

November 7, 2011

MEMORANDUM

SUBJECT: Regulatory Impact Results for the Reconsideration Proposal for Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units

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The EPA analyzed the economic impacts and benefits of this proposed rule using the methodology that was discussed in the final rule RIA and in the preamble to the final rule. *See* FR 76 15704.

The market impact results are very similar to the results in the final rule RIA. The Agency's economic model suggests average national price increases for industrial sectors are less than 0.0008 percent, while average annual domestic production may fall by less than 0.0005 percent. Because of higher domestic prices, imports slightly rise by 0.0006 percent and exports fall by 0.0006 percent. The change in US surplus is now -270 million dollars (2006\$). For the final rule RIA, the change in surplus was -283 million dollars (2006\$). Table 1 shows the price, production, import, and export changes for this proposed rule, which are very close to the estimated changes for the final rule RIA.

Table 1. Price, Production, Import, and Export Changes Resulting from the CISWI Proposed Reconsideration

Industry Sector	U.S. Prices	U.S. Production	Imports	U.S. Consumption	Exports
Energy	0.001%	-0.001%	0.003%	-0.001%	0.000%
Nonmanufacturing	0.003%	-0.001%	0.002%	0.000%	-0.002%
Manufacturing					
Food, beverages, and textiles	0.001%	-0.001%	0.001%	0.000%	0.000%
Lumber, paper, and printing	0.024%	-0.010%	0.024%	-0.006%	-0.017%
Chemicals	0.000%	-0.001%	0.000%	-0.001%	0.000%
Plastics and Rubber	0.000%	-0.001%	0.001%	-0.001%	0.000%
Nonmetallic Minerals	0.071%	-0.017%	0.026%	-0.010%	-0.059%
Primary Metals	0.001%	-0.001%	0.001%	-0.001%	-0.001%
Fabricated Metals	0.000%	0.000%	0.000%	0.000%	0.000%
Machinery and Equipment	0.000%	0.000%	0.000%	0.000%	0.000%
Electronic Equipment	0.000%	0.000%	0.000%	0.000%	0.000%
Transportation Equipment	0.000%	0.000%	0.000%	0.000%	0.000%
Other	0.000%	-0.001%	0.001%	0.000%	0.000%
Wholesale and Retail Trade	0.000%	0.000%	0.000%	0.000%	0.000%
Transportation Services	-0.001%	0.000%	0.000%	0.000%	0.000%
Other Services	0.000%	0.000%	0.000%	0.000%	0.000%

The results for sales tests for small businesses are lower for the reconsideration proposal than those calculated for the final rule. The number of small entities affected by the rule dropped from nine to five. For the final rule, four of the nine had cost-to-sales percentages of more than 3 percent. For the reconsideration proposal only two of the five had cost-to-sales percentages of more than 3 percent and the other three had small savings. This is not a significant impact on a substantial number of small entities.

The change in employment estimates between the final rule RIA and the reconsideration proposal is small. The estimated employment changes range between -500 to +1000 employees, with a central estimate of +300 employees for the final rule RIA. For the reconsideration proposal, the estimated employment changes range between -400 to +900 employees, with a central estimate of +200.

The health benefits were calculated using the methodology described in the final CISWI RIA, which is available at http://www.epa.gov/ttnecas1/regdata/RIAs/CISWIRIAfinal110221_psg2.pdf, using the revised emission reductions estimated for the reconsideration proposal. We were unable to estimate the benefits from reducing exposure to HAPs and ozone, ecosystem impairment, and visibility impairment, including reducing 22,000 tons of carbon monoxide, 590 tons of HCl, 3.1 tons of lead, 1.6 tons of cadmium, 290 pounds of mercury, and 94 grams of dioxins/furans. Please refer to the full description in the final CISWI RIA of the unquantified benefits as well as analysis limitations and uncertainties. These monetized benefits are approximately 4% lower than the final CISWI NSPS due to the slight decrease in emission reductions of PM_{2.5}, SO₂, and NO_x.

