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# RECYCLING OF SOLID WASTE: LEGAL IMPEDIMENTS AND A PROGRAM FOR REFORM\*

David Muchow†

Within the past few years, there has been a growing interest in the recycling<sup>1</sup> of solid wastes.<sup>2</sup> Some of this interest has come in the

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<sup>1</sup> Even at this late date the word "recycling" has not developed a universally accepted definition. One authoritative definition is that used by the Environmental Protection Agency (EPA) in its proposed Solid Waste Management and Resource Recovery Incentives Act of 1972 and adopted by the Council on State Governments in its volume entitled *Suggested State Legislation for 1973*. COUNCIL ON STATE GOVERNMENTS, SUGGESTED STATE LEGISLATION FOR 1973, at 63 (1972). This definition reads as follows: "Recycling [shall mean] [t]he process by which recovered resources are transformed into new products in such a manner that the original products lose their identity." *Id.* Note that recycling not only means converting an old product into a similar product, but may also mean turning an old product into any new product. Thus, a glass bottle might be recycled into paving material as well as into another glass bottle.

Another approach has been to define as recycled those resources which have been reclaimed from solid waste. This definition, which has been used in recycling tax deduction legislation, is as follows: "[T]he term 'recycled solid waste materials' means scrap metals, wastepaper, and paper products, discarded textiles, rubber, plastics, and glass reclaimed by the taxpayer or his supplier from garbage, refuse, or trash or from industrial, commercial, and agricultural operations." *See, e.g.*, H.R. 1508, 93d Cong., 1st Sess. § 189(c) (1973); H.R. 16581 & H.R. 16582, 92d Cong., 2d Sess. § 189(c) (1972).

Properly defining "recycled" and similar words is vitally important. Indeed, the Federal Trade Commission is studying the possibility of issuing a guideline defining such terms for two reasons: first, to prevent consumer deception as virgin materials are marketed as "recyclable"; and second, to provide a standard definition for use in the event that legislation offering incentives to the recycling industry is forthcoming. Such a definition might aid in indicating which materials would and would not receive federal benefits.

In this Article, the terms "secondary materials" and "recycled materials" will be used synonymously. Because virgin materials often are preferred to recycled goods as raw materials, the former are described as "primary" and the latter as "secondary." Finally, one consulting firm has suggested the use of the term "[r]ecyclamation—the joint action of reclamation, transformation, transportation, and recycling of waste goods from point of initial productive disuse to point of productive use." Herbert O. Whitten & Associates, *Recyclamation: Rail Transport Economics of Substitutability of Recycled Scrap or Waste for Basic Raw Materials: A Case of Rail Transport of Scrap Iron or Steel vis-à-vis Iron Ore*, Dec. 8, 1971, at 47 (unpublished) (on file at the *Cornell Law Review*) [hereinafter cited as *Recyclamation*].

<sup>2</sup> In this Article the term "solid waste" is used as defined in the Solid Waste Disposal Act, 42 U.S.C. § 3252(4) (1970):

wake of a heightened national awareness of all environmental problems. More directly, the interest in recycling has been aroused by several ominous trends. First, environmental degradation has been hastened by solid wastes. This degradation manifests itself in increasing air and water pollution, litter and scenic blight, and troublesome sanitation and public health problems.<sup>3</sup> Second, the costs of inefficient solid waste handling and disposal are rising rapidly, posing an ever-growing burden for state and local solid waste disposal agencies. Third, as greater quantities of products are thoughtlessly consumed and discarded, concern increases over the accelerating depletion of our nation's natural resources, particularly those used to produce energy. Finally, there has been a disturbing lack of commitment on the part of the federal government to seek national solutions to the solid waste crisis. Although air and water pollution have been attacked on a national scale, solid waste disposal remains primarily a local concern.<sup>4</sup>

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The term "solid waste" means garbage, refuse, and other discarded solid materials, including solid-waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but does not include solids or dissolved material in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.

The number of topics which might be covered in a recycling review is staggering and grows daily. This Article is limited to certain major impediments which prevent the private sector from recycling solid waste more effectively. Unfortunately, therefore, discussion of many important topics must be omitted. Such topics include: the relation between energy production and recycling (see H.R. 3954, 93d Cong., 1st Sess. (1973); U.S. ENVIRONMENTAL PROTECTION AGENCY, RESOURCE RECOVERY PROCESSES FOR MIXED MUNICIPAL SOLID WASTES, PART I (1973)); the desirability of producing recycled products given our growing energy needs (see H.R. 1894, 93d Cong., 1st Sess. (1973) (establishment of an energy commission)); the use of garbage for energy alone (see I A. REITZE, ENVIRONMENTAL LAW ch. 2, at 28 (1972)); the relationship between disease, visual blight, sanitation costs, land use, and recycling (see H.R. 36, 93d Cong., 1st Sess. (1973) (environmental data system)); the adverse impact intensified recycling might have as it diverts jobs and capital from extractive industries; the kind of national stockpile policy that would best aid our solid waste problems; the desirability of a worldwide system to monitor the discovery, importation, exportation, destruction, or conversion into energy of all natural resources.

<sup>3</sup> Solid Waste Disposal Act, 42 U.S.C. §§ 3251(a)(1)-(6) (1970); see PRESIDENT'S COUNCIL ON ENVIRONMENTAL QUALITY, REPORT 105-21 (1970) [hereinafter cited as REPORT].

<sup>4</sup> The Solid Waste Disposal Act recognizes this situation and states: "[T]he collection and disposal of solid wastes should continue to be primarily the function of state, regional and local agencies . . ." 42 U.S.C. § 3521(a)(b) (1970). The Act continues, stating that "the problems of waste disposal . . . have become a matter national in scope and concern and necessitate Federal action . . ." *Id.* Nevertheless, this call to federal action has largely gone unheeded. Indeed, the President's budget for fiscal year 1974 cut solid waste funds from \$30 million to \$5.76 million. Former EPA Administrator William Ruckelshaus said the cut in the EPA's solid waste management program was "the result of a decision that garbage problems should be considered primarily a local problem and not one that should be solved at a federal level." Evening Star and Daily News, Jan. 29, 1973, § 1, at 6, col. 1; Washington Post,

The costs of collecting and disposing of solid wastes are staggering. In 1969, approximately \$3.5 billion were spent handling 190 million tons of solid wastes—an average of \$18 per ton.<sup>5</sup> Collection constitutes some of the cost, while disposal accounts for the remainder.<sup>6</sup> Moreover, this 190 million tons is only a small fraction of the 4.3 billion tons of waste generated each year.<sup>7</sup>

Existing disposal facilities are inadequate and inefficient. According to the Council on Environmental Quality, “a considerably higher rate of spending would be needed to upgrade existing systems to acceptable levels of operation.”<sup>8</sup> Ninety-four percent of existing open dumping systems are among the worst air pollution offenders. Furthermore, America’s advancing technology and affluence have placed a back-breaking burden on solid waste facilities. Refuse collected in urban areas has increased from 2.75 pounds per person in 1920 to 5 pounds per person in 1970.<sup>9</sup> In addition, the volume of solid waste had changed character in the course of its upward spiral. The trend toward disposable packaging has put more inorganic materials such as glass, metals, and specially coated papers into the refuse. The technology of solid waste collection and disposal simply has not kept pace with these changes.

The national recycling industry has failed to meet this solid waste crisis. The reasons for this failure are numerous: public funds are scarce; solid wastes are being generated in ever-increasing quantities; and many newly-developed products cannot be recycled economically by current technology.

There are also more basic reasons for this lack of success. Recycling is subject to most of the basic economic principles con-

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March 4, 1973, § 1, at 14, col. 1; see N.Y. Times, Feb. 4, 1973, § 1, at 1, col. 1. The *Times* article details the Office of Management and Budget’s (OMB) actions in blocking the EPA’s program of solid waste and resource recovery incentives including interstate transportation incentives, interstate labelling incentives, and federal tax incentives, all of which require national action. But recently Chairman Russell E. Train, EPA Administrator, has noted our natural resource crisis: “The energy crisis is our first major early warning and we had better heed it . . . Shortages of metals and other critical raw materials already loom ahead.” N.Y. Times, Jan. 20, 1974, § 1, at 37, col. 1. Hopefully, the EPA will see recycling as one solution to this national problem. See Noone, *Environment Report—Federal Role in Solid-Waste Programs To Undergo Scrutiny in 93d Congress*, NAT’L J. 1773 (Nov. 1972).

<sup>5</sup> *Hearings on S. 2754 Before the Foreign Commerce and Tourism Subcomm. of the Senate Comm. on Commerce*, 92d Cong., 2d Sess., ser. 83, at 603 (1972) (statement of J. Vaccaro, transportation director, National Association of Secondary Material Industries (NASMI)) [hereinafter cited as *Hearings on S. 2754*].

<sup>6</sup> REPORT 108.

<sup>7</sup> See *id.* at 107.

<sup>8</sup> *Id.* at 108; *Hearings on S. 2754*, at 603.

