



## More than half of the state Renewable Electricity Standards exclude municipal waste combustion as a renewable source of energy

The Integrated Waste Services Association falsely claims that 23 states include waste-to-energy (electricity generation based on the incineration of municipal solid waste) in their Renewable Electricity Standards. In fact, almost half of the states that have adopted Renewable Electricity Standards explicitly exclude this dirty and inefficient source of energy as a new renewable energy source eligible to meet their standards.

More than 20 states and the District of Columbia have enacted Renewable Electricity Standards to encourage the use of clean, renewable sources of energy such as wind, solar and biomass. Twelve of them explicitly exclude waste-to-energy technology as renewable energy sources under their Renewable Electricity Standards, including those with the most ambitious goals, such as New York and Minnesota.<sup>1</sup>

States excluding waste-to-energy as a renewable source of electricity eligible to meet RES:	States including waste-to-energy as a renewable source of electricity under a separate tier with limited contribution to RES:
Colorado Delaware Massachusetts Minnesota New Hampshire New Mexico New York Oregon Rhode Island Texas Washington Wisconsin	Connecticut (3.0%) Maryland (2.5%, phasing out by 2020) New Jersey (2.5%) Pennsylvania (10% in 2020)  District of Columbia (2.5%, phasing out by 2020)  Percentages correspond to the maximum share of electricity the tier including waste-to-energy can represent in the total of electricity sales.

In Maryland and the District of Columbia, the contribution of waste-to-energy to their respective electricity portfolios is not only to be maintained at a low level (the total of tier 2 electricity sources should not exceed 2.5%) but will eventually be phased out by 2020. Arizona and California only include the conversion of municipal waste to energy by means other than combustion as a renewable source of electricity.

<sup>1</sup> Union of Concerned Scientists, <http://www.ucsusa.org/res> (2007)

### **Waste-to-energy plants are a dirty source of electricity.**

In 2000, municipal waste combustion was the 4th largest source of dioxin-like compound releases, according to EPA.<sup>2</sup> Dioxins are known as a strong carcinogen and are harmful to the immune system. In fact, EPA estimates that the cancer risk from dioxins in levels already present in the general public is approximately 1-per-1,000. Waste-to-energy facilities also release mercury, which ends up in groundwater or in surface waterways, where it accumulates into the fish Americans eat. Mercury exposure during fetal and child development can cause significant neurological damage and birth defects.

### **Waste-to-energy plants contribute to global warming.**

According to the International Panel on Climate Change, “the incineration of 1 metric ton of municipal waste is associated with the production/release of about 0.7 to 1.2 metric ton of carbon dioxide.<sup>3</sup> One-third to one-half of these emissions is not generated by plant-based waste or other types of biomass. Even when carbon emissions from these biogenic sources (biomass) are excluded, carbon dioxide emissions from waste incineration still amount to 491 g/kWh,<sup>4</sup> 81% of emissions from the combustion of natural gas.

### **Waste-to-energy is an inefficient source of electricity.**

With an average efficiency barely above 20%, waste-to-energy plants are a particularly inefficient way of generating electricity. Recycling municipal waste saves a lot more energy than they can generate through combustion. For plastics, recycling material rather than burning it and replacing it with virgin material saves 3.5 to 5.2 times more energy than could be generated from combustion.<sup>5</sup> Therefore, recycling of municipal solid waste should always be favored over incineration.

### **Conclusion:**

**Congress should follow the example already set by 12 states and explicitly exclude waste-to-energy from counting toward meeting the goals of a federal Renewable Electricity Standard.**

### **For more information:**

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<sup>2</sup> EPA/600/P-03/002F

<sup>3</sup> IPCC, “Emissions From Waste Incineration” [http://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5\\_3\\_Waste\\_Incineration.pdf](http://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5_3_Waste_Incineration.pdf)

<sup>4</sup> Eunomia Research and Consulting, “A Changing Climate for Energy from Waste? Final Report for Friends of the Earth” (2006) available at: [http://www.foe.co.uk/resource/reports/changing\\_climate.pdf](http://www.foe.co.uk/resource/reports/changing_climate.pdf)

<sup>5</sup> Friends of the Earth, “The Incineration Campaign Guide” (1997)