**Table 2: Summary of Monetized Benefits Estimates for CISWI Reconsideration Proposal
in 2015 (2008\$)**

Pollutant	Emissions Reductions (tons)	Benefit per ton (Pope, 3%)	Benefit per ton (Laden, 3%)	Benefit per ton (Pope, 7%)	Benefit per ton (Laden, 7%)	Total Monetized Benefits (millions 2008\$ at 3%)	Total Monetized Benefits (millions 2008\$ at 7%)
Direct PM _{2.5}	670	\$230,000	\$560,000	\$210,000	\$500,000	\$150 to \$370	\$140 to \$340
PM _{2.5} Precursors							
SO ₂	5,033	\$29,000	\$72,000	\$27,000	\$65,000	\$150 to \$360	\$130 to \$330
NO ₂	5,405	\$4,900	\$12,000	\$4,400	\$11,000	\$26.0 to \$64.0	\$24.0 to \$58.0
Total						\$330 to \$800	\$300 to \$720

*All estimates are for the implementation year (2015), and are rounded to two significant figures so numbers may not sum across columns. These models assume that all fine particles, regardless of their chemical composition, are equally potent in causing premature mortality because the scientific evidence is not yet sufficient to allow differentiation of effect estimates by particle type. The benefit per ton estimates vary because each ton of precursor reduced has a different propensity to become PM_{2.5}. The monetized benefits incorporate the conversion from precursor emissions to ambient fine particles. These estimates do not include benefits from reducing HAP emissions or ozone benefits.

**Table 3: Summary of Estimated Reductions in Health Incidences from PM_{2.5} for the
CISWI Reconsideration Proposal in 2015***

Avoided Premature Mortality	
Pope et al.	37
Laden et al.	94
Avoided Morbidity	
Chronic Bronchitis	25
Acute Myocardial Infarction	59
Hospital Admissions, Respiratory	9
Hospital Admissions, Cardiovascular	19
Emergency Room Visits, Respiratory	35
Acute Bronchitis	59
Work Loss Days	4,900
Asthma Exacerbation	650
MRAD	29,000
Lower Respiratory Symptoms	710
Upper Respiratory Symptoms	530

*All estimates are for the analysis year (2015) and are rounded to whole numbers with two significant figures. These models assume that all fine particles, regardless of their chemical composition, are equally potent in causing premature mortality because the scientific evidence is not yet sufficient to allow differentiation of effect estimates by particle type. These estimates do not include benefits from reducing HAP emissions and ozone exposure, nor energy disbenefits associated with the increased emissions from additional energy usage.

Figure 1: Breakdown of Monetized Benefits by Subcategory

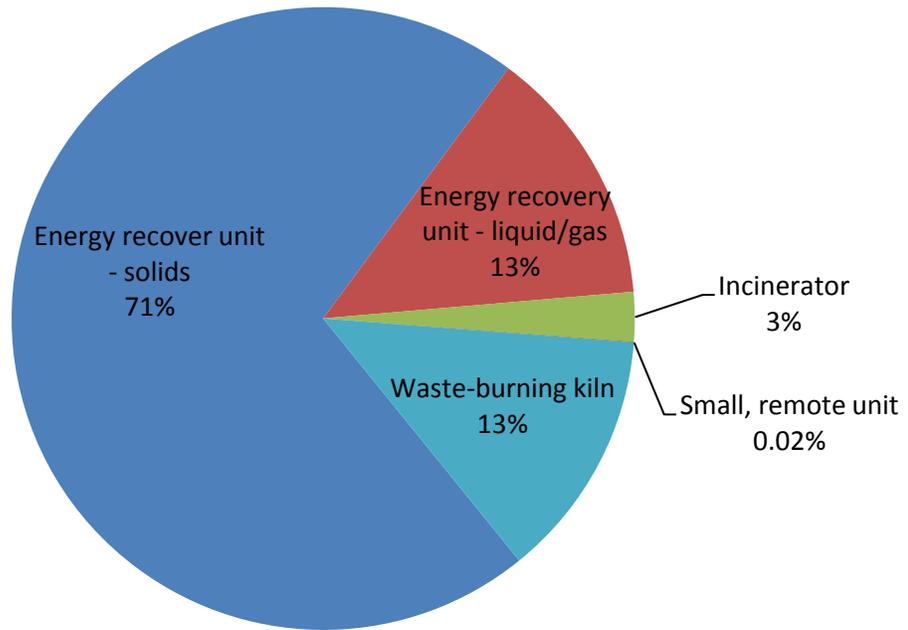


Figure 2: Total Monetized PM_{2.5} Benefits Estimates for the CISWI Reconsideration Proposal in 2015