<sup>9</sup> REPORT 106.

trolling our modified freemarket economy. American industries needing raw materials will use more secondary materials and fewer virgin materials only when the purchase price for secondary materials is competitive with that for virgin commodities. Thus, most serious recycling proposals to date (except those such as emergency proposals directed toward eliminating litter) have sought to lower the costs of recycled materials to increase their attractiveness to industry. Yet recycling has failed to keep pace with solid waste generation because until recently proposals to lower the costs of recycled materials have focused on the supply side of the problem, while giving little attention to the demand aspect. The emphasis has been on lowering the costs of segregating and collecting wastes, and the problem of finding markets for these materials has been virtually ignored. Civic-minded groups throughout the country are telling housewives, for instance, to segregate their discarded newspapers and cans, and volunteers are organized to collect this garbage. But there is too little interest in how this additional supply of secondary materials can be marketed economically when the market may already be glutted. In short, demand for solid waste materials must be increased to meet the supply.<sup>10</sup>

After years of recycling rhetoric, the role played by the secondary materials industry—companies in the private sector of the economy which recycle solid waste—is just beginning to be understood. Too little is known about the complex economic, legislative, and regulatory milieu in which the industrial recycling of solid waste occurs. It appears that in recent years this milieu has impeded many in the recycling industry from recycling at a rate sufficient to keep up with the mountains of solid waste.

The private sector, which has recycled our nation's solid wastes in spite of indifferent and even hostile government policies, must be revitalized. This revitalization need not come from vast federal

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<sup>10</sup> PRESIDENT'S COUNCIL ON ENVIRONMENTAL QUALITY, REPORT 202 (1973). Mr. Samuel Hale, Jr., Deputy Assistant Administrator for Solid Waste Programs of the Environmental Protection Agency, strongly advocates a market demand solution to the solid waste problem. Speaking at Eco-Technic II, a joint government-industry forum on recycling, held in New York City in late 1962, he stated:

. . . I think that our studies over the past two years . . . have led us to one overriding conclusion. And that is a fact you all knew before any studies were really conducted: that is, it's [the solid waste problem] a demand problem, not a supply problem.

National Ass'n of Secondary Material Industries, *Recycling: Where Are We? Where Are We Going?* 8 (1972) (on file at the *Cornell Law Review*). His remarks were echoed by Mr. Eric Zausner, then Senior Staff Member, Council on Environmental Quality: "I think we can also see some recognition, in the last two years, of the market and demand side and the need to stimulate that in recycling." *Id.* at 10.

subsidies or grants. Indeed, many independently minded members of the recycling industry would resist any such approach. Rather, revitalization should come through the creation of additional markets for recycled materials by the removal of a broad spectrum of federal, state, local, and other impediments to recycling. These impediments include discriminatory tax policies, discriminatory ocean and rail freight rates, unfair labelling practices and other discriminatory policies which have prevented the private sector from effectively utilizing solid waste for recycling. It is the purpose of this Article to analyze these discriminatory policies and to suggest a program for reform which could make recycling economically feasible. Only by such basic economic reform can this nation hope to deal with the twin problems of solid waste disposal and dwindling virgin resources.

## I

### DISCRIMINATORY FREIGHT RATES

There is growing evidence that both rail and ocean freight rates discriminate against the movement of recyclable materials and favor the movement of directly competing virgin materials.<sup>11</sup>

#### A. *Discriminatory Rail Freight Rates*

Past testimony before the Joint Economic Committee indicates that rail freight rates for recyclable materials are discriminatory in two respects.<sup>12</sup> First, rates for recyclable commodities may be substantially higher than rates for directly competing virgin commodities carried in containers of identical size and weight.<sup>13</sup> Second, there is evidence that rail rates for the exportation of recycla-

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<sup>11</sup> See *United States v. Students Challenging Regulatory Agency Procedures* (S.C.R.A.P.), 346 F. Supp. 189 (D.D.C. 1972), *rev'd*, 412 U.S. 669 (1973); *Increased Freight Rates & Charges*, 1972, 341 I.C.C. 288, 555 (1972); *Increased Freight Rates*, 1970, 1971, 339 I.C.C. 125 (1971); *Transportation of Waste Prods. for Reuse & Recycling*, 114 M.C.C. 93 (1971); *Hearings on S. 2754*, at 601 (statement of J. Vaccaro, transportation director, NASMI); *Hearings on the Economics of Recycling Waste Materials Before the Subcomm. on Fiscal Policy of the Joint Economic Comm.*, 92d Cong., 1st Sess. 20-40 (1971) (statement of M. Mighdoll, executive vice-president, NASMI) [hereinafter cited as *Hearings on Recycling*]; *CITIZEN'S ADVISORY COMM. ON ENVIRONMENTAL QUALITY, ANNUAL REPORT TO THE PRESIDENT AND TO THE COUNCIL ON ENVIRONMENTAL QUALITY* 40 (1972); *1 BATTELLE COLUMBUS LABORATORIES, A STUDY TO IDENTIFY OPPORTUNITIES FOR INCREASED SOLID WASTE UTILIZATION* iv (1972).

<sup>12</sup> *Hearings on Recycling* 49 (statement of A. Wein, executive vice-president, Steelmet, Inc.).

<sup>13</sup> *Id.* at 51.

ble materials are unreasonably higher than local or domestic rates for virgin materials even though the distances traveled may be equal.<sup>14</sup>

### 1. Rail Rates for Virgin vs. Recycled Commodities

Recyclable paper waste directly competes with virgin pulp wood as a raw material source for paper products. Yet a comparison of rail rates in the eastern and central rail territories for these two commodities indicates that although the market value of recyclable paper waste is substantially lower than the market value of virgin pulp wood, freight rates for paper waste sometimes are more than twice the rates for pulp wood.<sup>15</sup> Pulp wood, therefore, can be sold at a lower price than paper waste because it costs less to ship it to manufacturers. In addition, the lower valued commodity, paper waste, produces more revenue per carload for the railroads than its higher valued competitor. Thus, while paper waste carries more than its share of freight costs, pulp wood rides at a discount. Similar examples can be found in the movement of metals. Virgin ores and ore concentrates moving from various points throughout the country often enjoy lower rates than scrap metals which directly compete against these ores.<sup>16</sup>

<sup>14</sup> *Id.*

<sup>15</sup> The following chart compares rail freight rates for pulpwood and paper waste.

Territory	Miles	Pulpwood		Paper Waste	
		Rate Minimum weight/car 23 cords or 103,500 lbs.	Revenue Per Car	Rate Minimum weight/car 80,000 lbs.	Revenue Per Car
<b>Central</b> (Includes an area from N.Y. to Wis. and from Ill. to Va.)					
	95	\$.14 /cwt	\$144.38	\$.28/cwt	\$244.00
	225	.2025/cwt	209.99	.40/cwt	320.00
	298	.245/cwt	254.84	.43/cwt	344.00
<b>Eastern</b> (Includes the states of Ill., N.Y., Mo., Pa., Va., Del., and Wash., D.C.)					
	150	\$.168/cwt	\$100.80	\$.37/cwt	\$185.00
	300	.245/cwt	142.00	.50/cwt	250.00
	500	.313/cwt	172.15	.63/cwt	315.00

*Hearings on H.R. 11824, H.R. 11826, & H.R. 11207 Before the Subcomm. on Surface Transportation and Aeronautics of the House Comm. on Interstate and Foreign Commerce, 92d Cong. 2d Sess. at 1210 (1972) (statement of M. Mighdoll, executive vice-president, NASMI).*

<sup>16</sup> According to the Institute of Scrap Iron and Steel "freight rates to haul ferrous scrap are about 2½ times higher than the rates for virgin iron ore." Berman, *Markets Have Not Kept Pace for Iron and Steel Scrap*, WASTE AGE 24 (July-Aug. 1972). The following table compares

There are many reasons for this freight rate discrimination against recycled materials. First, before containerization, movement of scrap was difficult and expensive. Carriers were concerned, for instance, that jagged edges on scrap metals would injure boxcars and damage rolling stock. In the movement of paper waste, carriers sometimes found it difficult to transport baled paper without breaking the wire straps holding the large bales together. If these straps broke, a major clean-up was necessary. With increased containerization, however, these reasons have less validity. Indeed, any damage to containers encountered in the movement of scrap is often the financial responsibility of the shipper rather than the carrier. Once packed, containers of virgin and recyclable materials are indistinguishable in appearance and transportation characteristics.<sup>17</sup>

Second, in the past it was difficult to compress or "cube" scrap materials to the same densities as virgin materials. Thus, a larger shipping volume often was required for scrap, and higher transportation rates resulted. Today, technology has overcome many cubing problems, especially in the waste paper area, and there appears to be no reason why rates for recyclable materials should be so much higher than virgin rates.

Another more subtle form of discrimination occurs when freight rates are increased by carriers "across the board." When carriers implement what are seemingly equal freight rate increases, recycled commodities often suffer more than virgin commodities. Because the value (sale price) of scrap material is usually lower than the value of virgin material, an "equal" increase actually

freight rates for selected virgin and scrap metals and dramatically illustrates certain discriminatory rate preferences for virgin material.

Ores and Concentrates	Scrap
	<i>Copper</i>
\$17.05/ton	Los Angeles, Cal. to Tacoma, Wash. \$26.80/ton
	<i>Zinc</i>
\$13.00/ton	Copperhill, Tenn. to Chicago, Ill. \$20.00/ton
	<i>Lead</i>
\$ 9.48/ton	Los Angeles, Cal. to El Paso, Texas \$63.00/ton
	<i>Aluminum</i>
\$16.73/ton	Mobile, Alabama to Gregory, Texas \$38.40/ton

Hearings, *supra* note 15, at 1218 (statement of R. Freedman, vice-president, Commercial Metals Co.).

