public support for waste-to-energy as a renewable resource. Critics may be loud, but the record shows that the significant support for waste-to-energy is no less impressive and based squarely on fact.

The facts show that waste-to-energy is considered a renewable energy source by federal policy and law, as well as by fifteen states that have defined renewable generation. The states of California, Connecticut, Hawaii, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, Pennsylvania, Virginia and Washington define waste-to-energy as a renewable energy source of electricity.

The U.S. EPA states that waste-to-energy facilities are a "clean, reliable, renewable source of energy" and waste-to-energy facilities produce electricity with "less environmental impact than almost any other source of electricity."

The U.S. Department of Energy recognizes waste-to-energy as a renewable energy source and includes it in their tracking of progress toward achieving the Federal Government's renewable energy goal, established by Executive Order 13123.

The Federal Power Act Amendments of 1978 defines renewable electric energy as electric energy produced by a renewable energy facility which produces electric energy solely by the use, as a primary energy source, of solar energy, wind energy, waste resources, biomass resources, geothermal resources, or any combination thereof.

The Public Utility Regulatory Policy Acts definition of small power plant production facility is as follows: The term renewable energy means electricity generated from biomass, waste, renewable resources to include wind and solar, geothermal resources, or any combination thereof.

The Federal Energy Regulatory Commissions Regulations (18 CFR.Ch. I, 4/96 Edition, Sec. 292.204) defines biomass energy as Any primary energy source which, on the basis of its energy content, is 50 percent or more biomass shall be considered biomass.

The U.S. Environmental Protection Agency's *Characterization of Municipal Solid Waste in the U.S.: 1998* calculates that the biomass content of municipal solid waste is more than 70%.

According to the U.S. Department of Energy "Biomass is a term that includes all energy materials that emanate from biological sources, whether they are wood or wood wastes, residue of wood processing industries, food industry waste products, or municipal solid waste. Unlike the burning of fossil fuels, combustion of biomass merely recycles the carbon fixed by photosynthesis in the growth phase."

The *Biomass Research and Development Act of 2000* signed into law on June 20, 2000 defines biomass as any organic material that is available on a renewable or recurring basis, including agricultural crops and trees, wood and wood wastes, plants, grasses, residues, fibers, animal wastes, municipal wastes, and other waste materials.

The Department of Energy's Conservation and Renewable Energy Reserve Program lists the following as 'qualified renewable energy generation' for purposes of its program: 3.1 Biomass resources - combustible energy-producing materials from biological sources which include: wood, plant residues, biological wastes, landfill gas, energy crops, and eligible components of municipal solid waste.

The fuel used in waste-to-energy plants to produce clean electricity is municipal solid waste. Trash is both sustainable and indigenous - two basic criteria for establishing what is a renewable energy source.

Most important, thousands of New York citizens rely upon waste-to-energy as a source of clean electricity and safe solid waste disposal. The record contains numerous letters and comments from residents who live in communities with waste-to-energy, state legislators, scientists, engineers, researchers, health experts and academics who whole- heartedly support the technology and its renewable status.

The Economic Advantages of Waste-to-Energy in the RPS

Waste-to-energy provides more reliable, base load power much more so than other renewable sources, and its inclusion in the RPS will result in mitigating price volatility and the risk of higher natural gas prices in a market with fewer energy sources.

Waste-to-energy has a substantial positive impact on the creation of long-term, high-quality local jobs. The New York State AFL-CIO understands that waste-to-energy means New York employment. They fully support waste-to-energy and its renewable status. The State's ten plants provide about 400 full-time jobs and contribute about \$100 million to the State's economy. A 50-MW wind power project would employ about 20 full-time operational employees. A waste-to-energy facility of similar electrical output employs 50 to 75 workers full-time. These facilities rely heavily upon local contractors for maintenance and repair services.

The facilities not only contribute to the reliable base load capacity, they also diversify the supplier base in an area that is lacking in such diversity. Reliability and access to transmission in urban areas is a significant benefit made all the more important following this summer's blackout.

Critics of the technology claim that waste-to-energy power may "take away" a market share from wind, solar or other technologies. The criticism is a short-sighted and is, at its core, based on greed. Critics are correct that a lesser number of technologies allowed into an exclusive "renewables" group will increase the worth, and the price of those generators' electricity. Demand and the price paid for energy grows even greater for those fewer suppliers who enjoy charging higher and higher prices. It is industry's job to create better markets for their products, and excluding waste-to-energy from a renewable portfolio standard certainly would produce a more lucrative market for others. But exclusion would not benefit the consumer or public policy, particularly a public policy that includes the aggressive goal of generating one-quarter of its electricity from renewables while also increasing competition among electric suppliers, generally, and renewable energy suppliers in particular. Inclusion and diversity support consumer choice, lower prices, and the greater public good.

Existing Facilities Must Be Protected

New York currently generates about 300 megawatts of renewable energy from its ten waste-to-energy plants. The RPS must protect that renewable generation, or risk erosion of the base upon which a renewable marketplace will grow.

The RD is based on the concept of an unchanging baseline, and a policy that favors only new renewable facilities ignores those technologies that the State has relied upon for years to be a leader in renewable energy generation.

New York's existing renewable baseline is not fixed in stone. The Commerce Clause of the Constitution allows generators to sell their power nationwide, and if existing renewables are not provided benefits under the RPS in New York, the power and/or renewable attributes will likely be sold outside New York where benefits do exist. If existing renewables are ignored in this fashion, the baseline will be eroded and the State's renewable goal will be out of reach. Existing renewables such as waste-to-energy should be encouraged to continue generating reliable power for New York.

By ignoring existing facilities, the RD jeopardizes the cost balance of facilities such as waste-to-energy. The RD rightly points out that waste-to-energy facilities have an additional source of revenue, i.e., the waste disposal fee. However, the RD's logic in using this additional revenue source as a justification for exclusion of waste-to-energy from the RPS is flawed. Facility revenues come from fees paid to dispose of the garbage and the price paid for electricity generated by waste-to-energy plants. The price paid for electricity helps to offset the cost of disposal of trash, making waste-to-energy competitive with landfills. A reduction in power revenues that is likely to be experienced by waste-to-energy plants as existing PURPA contracts expire would result in increase solid waste tip fees, which may jeopardize the economic viability of some facilities. At a minimum, such a situation would "punish" regions of the state that have chosen to commit to the superior environmental benefits of waste-to-energy.

In addition, other sources of renewable energy, such as wind and solar, may also avail themselves of additional financial support available to them. In New York alone, there are at least 12 renewable energy incentive programs, and the federal government has established significant tax incentives for wind and solar energy. Should those sources be excluded because they are already receiving taxpayer support?

Overall, IWSA believes that the RD decision to recommend exclusion of existing renewable energy facilities in a RPS is unfair and inconsistent with the ultimate goal. Existing renewable facilities have contributed to the State's achievement of about 18% renewable generation in the State for years. It is vital to maintain this base in order to achieve the ultimate goal of 25%.

Existing waste-to-energy facilities have always been considered to be renewable, and new generation deserves equal status as renewable energy in New York. We welcome this opportunity to comment, and look forward to working with the PSC in development of a comprehensive, fair and successful RPS.

Sincerely,

/signed/

Maria Zannes
President
Integrated Waste Services Association