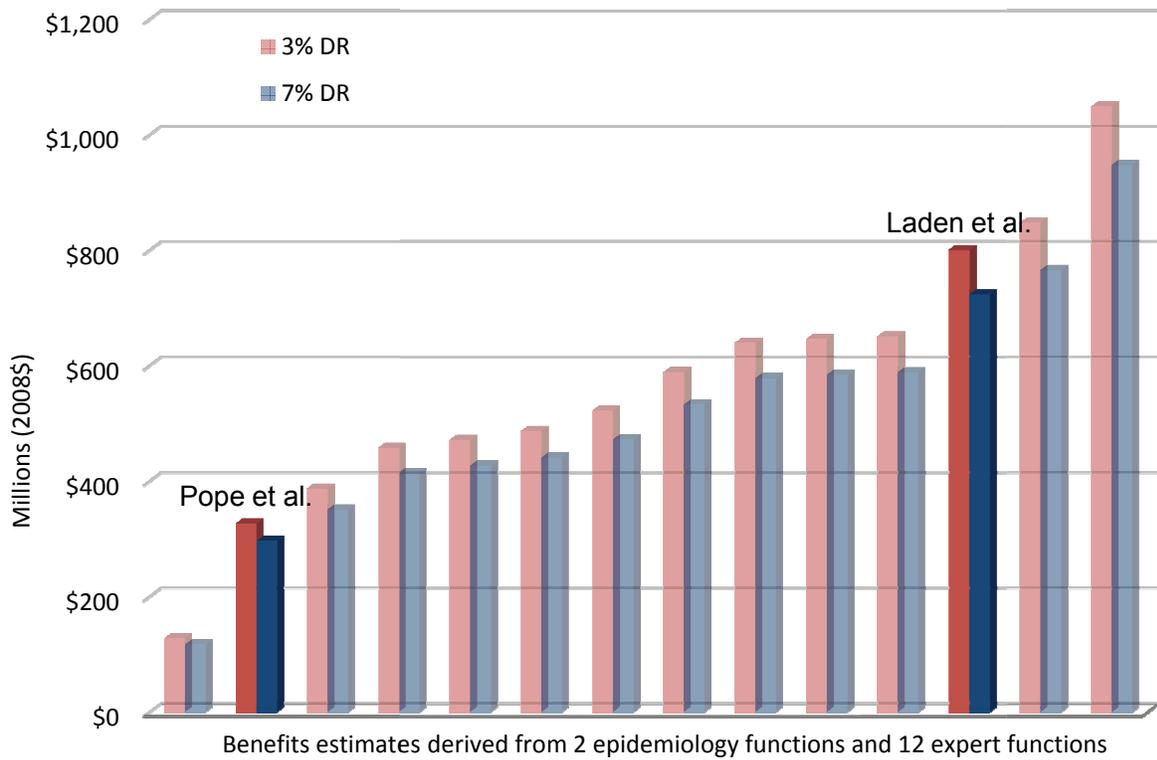


Table 4 shows the estimated costs and benefits for the reconsideration proposal. The estimated net benefits are almost the same as for the final rule RIA, which was \$30 million to \$470 million at 7 percent and was \$60 million to \$550 million at 3 percent.

Table 4. Summary of Estimated Social Costs and Benefits

Category	Primary Estimate	Low Estimate	High Estimate	Year Dollar	Discount Rate	Period Covered
Benefits						
Annualized Monetized (\$millions/year)		\$300	\$720	2008	7%	2015
		\$330	\$800	2008	3%	2015
Costs						
Annualized Monetized (\$millions/year)	\$271			2008	7%	2015
	\$271			2008	3%	2015
Net Benefits						
Annualized Monetized (\$millions/year)		\$30	\$450	2008	7%	2015
		\$60	\$530	2008	3%	2015