<sup>17</sup> Hearings on S. 2754, at 902.

makes freight costs a larger percentage of the sale price of the scrap commodity, compared to the virgin commodity, and further cripples scrap's competitive position.<sup>18</sup>

## 2. *Domestic vs. Export Rail Rates*

When scrap moves by rail to a port for export, it faces higher rail rates than scrap moving the same distance for domestic consumption. Although an export shipment may involve extra handling and other charges as the cargo is moved from rail to ship, too often there is no reasonable relation between the higher export rate and the actual costs involved.<sup>19</sup> The result has been export rates for recyclable materials which are higher than domestic rates.<sup>20</sup> This unreasonably high export rate structure frustrates one logical solution to the solid waste problem—the exportation of more solid waste to hungry markets overseas. Unreasonably high export rates for scrap force recyclable materials into cutthroat domestic competition against virgin materials which have lower rail rates. Thus, much recyclable material simply remains where it is discarded and never moves to any market, foreign or domestic. In addition to exacerbating our solid waste problems, this higher export rate detrimentally affects our net balance of payments.

Rail and ocean rates present the most difficult problems of analysis. Many factors combine to produce these rates, including containerization, value of the cargo, handling costs, the hazardousness of the shipment, the volume of traffic moving on any given route, the historic rate basis for a particular commodity,<sup>21</sup> and other determinants. The difficulties involved in providing fair rates for the movement of recyclable materials may be great, but greater movement of solid waste into the recycling stream depends upon a resolution of this problem.<sup>22</sup> Indeed, eliminating unreasonably

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<sup>18</sup> *Hearings on Recycling* 40 (statement of M. Mighdoll, executive vice-president, NASMI).

<sup>19</sup> *Hearings on S. 2754*, at 902.

<sup>20</sup> Paper waste, for example, moving from Buffalo, New York, to the Port of New York for domestic consumption, has a freight rate of \$0.64 per hundredweight (cwt). *Hearings, supra* note 15, at 1210 (statement of M. Mighdoll, executive vice-president, NASMI). When this same quantity of paper waste moves the same distance for export, however, it has a rate of \$0.91 per cwt. Textile waste moving from Cleveland, Ohio, to New York City has a domestic rate of \$0.71 per cwt., while the export rate is \$1.07 per cwt. *Id.* at 1221 (statement of E. Frankel, vice-president, Frankel Bros. & Co.).

<sup>21</sup> *Hearings on S. 2754*, at 590.

<sup>22</sup> One example of the importance of freight rates to the movement of a low-value waste material is found in recent testimony by Mr. Edward B. Frankel, vice-president of Frankel Bros. & Co., a textile recycling firm, before the Subcommittee on Transportation and

discriminatory freight rates is one of the most significant factors in creating viable and competitive markets for recyclable materials.<sup>23</sup>

### 3. *Federal Activity in Providing Reasonable Rail Rates for the Movement of Recyclable Materials*

The Interstate Commerce Commission (ICC) for many years provided the only practical forum for shippers seeking reasonable freight rates for recyclable materials. When carriers petitioned the ICC for additional rate increases, shippers and trade associations for recyclable commodities strenuously protested, but generally with little success.<sup>24</sup> This lack of success may be traced to several problems typical of the regulatory process.

First, although the Interstate Commerce Act prohibits any "rate, fare, or charge whatsoever" which is "unjust or unreasonable or unjustly discriminatory or unduly preferential or prejudicial"<sup>25</sup> the many variables which must be considered in evaluating rates make it extremely difficult for a complainant to prove that any given rate is in violation of the Act.

Second, the ICC has a statutory duty to provide just and reasonable rates based upon an evaluation of such factors as the "need of revenues sufficient to enable the carriers, under honest, economical, and efficient management to provide . . . [adequate

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Aeronautics of the House Committee on Interstate and Foreign Commerce. Regarding the need for reasonable freight rates, Mr. Frankel stated that the economics of moving low-grade textile wastes from his plant in New York to a customer in nearby Toronto were as follows. The product sold for \$1.75 in Toronto. The average freight to his plant was \$0.78 per cwt. The average freight to his customer in Toronto was \$0.59 per cwt, resulting in a total freight cost of \$1.37 per cwt—78% of the sale price. *Hearings, supra* note 15, at 1220 (statement of E. Frankel, vice-president, Frankel Bros. & Co.).

<sup>23</sup> *Hearings on Recycling* 25, 26.

<sup>24</sup> See *Increased Freight Rates & Charges*, 1972, 341 I.C.C. 288 (1972); *Increased Freight Rates 1970, 1971*, 339 I.C.C. 125 (1971).

The ICC, which oversees the filing of 300,000 new tariffs each year, approximately 1,000 of which are currently under formal proceedings, has become a popular subject of attack. See R. FELLMETH, *THE INTERSTATE COMMERCE COMMISSION: THE PUBLIC INTEREST AND THE ICC 147-54* (1970) (attacks "value of service" rates). But see Goodman, *Recent Trends in Transport Rate Regulation*, 70 MICH. L. REV. 1225 (1972).

In some early cases, the Commission held that rates should not differentiate between new and used articles. See *Wiessbaum & Co. v. Director Gen.*, 53 I.C.C. 681 (1919); *Cal Hirsh & Sons Iron & Rail Co. v. Washington, B. & A. Elec. R.R.*, 26 I.C.C. 480 (1913); Goodman, *supra* at 1231. Later cases have upheld this approach. See *Condenser Serv. & Eng'r Co. v. Atlantic Coast Line R.R.*, 296 I.C.C. 495 (1955); *Vacuum Cleaner Mfrs. Ass'n v. Atchison, T. & S.F. Ry.*, 276 I.C.C. 783 (1950).

But when a commodity becomes so worn that it is no longer suited for its original purpose, a lower rate has been ordered. See, e.g., *Coastal Bag & Bagging Corp. v. Texas & N.O.R.R.*, 277 I.C.C. 789 (1950); *Aaron Ferer & Sons v. Belt Ry.*, 151 I.C.C. 197 (1929).

<sup>25</sup> 49 U.S.C. § 15(1) (1970).

and efficient] service.”<sup>26</sup> Unfortunately, many carriers are in such precarious financial position that reducing rates on any materials could result in serious financial problems. Thus, if rates for recyclable materials were reduced to virgin rate levels, some carriers might suffer more severe revenue losses than the ICC could justifiably allow. If rate parity were sought by raising virgin rates, carriers would be faced with a dilemma. In the short run, revenues might rise, but at least over some routes and for some commodities, virgin commodities might be diverted to motor or barge traffic, thereby offsetting possible revenue gains and perhaps even resulting in additional losses.

The third reason why rate adjustment at the ICC has been such a frustrating task is that shippers lack a sufficient data base about their combined costs, sales, profits and similar financial information. Without such data, they have been unable fully to document their case to the ICC. Highly competitive shippers have refused to reveal such sensitive data to each other. And to date, there has been so little hope of winning before the ICC that requesting such data was more than a trade association could justify to its own members.

Fortunately, there have been some signs of change at the ICC. The Commission, albeit under considerable outside pressure, is now more willing to consider the environmental impact of its decisions on the movement of recyclable materials.<sup>27</sup> In late 1971, the nation's railroads filed a request for an “across the board” 2.5 percent surcharge on all freight rates, effective January 1972.<sup>28</sup> The Commission responded by announcing a general investigation into the adequacy of freight rates and charges, but allowed the

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<sup>26</sup> *Id.* § 15a(2).

<sup>27</sup> In January 1970, the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4331-47 (1970), became effective. This Act requires all federal agencies to file a detailed environmental impact statement with each major federal action they take which significantly affects the quality of the human environment. *Id.* § 4332(2)(C). In November 1971, the ICC showed its growing sensitivity toward the movement of recycled materials by instituting on its own initiative a motor carrier proceeding entitled Transportation of Waste Prods. for Reuse & Recycling, 114 M.C.C. 93 (1971).

In the words of the Commission, this proceeding “was instituted . . . because of our concern with our environment and with the deterioration of our natural surroundings caused by the misuse and depletion of our land and natural resources . . . .” *Id.* at 93. Although this proceeding had no direct effect upon freight rates for recycled materials, it did streamline motor carrier paper work and licensing procedures for those shipping solid waste and thus signaled shippers that the ICC was more willing to listen to environmental considerations in its proceedings than it had been under earlier orders. *See* Increased Freight Rates, 1970, 1971, 339 I.C.C. 125 (1971).

<sup>28</sup> Increased Freight Rates & Charges, 1972, 341 I.C.C. 288 (1972).

surcharge to go into effect pending completion of the investigation. In so doing, the ICC stated that "the increases here proposed are just and reasonable" and that the general increase "will have no significant adverse effect on . . . the quality of the human environment within the meaning of Environmental Policy Act."<sup>29</sup>

The Commission's action raised a storm of controversy. A group of George Washington University Law Students (Students Challenging Regulatory Agency Procedures—S.C.R.A.P.) demanded that the ICC issue an environmental impact statement as required by the National Environmental Protection Act (NEPA)<sup>30</sup> before making a final decision on the railroad's request. The Commission acceded to S.C.R.A.P.'s demand and issued a six-page impact statement. The statement proved inconclusive, however, for the Commission found that "the imposition of, or failure to impose a surcharge of two and one-half percent might have some impact on the environment; however, . . . it is unclear what the effect would be."<sup>31</sup>

Calling the Commission's statement "grossly insufficient," both S.C.R.A.P. and the Environmental Defense Fund brought suit to enjoin collection of the surcharge on goods being transported for recycling.<sup>32</sup> An injunction was issued by District of Columbia Circuit Judge J. Skelly Wright upon the complainants' allegations that the across-the-board increase "boosts the cost of shipping recyclable materials and aggravates the preexisting disparity in shipping costs between these materials and the primary goods with which they compete."<sup>33</sup> This favorable decision was short-lived. The Supreme Court overturned the injunction on the ground that the district court lacked jurisdiction to issue it.<sup>34</sup>

Nevertheless, Judge Wright's decision set the stage for a lim-

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<sup>29</sup> *Id.* at 552.

<sup>30</sup> *See* note 27 *supra*.

<sup>31</sup> Increased Freight Rates & Charges, 1972, 341 I.C.C. 288 (1972).

<sup>32</sup> Students Challenging Regulatory Agency Procedures (S.C.R.A.P.) v. United States, 346 F. Supp. 189 (D.D.C. 1972), *rev'd*, 412 U.S. 669 (1973).

<sup>33</sup> *Id.* at 191.

<sup>34</sup> In a 28-page opinion, a majority of the Supreme Court held that the appellees, S.C.R.A.P. and the Environmental Defense Fund, were sufficiently adversely affected or aggrieved within the meaning of § 10 of the Administrative Procedure Act to withstand a motion to dismiss on the ground of lack of standing to sue. The Court found, however, that the district court lacked jurisdiction to issue the injunction. In *Arrow Transp. Co. v. Southern Ry.*, 373 U.S. 658 (1963), the Court had held that Congress in § 15(7) of the Interstate Commerce Act had vested exclusive jurisdiction in the ICC to suspend rates pending its final decision on their lawfulness and had deliberately extinguished judicial power to grant such relief. Thus, the District Court's order was reversed, and the case was remanded for further proceedings. 412 U.S. 669 (1973).

ited reversal of ICC policy.<sup>35</sup> In *Increased Freight Rates & Charges, 1972*,<sup>36</sup> the Commission rejected a carriers' request for a ten percent across-the-board surcharge on all freight rates and permanent rate increases ranging as high as eight percent on recyclable non-ferrous scrap metals, paper waste, and textile wastes.<sup>37</sup> Instead, the ICC ordered rate increases for all of these recyclable materials held to three percent. In so doing, the Commission devoted ten pages of its decision to a discussion of recyclable materials transportation problems and concluded:

Balancing these environmental factors against the carriers' need for additional revenue, we conclude that the increase on paper waste or scrap, textile waste, nonferrous metallic scrap and glass, rubber or plastic scrap or waste shall not exceed 3%. While we have concluded elsewhere that secondary materials would continue to move despite the proposed increases, the holddown here imposed should encourage the movement and recycling of these commodities.<sup>38</sup>

The recycling industry's request for rate parity with virgin materials was not granted.

In spite of the policy shift at the ICC, shippers of recycled materials began to look directly to Congress for relief.<sup>39</sup> Pressing

<sup>35</sup> There were precursors of the ICC shift. See *Increased Freight Rates, 1970, 1971*, 339 I.C.C. 125 (1971); *Transportation of Waste Prods. for Reuse & Recycling*, 114 M.C.C. 93 (1971).

<sup>36</sup> 341 I.C.C. 288 (1972).

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* at 369.

<sup>39</sup> See *Hearings on Recycling* 59. Since the passage of the Interstate Commerce Act, shippers have often come to Congress for relief from what they have deemed to be unjust or discriminatory rates. Indeed, the Interstate Commerce Act itself is a product of such shipper discontent. "Positive control over railroad rates was a product of the Granger movement of the early [18]70's." D. LOCKLIN, *ECONOMICS OF TRANSPORTATION* 198 (6th ed. 1966). The grievances of the Granger movement included high freight rates and gross discrimination between competing points, discrimination which existed even on a shipper-by-shipper basis. *Id.* at 199. After the Granger agitation had produced state laws regulating the railroads, these laws were upheld by the Supreme Court in 1877, clearing the way for federal rate regulation. See *Munn v. Illinois*, 94 U.S. 113 (1877). See generally S. BUCK, *THE GRANGER MOVEMENT* (2d ed. 1933); E. JONES, *PRINCIPLES OF RAILROAD TRANSPORTATION* (1924); R. WESTMEYER, *ECONOMICS OF TRANSPORTATION* (1952). Statutory relief from Commission decisions is rare. One of the best examples of such relief for shippers of a particular commodity is the Hoch-Smith Resolution, 49 U.S.C. § 55 (1970), enacted nearly 50 years ago. This Resolution directed the Commission to promote the movement of agricultural commodities "with the least practicable delay" at the "lowest possible lawful rates compatible with the maintenance of adequate transportation service." *Id.* For a discussion of this Resolution, see D. LOCKLIN, *supra* at 240-42. Although the Resolution directed the ICC to make a thorough investigation of the rate structure and to remove instances of discriminatory rates, it has had a dubious effect on agricultural rates. In 1930, the Supreme Court, in *Ann Arbor R.R. v. United States*, 281 U.S. 658 (1930), held that the Resolution did not

their attack on several fronts, these shippers asked the Fiscal Policy Subcommittee of the Joint Economic Committee to hold hearings in November 1971 on economic and other disincentives to recycling. These hearings produced extensive testimony indicating that discriminatory freight rates were inhibiting the movement of recycled material.<sup>40</sup>

In late November 1971, Senator Moss unsuccessfully attempted to persuade the Senate Commerce Committee to add an amendment to pending railroad legislation to provide for the establishment of nondiscriminatory freight rates for the movement of recycled materials.<sup>41</sup> In August of 1972, Senator Moss successfully offered a similar amendment to the Rolling Stock Utilization and Financing Act of 1972.<sup>42</sup> This amendment provided:

The Congress hereby finds that, in order to accomplish the purposes of the Solid Waste Disposal Act, as amended by the Resource Recovery Act of 1970, it is essential to establish and maintain fair, reasonable, and nondiscriminatory transportation rates which will facilitate and encourage broader utilization of recycled solid waste materials and promote conservation of vital natural resources.<sup>43</sup>

This legislation would have ordered a twenty-four month study by the ICC of all rates for the transportation of recycled materials to determine whether they were unjustly discriminatory compared to rates for competing virgin materials.<sup>44</sup> The ICC was to be given full authority to order the elimination of unreasonable rates and was directed to report to Congress regarding its findings and actions.<sup>45</sup> The Moss amendment passed the Senate unanimously, but died in the House Commerce Committee.

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"purport to make unlawful any rate which under the existing law is a lawful rate, but on the contrary leaves the validity of the rate to be tested by that law." *Id.* at 668. In addition, the Court characterized the language of the Act requiring the lowest possible rates on agricultural products "more in the nature of a hopeful characterization of an object deemed desirable . . . than a rule intended to control rate making." *Id.* at 668-69. Although this language is often deemed to have nullified the Hoch-Smith Resolution, at times the legislation has been invoked to justify low rates for agricultural products. *See* Increased Freight Rates, Eastern, Western & Southern Territories, 300 I.C.C. 633, 686 (1957); Wool & Mohair Rates, 276 I.C.C. 259, 269 (1949); General Commodity Rate Increases, 1937, 176 I.C.C. 159 (1931); 17 VA. L. REV. 192 (1930).

<sup>40</sup> *See generally* *Hearings on Recycling*.

<sup>41</sup> 118 CONG. REC. S 1271 (daily ed. Aug. 4, 1972).

<sup>42</sup> S. 1729, 92d Cong., 2d Sess. (1972).

<sup>43</sup> *Id.* § 502(a).

<sup>44</sup> *Id.*

<sup>45</sup> *Id.* In the closing days of the first session of the 93d Congress, the Senate added similar language to the House-passed Regional Rail Reorganization Act of 1973, H.R. 9142, 93d Cong., 1st Sess. § 703 (1973). This language was eliminated in conference, however, and weak language calling for the ICC only to "adopt appropriate rules" to eliminate discrimina-

In the House, further attempts to provide statutory relief were also unsuccessful. Following hearings before the Subcommittee on Transportation and Aeronautics of the House Commerce Committee in May 1972,<sup>46</sup> Representative Dingell proposed an amendment<sup>47</sup> similar to that proposed by Senator Moss. The Dingell amendment further provided that the freight rate investigation and remedial action provisions would apply to the Federal Maritime Commission (FMC) as well as to the ICC.<sup>48</sup> This amendment was adopted by the Subcommittee, but when the 92d Congress adjourned, the legislation also died in the House Commerce Committee.

Even if legislation of the type introduced in the 92d Congress were eventually enacted, it might be necessary to provide additional incentives for the recycling of solid waste.<sup>49</sup> Some have suggested the creation of a statutory preference scheme of incentive rates, such as that provided for agricultural commodities under the Hoch-Smith Resolution.<sup>50</sup> Another suggestion is that all waste and scrap materials be exempt from regulation when moved by motor carrier or barge in order to exert competitive pressure on rail rates.<sup>51</sup> This approach would help to facilitate the movement of recyclable materials regardless of the form of transportation utilized.<sup>52</sup> Finally, some have suggested direct subsidies to carriers to induce them to transport these low-value commodities at reasonable rates,<sup>53</sup> while others have called for abolition of the whole archaic ICC ratemaking structure.<sup>54</sup> Assuming that legislation like that proposed in the 92d Congress is enacted, we will then be able

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tion against recyclable materials was substituted. See H.R. REP. NO. 744, 93d Cong., 1st Sess. 40 (1973). This watered-down version is now the law. Pub. L. No. 93-236 (Jan. 2, 1974). Because no standards are provided for the ICC's review, it is difficult to see how such a provision will be adequate. Unlike the Moss approach, no rate study is authorized, and no annual reports to the Congress are required. Virtually identical language was added to the Energy Emergency Act (H.R. 11450, 93d Cong., 1st Sess. § 107(c) (1973)) by Representative Bingham. See 119 CONG. REC. H 11,421 (daily ed., Dec. 14, 1973).

<sup>46</sup> See generally *Hearings, supra* note 15.

<sup>47</sup> H.R. 16281, 92d Cong., 2d Sess. (1972).

<sup>48</sup> *Id.*

<sup>49</sup> See notes 65-99 and accompanying text *infra*.

<sup>50</sup> Recyclamation 47; see note 39 *supra*.

<sup>51</sup> Recyclamation 47.

<sup>52</sup> One recent study suggested that the current discriminatory freight rates be replaced by rates based only upon (1) the type, size, and kind of equipment used, (2) the characteristics of the services and facilities provided, and (3) weight or cube of the shipment. *Id.*

<sup>53</sup> LEAGUE OF WOMEN VOTERS, RECYCLE 18 (1972).

<sup>54</sup> Indeed, one commentator has found that the "present ceiling rates of the railroad industry were prescribed by the ICC in 1952 using a formula method of scale structure which had been suggested in 1891 to meet the competition of horse and wagon." Recyclamation 46-47.

to speak with more certainty as to what further incentives, if any, are necessary to encourage the movement of recyclable materials to the marketplace. Legislation aimed at the equalization of rail freight rates should be the first step, however.

One advantage of the Dingell approach, is that it places the task of sorting out reasonable freight rates for recycled materials in the ICC, which is better prepared than any other federal agency to perform such a task. Of course, this approach runs the risk of a half-hearted review. Considering that some ICC commissioners are already on record for such freight rate relief, however, and that the ICC would have difficulty avoiding its responsibilities under a continuing threat of congressional oversight and court suit, the Dingell approach seems sensible.

### B. *Discriminatory Ocean Freight Rates*

In addition to rail rate discrimination against the movement of recyclable materials, there is a parallel pattern of ocean freight rate discrimination. This discrimination, like the export rate discrimination found in rail rates, is doubly damaging: it prohibits the exportation of solid waste overseas, and by blocking potential export earnings, aggravates our balance of trade problems.<sup>55</sup>

In mid-1972, many shippers of recyclable materials became convinced that attempting to litigate rate equality before the Federal Maritime Commission (FMC) would be prohibitively expensive, and virtually endless. They moved, therefore, to seek a comprehensive legislative solution to ocean freight rate discrimination against recycled materials.

As in the case of rail shippers, ocean shippers previously have come to Congress for relief from what they felt were monopolistic practices by the carriers, unjust rates, and other objectionable competitive practices.<sup>56</sup> But here too, statutory relief has been infrequent.<sup>57</sup>

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<sup>55</sup> See *Hearings on S. 2754*, at 600-20.

<sup>56</sup> The Shipping Act, 1916, 46 U.S.C. §§ 801-42 (1970), was a product of shipper agitation for protection from competitive practices and unjust rates. For a summary of the legislative history of this act and its major provisions, see D. LOCKLIN, *supra* note 39, at 739-42. Sections 816 and 817 of the Shipping Act, for instance, prohibit "unjustly discriminatory" rates and require "just and reasonable fares, rates, [and] charges." 46 U.S.C. §§ 816, 817 (1970).

<sup>57</sup> For an example of legislative relief for shippers of a particular commodity, see 46 U.S.C. § 817(b)(1) (1970). In 1964, shippers of lumber in the Pacific Northwest with the support of the National Industrial Traffic League sought legislation to exempt shipments of lumber from the tariff filing requirements of the Shipping Act, 1916, *id.* § 817(a). According to these shippers, Canadian lumber exporters "had an advantage because there is no law in

At hearings before the Senate Commerce Committee in February 1972 on the Proposed Export Expansion Act,<sup>58</sup> shippers of recyclable materials testified about ocean freight rate discrimination against recycled materials.<sup>59</sup> As a direct result of this testimony, the Federal Maritime Commission began an investigation of alleged rate discrimination by the Pacific Westbound Conference.<sup>60</sup> This landmark investigation, in which the EPA in-

Canada requiring the filing of ocean freight rates, so that the lumber shipper in Canada could negotiate with the ocean carrier for lower rates." 109 CONG. REC. 14,081 (1963). In 1965, this legislation was further amended to restrict its application only to softwood because "during the past 2 years the hardwood lumber industry has felt that this exemption . . . was detrimental to their interests in stable ocean transportation rates to Europe . . ." S. REP. NO. 873, 89th Cong., 1st Sess. 1 (1964), cited in 111 CONG. REC. 27,264 (1965).

One important reason that shipper relief from discriminatory rates on a commodity basis is so rare is that the Commerce Department over the years has primarily emphasized subsidies for the entire industry. The problems inherent in seeking preferential rates for certain shippers have thus been avoided. See 46 U.S.C. §§ 1151-52 (1970) (construction-differential subsidy); *id.* §§ 1171-83 (operating-differential subsidy).

<sup>58</sup> S. 2754, 92d Cong., 1st Sess. (1972).

<sup>59</sup> The following table, comparing ocean freight rates for virgin and recycled materials, illustrates the discriminatory nature of selected rates.

Recycled vs. Virgin Ocean Freight Rates  
from Pacific Ports to Japan

Commodity	Scrap Rate*	Virgin Rate*
Paper	\$32/ton	\$18-\$23/ton
Copper	\$35.75/ton	\$27/ton
Aluminum	\$34.50/ton	\$23/ton

\*Note: Short tons used; rates exclusive of bunker, currency and other surcharges; virgin rates are special or open rates.

J. Vaccaro, Chart submitted in *Hearings on S. 2754 Before the Subcomm. on Foreign Commerce and Tourism of the Senate Commerce Comm.*, 92d Cong., 2d Sess. (1972) (unpublished chart on file with the Subcomm. on Foreign Commerce and Tourism of the Senate Commerce Comm.); see *Hearings on S. 2754*, at 605-06.

<sup>60</sup> The Order of Investigation stated in part:

[T]he Commission is aware of the many potential benefits to be derived from increased recycling of our national solid waste through encouragement and development of existing or new ways and means for disposing of such waste. Waste paper, for example, competes directly with woodpulp. . . . However, the Commission has reason to believe that the rates charged by members of the PWC for transportation of wastepaper may preclude wastepaper from being competitive with virgin woodpulp. . . .

Rates on woodpulp are "open" allowing each Conference member to set rates at a level consistent with and based upon their [*sic*] individual operating expenses, while rates on wastepaper are fixed under the dual rate system. This permits exporters of woodpulp whose rates are "open" to utilize the services of carriers having the lowest rates at the time of shipment while exporters of wastepaper must exclusively use the Conference carriers at contract rates or refrain from signing the contract in order to use nonconference carriers.

Furthermore, rates on both woodpulp and wastepaper are on a weight basis.

tervened, not only should document the ocean freight rate problem for recyclable materials, but also should provide more rationally based rates for the movement of these materials.

As a further result of hearings on the Export Expansion Act, Senator Inouye and Commerce Committee Chairman Magnuson introduced corrective freight rate legislation in the closing days of the 92d Congress.<sup>61</sup> The Inouye bill sought to amend the Shipping Act, 1916 to preclude any ocean freight rate discrimination "against recycled solid waste materials."<sup>62</sup>

Broader legislation, which called for a twenty-four month investigation of ocean freight rates by the FMC and directed the elimination of any unjust discrimination against recycled materials, was favorably reported in late 1972 by the Senate Commerce Committee as a section of the proposed Surface Transportation Act.<sup>63</sup> In addition, virtually identical language was placed on the Surface Transportation Act as reported to the full House Commerce Committee.<sup>64</sup>

As in rail rate discrimination, there are many possible solutions to the ocean rate discrimination problem, including turning the problem over to the FMC, changing basic ratemaking rules, or providing direct subsidies. The logical first step, however, would be the equalization of shipping rates. As with rail rate legislation, the full effect of passage of such legislation is unknown.

## II

### DISCRIMINATORY TAX POLICIES

One of the most promising methods of making recycled materials competitive with virgin materials is through tax incentives. This approach is particularly appropriate since discriminatory tax incen-

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. . . The rate on wastepaper is \$31.25 or \$37.00 per ton depending on density while the rate on woodpulp is between \$14.50 and \$32.00 per ton. . . .

Order of Investigation, Federal Maritime Comm'n, against the Pacific Westbound Conference & its Member Lines No. 72-35, at 1,2 (F.M.C. July 30, 1972).

<sup>61</sup> Senator Inouye's bill provided:

The Congress hereby finds and declares that unreasonable discriminatory ocean freight rates and charges for the exportation of solid waste materials are detrimental to the commerce of the United States and contrary to the purposes of the Solid Waste Disposal Act of 1965 as amended by the Resource Recovery Act of 1970.

S. 4117, 92d Cong., 2d Sess. (1972).

<sup>62</sup> *Id.*

<sup>63</sup> S. 2362, 92d Cong., 2d Sess. (1972).

<sup>64</sup> H.R. 16281, 92d Cong., 2d Sess. (1972); *see* S. 2753, 93d Cong., 1st Sess. §§ 201-05 (1973).

tives were once enacted favoring the utilization of virgin resources over recycled materials. The present tax laws contribute toward making it cheaper to use trees or extracted minerals in manufacturing than to utilize materials reclaimed from the solid waste pile.

Two provisions in the Internal Revenue Code give virgin materials this competitive advantage. One allows capital gain treatment of income derived from the increase in the value of standing timber.<sup>65</sup> The percentage depletion allowance for the extraction of minerals is the second.<sup>66</sup>

Many have suggested repealing these provisions rather than adding new incentives for recycled materials.<sup>67</sup> Although these provisions have been questioned many times, each time a strong case has been made that they continue to serve the purposes for which they were originally enacted.<sup>68</sup> It appears that the most effective approach toward increasing the use of recycled materials would be to provide tax incentives which would equalize the tax benefits derived from utilizing recycled materials and those now available for utilizing natural resources. In order to understand why tax incentives are needed for the utilization of recycled materials, it is necessary to examine the tax preferences allowed for the utilization of virgin materials.

#### A. *Capital Gain Treatment for Timber*

Since 1943, the Internal Revenue Code has included a provision which allows an owner of standing timber or an owner of a contract right to cut standing timber to treat the cutting of such timber as a sale or exchange subject to favorable capital gain treatment.<sup>69</sup> This is true even though there has been no actual sale or exchange of the timber.<sup>70</sup> The capital gain is measured by the difference between the taxpayer's adjusted cost basis and the fair market value of the timber at the beginning of the taxable year in which it is cut.

The major justification for this capital gain treatment has been that it encourages conservation, reforestation, and good forest management, although a major reason for enacting the provision

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<sup>65</sup> INT. REV. CODE OF 1954, §§ 631(a), (b).

<sup>66</sup> *Id.* § 613.

<sup>67</sup> *See, e.g.*, H.R. 1040, 93d Cong., 1st Sess. § 201 (1973).

<sup>68</sup> *See generally* STAFF OF JOINT COMM. ON INT. REV. TAXATION, 81ST CONG., 2D SESS., LEGISLATIVE HISTORY OF DEPLETION ALLOWANCES (Comm. Print 1950).

<sup>69</sup> INT. REV. CODE OF 1954, §§ 631(a), (b).

<sup>70</sup> S. REP. NO. 627, 78th Cong., 1st Sess. 25 (1943).

was that it eliminated discrimination between taxpayers who disposed of timber by cutting and those who sold the timber outright.<sup>71</sup>

The last major congressional debate on the subject took place in 1969.<sup>72</sup> Voluminous testimony and data presented to the tax-writing committees of Congress indicated that the capital gain provision for timber had been very effective in encouraging greater conservation and better forest management of timber lands.<sup>73</sup> As a result, Congress chose not to change the tax laws providing capital gain treatment for timber.

Because of capital gain treatment, paper companies using trees as a source of raw material have an overall effective tax rate which is less than that of companies which utilize recycled materials.<sup>74</sup> According to a Treasury Department study conducted in 1969, paper companies had an effective tax rate about five percent less than that of other manufacturing industries, and also five percent less than that of users of recycled materials.<sup>75</sup> More current information indicates that the differential continues to be at least five percent even after applying the thirty percent capital gain rate provided by the Tax Reform Act of 1969.<sup>76</sup>

A July 1972 report on tax subsidies issued by the Joint Economic Committee of Congress stated that an "average" large paper firm during the years 1964 through 1969 had minimized its tax liability by having almost all its taxable income taxed at the preferential capital gain rates.<sup>77</sup> The report attributed this, at least in part, to the use of a high estimated fair market value for the timber cut so that all of the paper company's taxable income was capital gain. The timber tax law provides an inducement for a taxpayer to report a fair market value which minimizes tax liability.<sup>78</sup>

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<sup>71</sup> JOINT ECONOMIC COMM., 92D CONG., 2D SESS., THE ECONOMICS OF FEDERAL SUBSIDY PROGRAM, A COMPENDIUM OF PAPERS SUBMITTED TO THE JOINT ECONOMIC COMMITTEE, pt. 3, at 337 (Comm. Print 1972).

<sup>72</sup> *Hearings on Tax Reform Before the House Comm. on Ways and Means*, 91st Cong., 1st Sess., pt. 8, at 2823 (1969).

<sup>73</sup> *Id.*

<sup>74</sup> U.S. TREASURY DEP'T, TAX REFORM STUDIES AND PROPOSALS, pt. 3, at 434-36 (1969).

<sup>75</sup> *Id.* at 434.

<sup>76</sup> INT. REV. SERV. PUB. NO. 16, STATISTICS OF INCOME, 1968 CORPORATE INCOME TAX RETURNS (1972).

<sup>77</sup> JOINT ECONOMIC COMM., 92D CONG., 2D SESS., *supra* note 71, at 331.

<sup>78</sup> An example will illustrate how the capital gain provision operates to produce a lower effective tax rate and to minimize taxable income subject to ordinary rates. Assume that a corporation engaged in the manufacture of paper products plants trees in 1950 at a total cost of \$1,000. Over the growth years, additional costs are incurred in managing the forest,

In view of the lower tax bill that results from electing capital gain treatment, management must necessarily turn to utilizing trees rather than recycled material unless the actual cost of recycled material is low enough to offset the tax savings resulting from the utilization of timber. Generally, the cost of using recycled material is not sufficiently low to do this.

Capital gain treatment is also available for the disposal of domestic iron ore.<sup>79</sup> This provision operates like the timber provision, but is not as significant to the iron industry as is percentage depletion, which is discussed below.

### B. *Percentage Depletion Allowance*

The tax laws now provide a depletion allowance for mineral resources under either the cost depletion method or the percentage depletion method, whichever is more favorable to the taxpayer.<sup>80</sup> Cost depletion is designed to provide a tax-free return

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and these costs are deducted as incurred. In 1975, the corporation cuts these trees for the purpose of converting them into paper products. At the time of cutting, the trees have appreciated to a fair market value of \$5,000. If the taxpayer corporation makes an election under § 631 of the Internal Revenue Code (INT. REV. CODE OF 1954, § 631), it can treat the \$4,000 increase in the value as a capital gain resulting from a sale or exchange, even though the corporation did not make a sale but will use the trees to make paper products for sale to customers. This \$4,000 gain will be taxed at the more favorable 30% capital gain rate applicable to corporations, which will result in a \$1,200 tax. In computing the profit derived from the ultimate sale of paper products produced from these same trees, the timber costs will be \$5,000, the fair market value at the time of cutting.

Assume further that these same trees are manufactured into paper products at an additional cost of \$4,000 (including logging) and ultimately sold to customers at a price of \$10,000. The profit of the corporation subject to tax would be computed as follows:

\$10,000	Sale price of paper products
-5,000	Timber Cost (fair market value when cut)
-4,000	Other costs
<hr/>	
\$1,000	Profit

This profit would then be taxed at the ordinary corporate income tax rate, which for taxable income over \$25,000 is 48%. The total tax to the corporation under this example, for both the timber profit and the manufacturing profit, would be:

Timber Profit .....	\$4,000 × 30% = \$1,200
Manufacturing Profit .....	\$1,000 × 48% = \$ 480
	<hr/>
Total Tax .....	\$1,680

Had the corporation not been able to elect the favorable capital gain treatment, the overall tax would have been \$2,400 (\$5,000 × 48%).

<sup>79</sup> *Id.* § 631(c).

<sup>80</sup> *Id.* §§ 611-15.

of the actual investment in a particular mine or well.<sup>81</sup> It is computed on the basis of the cost of the property and is similar to the depreciation of a piece of machinery or a building. Cost depletion offers no special rewards for utilizing natural resources rather than recycled materials. Percentage depletion, on the other hand, provides not only a tax-free return of the actual investment in a particular mine or well, but also allows tax-free receipts to be reinvested to find new reserves or to replace those being depleted.<sup>82</sup>

The percentage depletion allowed by the Internal Revenue Code is computed by multiplying a specific percentage, which varies according to the mineral extracted, by the gross income from the mineral property. Such allowance cannot exceed 50 percent of the taxpayer's taxable income from the producing property computed without the allowance for depletion.<sup>83</sup> The depletion deduction is computed separately for each producing property although the rate differs for some minerals between domestic and foreign production. A taxpayer may continue to deduct percentage depletion even after he has recovered the entire cost or other basis of the property through prior depletion deductions.<sup>84</sup> The total amount of depletion allowed a producing property is unlimited.<sup>85</sup> The annual deduction is restricted only to 50 percent of the taxpayer's taxable income. The percentage depletion allowed is 22 percent for oil, gas, sulphur, and most domestically mined metals, including bauxite, lead, nickle, tin, and zinc.<sup>86</sup> The percentage is 15 percent for copper and iron ore.<sup>87</sup>

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<sup>81</sup> Cost depletion has been allowed by the federal income tax laws continuously since 1913. Act of Oct. 3, 1913, ch. 16, 38 Stat. 172. Discovery-value depletion was first added to the tax laws in 1918, Act of Feb. 24, 1919, ch. 18, § 214(a)(10), 40 Stat. 1067, as an alternative to cost depletion, to provide a special incentive for risky exploration and discovery and, in addition, to assure that the discoverer of an oil field would not be taxed more than the purchaser of a proven field. STAFF OF JOINT COMM. ON INT. REV. TAXATION, 81ST CONG., 2D SESS., *supra* note 68, at 1. Percentage depletion at the rate of 27.5% was first introduced in 1926, but was limited to oil and gas only. *Id.* It was enacted to provide a simpler method of computing depletion than the then existing discovery-value method. In 1932, percentage depletion was extended to metals at a 15% rate, to sulphur at a 23% rate, and to coal at a 5% rate. *Id.* The original discovery-value depletion, the forerunner of percentage depletion, eventually faded out of the Code.

<sup>82</sup> See generally R. MANNING, DEPLETION ALLOWANCES UNDER FEDERAL INCOME TAX AND ALLOWANCES FOR EXPLORATION AND DEVELOPMENT COSTS (1962).

<sup>83</sup> INT. REV. CODE OF 1954, § 613(a).

<sup>84</sup> *Id.* § 613(b).

<sup>85</sup> *Id.* § 613.

<sup>86</sup> *Id.* § 613(b)(1).

<sup>87</sup> *Id.* § 613(b)(2).

According to a Treasury Department study conducted in 1969, mining industries, excluding petroleum, have an effective tax rate of only 24.3 percent of net income compared with 43.3 percent for other manufacturing industries.<sup>88</sup> The tax treatment of the capital cost of bringing a mineral deposit into production also significantly contributes to these lower effective rates. Under the tax laws, intangible drilling costs and development costs are deductible as expended, rather than added to the cost basis of the property and depreciated over the life of the producing property.<sup>89</sup>

As with timber, these tax savings given to mining industries contribute to a competitive advantage enjoyed by virgin materials over recycled materials. Although many argue that repeal of the depletion allowance is the proper way to equalize the tax treatment of natural resources and recycled materials,<sup>90</sup> a strong case has been made that percentage depletion is necessary because of factors such as the energy crisis, higher prices to consumers, and increased foreign competition.<sup>91</sup> Percentage depletion has been under attack almost continuously since it was originally enacted in 1926.<sup>92</sup> Congress, in 1969, considered various proposals to reduce and repeal percentage depletion and, after the debate, decided only to reduce the percentages. Capital gain treatment for the

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<sup>88</sup> A somewhat oversimplified example will illustrate mechanically how percentage depletion is computed. Assume the taxpayer mines domestic tin for sale to a manufacturer of tin cans. The gross income derived from the mining of such tin for a particular taxable year is \$1 million. Taxable income, after allowable deductions (excluding any deduction for depletion) is assumed to be \$500,000. The depletion deduction would be determined as follows:

Gross Income	\$1,000,000
Deductions	
(Other than depletion)	\$ 500,000
Taxable income	\$ 500,000
50% Limitation	\$ 250,000
22% × \$1,000,000 =	\$ 220,000 Depletion Allowed

If the taxable income of the taxpayer had been \$400,000, rather than \$500,000, the 50% limitation would have applied and the depletion allowance would have been limited to \$200,000. In fact, the depletion deduction of most large mining concerns is reduced to 50% of taxable income.

As the above example shows, percentage depletion provides substantial tax savings for the extractive industries. U.S. TREASURY DEP'T, *supra* note 74, pt. 1, at 101.

<sup>89</sup> INT. REV. CODE OF 1954, § 263(a).

<sup>90</sup> See note 67 and accompanying text *supra*.

<sup>91</sup> *Hearings on Recycling* 56.

<sup>92</sup> See STAFF OF JOINT COMM. ON INT. REV. TAXATION, 81ST CONG., 2D SESS., *supra* note 68, at 8-30.

cutting of timber also has been debated almost continuously since it was originally enacted in 1943. President Franklin Roosevelt, in his message vetoing the Revenue Act of 1943, pointed to the treatment of timber income as one of his objections and stated that "[a]s a grower and seller of timber, I think that timber should be treated as a crop and therefore as income when it is sold."<sup>93</sup> Congress overrode the veto.

Under the circumstances, it appears that the most effective and practical approach toward equalizing tax treatment for recycled and virgin materials would be to provide similar tax preferences for both.<sup>94</sup> If it is not possible to abolish incentives for virgin materials, equalization should be provided for solid waste. Tax incentives for recycled materials have been advocated by many individuals, organizations, and members of Congress.<sup>95</sup>

### C. *Recycling Tax Deduction*

One suggested tax incentive is to allow taxpayers a deduction similar to the percentage depletion allowance for utilizing recycled materials in manufacturing processes. During hearings in 1971 before the Fiscal Policy Subcommittee of the Joint Economic Committee, a proposal along these lines was made.<sup>96</sup> Under this proposal, the manufacturer would be entitled to a recycling tax deduction (or tax credit) determined on the basis of the cost of recycled materials purchased. The recycling deduction would be computed as a percentage of the cost of recycled material which qualified for deduction. This percentage would vary according to the type of recycled material involved and the amount of deduction required to neutralize the tax advantages given to corresponding virgin material. This recycling deduction would apply to all materials designated under the Solid Waste Disposal Act and Resource Recovery Act as solid waste materials.<sup>97</sup>

The suggested equalization approach would allow a company now using virgin materials to switch to the use of recycled materials without adversely affecting its overall after-tax earnings. Because tax consequences generally would be the same, a paper company which now almost totally satisfies its pulp requirements by cutting

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<sup>93</sup> JOINT ECONOMIC COMM., 92D CONG., 2D SESS., *supra* note 71, at 338.

<sup>94</sup> H.R. 15770, 92d Cong., 2d Sess. (1972). *See also* H.R. 2184, 93d Cong., 1st Sess. (1973).

<sup>95</sup> *See, e.g.*, CITIZEN'S ADVISORY COMM. ON ENVIRONMENTAL QUALITY, *supra* note 11, at 36.

<sup>96</sup> *Hearings on Recycling* 41-43.

<sup>97</sup> *See* note 2 *supra*.

trees could fulfill a substantial part of its pulp needs from recycled material without adverse tax effects, leaving more trees to satisfy future pulp and lumber requirements. To encourage the construction of new recycling facilities and to remain technologically advanced, the proposal also suggested a tax benefit in the form of a rapid five-year write-off of plant and equipment used in recycling.

Following the Joint Economic Committee hearings, Representative Griffiths, a member of the House Ways and Means Committee, introduced a bill along the same lines proposed during the hearings.<sup>98</sup>

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<sup>98</sup> H.R. 15770, 92d Cong., 2d Sess. (1972). This bill, which ultimately gathered 45 co-sponsors, would add a new § 189 to the Internal Revenue Code providing in part:

(a) IN GENERAL.—There shall be allowed as a deduction the percentages specified in subsection (b) of the amounts paid or incurred during the taxable year by the taxpayer to purchase or otherwise acquire recycled solid waste materials (as defined in subsection (c)) for manufacture by the taxpayer into useful raw materials or salable products.

(b) PERCENTAGES ALLOWED.—The percentages referred to in subsection (a) are as follows:

- (1) 22 percent for recycled metals other than those referred to in paragraph (2);
- (2) 15 percent for recycled copper, iron, steel, gold, and silver;
- (3) 18 percent for recycled wastepaper, wastepaper products, and textiles; and
- (4) 15 percent for all other recycled solid waste materials.

*Id.* Representative Griffiths stated when introducing her bill that it was designed [t]o offset preferential depletion allowances and capital gains treatment applicable to virgin timber and metals and to give the industries involved a true incentive to move swiftly from the depletion of natural resources to the utilization of recycled materials, my bill provides a percentage deduction for recycled solid waste materials approximately equal in each case to the percentage advantage now enjoyed by each of the competing virgin materials.

118 CONG. REC. E 6630 (daily ed. June 30, 1972).

As Representative Griffiths explained, the percentages in the bill followed generally the depletion percentages now provided for the corresponding virgin materials. However, in the case of recycled wastepaper, wastepaper products, and textiles, the 18% designated parallels the difference between the 48% corporate tax rate on ordinary income and the 30% corporate capital gains rate.

The Griffiths bill defines "recycled solid waste materials" as "scrap metals, wastepaper, and paper products, discarded textiles, rubber, plastics, and glass reclaimed by the taxpayer or his supplier from garbage, refuse, or trash, or from industrial, commercial, and agricultural operations." H.R. 15770, 92d Cong., 2d Sess. § 189(c)(1972). The bill also provides that the Administrator of the Environmental Protection Agency can suspend the recycling deduction for any taxable year when it is determined that the deduction is not required to alleviate the depletion of any virgin natural resource and to promote the solid waste recycling purposes of the Resource Recovery Act of 1970. 42 U.S.C. §§ 3251-59 (1970). H.R. 15770, 92d Cong., 2d Sess. § 189(d) (1972). In addition to the recycling deduction, the Griffiths bill contains a provision to allow taxpayers to depreciate recycling facilities over a five-year period, a much quicker tax write-off than would otherwise be available. *Id.* § 190.

The Griffiths recycling deduction would operate in the following manner. Assume the taxpayer is engaged in the manufacture of cardboard boxes. The taxpayer purchases recycled wastepaper (as defined in the bill) at a cost of \$1,000. In computing taxable income, the taxpayer, who already would be allowed a deduction of \$1,000 for the cost of the

Some may suggest that taxpayers should not be given a tax benefit for recycled material they are now utilizing.<sup>99</sup> To avoid this difficulty, the recycling deduction could be limited to the increased use of recycled material. This could be accomplished by providing a base period to measure enhanced utilization of recycled materials. The deduction would be applicable only to the cost of recycled material purchased in excess of the average amount annually purchased during the base period. This proposal has the obvious disadvantage of tending to place existing users of the recycled materials at a competitive disadvantage in comparison with new users of recycled materials. In other words, it would penalize those users who have been doing the recycling that the tax incentive is intended to foster. The base period approach, however, would eliminate any federal revenue loss due to present recycling which might result from the enactment of the recycling deduction.

Another approach toward reducing initial revenue losses is to provide a graduated percentage which increases to the full percentage designated as the recycled material user increases his use of recycled materials. For example, the percentage allowed as a deduction would increase as the amount of recycled material used increases until the maximum percentage is reached. This suggestion too has an obvious drawback in that it tends to place the new user of recycled materials and the small business at a competitive disadvantage in relation to existing users of recycled materials.

Numerous other approaches have been suggested,<sup>100</sup> but re-

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recycled wastepaper, would be allowed a recycling deduction of \$180 (18% × 1,000) in addition. Unlike the depletion allowance, the Griffiths proposal does not contain a provision limiting the recycling deduction to 50% of taxable income. It may be that such a limitation should be a part of any recycling deduction.

<sup>99</sup> See *Hearings on Recycling* 42.

<sup>100</sup> The Citizens' Advisory Committee on Environmental Quality has called for tax changes to further resource recovery, recycling, and reuse of solid waste. See CITIZENS' ADVISORY COMM. ON ENVIRONMENTAL QUALITY, *supra* note 11, at 36. More specifically, the committee recommended consideration of the following changes in tax policy: (1) a federal tax policy that will provide equal tax treatment for the use of recycled materials and natural resources; (2) an investment tax credit for investments in new plants and equipment geared to the production of marketable products from recycled materials; (3) a five-year amortization deduction for resource recovery facilities; (4) tax exempt industrial development bonds for the financing of recycling facilities built by private concerns to handle their own wastes; and (5) new taxes on products that contribute heavily to solid waste pollution. *Id.* For a discussion of tax-free treatment for industrial revenue bonds for solid waste facilities, see Rev. Rul. 72-190, 1972 INT. REV. BULL. No. 17, at 6-7.

S. 1593, 93d Cong., 1st Sess. (1973), proposes an energy consumption adjustment which would decrease the total deduction allowed for the purchase of materials used in manufacturing according to the difference in energy costs incurred in using virgin and recycled materials. To the extent that a firm's total energy costs incurred in producing goods from

ardless of approach, it is clear that tax incentives are needed to foster recycling of solid wastes. The proposal to give a tax deduction for utilization of recycled material in the manufacturing process would increase the market for recycled material by removing the competitive inequality existing between recycled and virgin materials.

### III

#### MARKET DISCRIMINATION AGAINST RECYCLED MATERIALS

##### A. *Government Procurement Policies*

Perhaps no part of the recycling picture is as important as the development of expanded markets for recycled materials. Unless someone is willing to buy recycled products, all efforts by the private sector to provide incentives for recycling (in the form of transportation policies, tax policies, and the like) will be a cruel charade, as recycled materials are pushed down a dead-end pipe. Unfortunately, the Executive and the Congress have discriminated in their procurement policies for many years against the purchase of recycled materials.<sup>101</sup> This discrimination continues today even after the enactment of the Resource Recovery Act.<sup>102</sup>

Section 205(a) of the Act directs the Environmental Protection Agency to investigate and determine how federal procurement programs can be utilized to develop market demand for recovered resources.<sup>103</sup> The Senate *Report* on this legislation, stressing the importance of markets for recycled materials, specifically directs federal agencies "not to await the results of [such] investigation[s] before committing themselves to the recovered materials market but to participate . . . by an energetic recycling purchasing policy."<sup>104</sup>

Federal procurement to encourage markets for recycled mat-

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virgin materials exceeded its energy costs in using recycled materials, the deduction for purchasing all materials used in production would be decreased. The same result would be obtained if the energy costs of using recycled material were to exceed the energy costs of using virgin resources. This energy consumption adjustment could be an effective incentive to using recyclables because it appears that production from recycled material is less energy-intensive than production from virgin material. League of Women Voters Education Fund, *Environmental Update*, No. 461, Dec. 1973 (newsletter).

<sup>101</sup> See 7 WEEKLY COMP. PRES. DOCS. 193 (1971).

<sup>102</sup> *Hearing on Use of Recycled Paper by Congress Before the Senate Comm. on Rules and Admin.*, 92d Cong., 1st Sess. 44-45 (1971).

<sup>103</sup> 42 U.S.C. § 3253 (1970).

<sup>104</sup> S. REP. NO. 1034, 91st Cong., 2d Sess. 19 (1970).

erials is vital. First, the federal role has great impact not only on state and local governments, but also on the private sector. Second, the federal government is one of the major sellers of solid waste materials to the recycling industry and one of the greatest potential markets for such material.

In August 1970, after receiving complaints from waste paper companies and others that the federal government was discriminating against the use of recycled paper by continuing to issue specifications<sup>105</sup> for paper procurement that called only for the use of "virgin chemical woodpulp," the Council on Environmental Quality began to consider a government-wide program of incentives for the purchase of recycled materials, beginning with paper. Two different approaches were reviewed. One, a "set-aside" approach, required that a certain quantity of each procurement be set aside for bidders providing recycled materials.<sup>106</sup> The other, which was finally adopted, provided for minimum percentages by weight of recycled material in all paper purchases.<sup>107</sup> The program was begun at the General Services Administration. Although many other federal agencies purchase paper materials, the GSA provided central purchasing power and the largest volume of paper procurements.<sup>108</sup>

A vigorous policy statement by the President<sup>109</sup> should have

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<sup>105</sup> Use of Recycled Paper by Congress, GSA Press Release (Aug. 2, 1971), *cited in Hearing, supra* note 102, at 43-45.

<sup>106</sup> The Department of Defense has used a small business set-aside in procurements for some years. *See* 41 U.S.C. § 252 (1970).

<sup>107</sup> *See* 7 WEEKLY COMP. PRES. DOCS. 193 (1971).

<sup>108</sup> Paper products were chosen first because of the ease with which most paper products can be made alternatively from either virgin or recycled material. In addition, it was thought that the public readily could understand the recycling process when a product such as discarded office stationery was recycled back into the same product. Finally, paper constitutes a very high percentage of municipal and government solid waste and thus would have a greater recycling impact than many other products. *See id.*

<sup>109</sup> On February 9, 1971, President Nixon, in his Environmental Message to Congress, included a section on "Recycling of Wastes" which announced this new program:

The Nation's solid waste problem is both costly and damaging to the environment. Paper, which accounts for about one-half of all municipal solid waste, can be reprocessed to produce a high quality product. Yet the percentage the nation recycles has been declining steadily.

To reverse this trend, the General Service Administration working with the Council on Environmental Quality, has reviewed the Federal Government's purchasing policies. It has found a substantial number of prohibitions against using paper with recycled content. Such prohibitions are no longer reasonable in light of the need to encourage recycling.

As a result of this review, the GSA has already changed its specifications to require a minimum of 3% to 50% recycled content depending on the product in over \$35 million per year of paper purchases. GSA is currently revising other specifications to require recycled content in an additional \$25 million of annual

insured the success of the GSA's program, but immediately a battle developed within the GSA over how "recycled paper" was to be defined.<sup>110</sup> Since that time, the GSA has been slowly increasing its recycled and post-consumer content in bids. This progress has been so sluggish that the agency has come under criticism for failing to promote recycling.<sup>111</sup>

The Executive Branch has not been alone in the recycling effort.<sup>112</sup> In early 1971, several Senators and Representatives, annoyed because they were unable to purchase recycled paper for their own use out of their stationery accounts and frustrated because they could not persuade the congressional stationery rooms to order such paper, moved to solve the problem legislatively.<sup>113</sup> Although hearings on procurement legislation be-

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paper purchases. In total, this will amount to more than one-half of GSA's total paper products purchases. All remaining specifications will be reviewed to require recycled content in as many other paper products as possible. The regulations will be reviewed continually to increase the percentage of recycled paper required in each.

I have directed that the Chairman of the Council on Environmental Quality suggest to the governors that they review State purchasing policies and where possible revise them to require recycled paper . . . .

*Id.* at 193-94.

<sup>110</sup> The American Paper Institute (API) favored a definition of recycled which included mill broke, *i.e.*, paper scrap generated during the paper manufacturing, cutting, and trimming processes. Many paper mills using recycled fiber and a major recycling trade association pointed out, however, that including mill broke within the recycled definition would be contrary to the spirit of the President's Message.

Two reasons were advanced to support this view: (1) the government and the API had considered mill broke to be virgin material in the past, even for reporting paper statistics to the Department of Commerce; (2) allowing mill broke to qualify as recycled would allow virgin mills to comply with the new procurement policy merely by selling their cuttings and trimmings to the federal government. These items, which are high-grade industrial scrap, never had constituted a solid waste problem.

After several months of fruitless negotiations, the issue was finally settled at the White House in favor of a two-part definition and purchasing program. Each bid would contain both a post-consumer solid waste requirement and a general recycled material requirement which would allow the use of industrial wastes, agricultural wastes, and mill broke.

<sup>111</sup> See *Hearing, supra* note 102, at 8-10 (statement of Senator Moss).

<sup>112</sup> The Joint Committee on Printing controls paper specifications for the Congress, and also controls office-grade paper specifications for the executive and legislative branches. For many years, however, specifications and administrative policy have prevented the purchase of recycled paper by both houses of Congress. *Id.* at 44-45.

<sup>113</sup> In July 1971, Senator Moss introduced two bills, S. 2266, 92d Cong., 1st Sess. (1971), and S. 2267, 92d Cong., 1st Sess. (1971), providing for the use of recycled paper by Congress. S. 2266 provided that at the request of any individual or committee, "stationery, blank books, tables, forms, and other necessary papers . . . shall contain not less than 50 percentum recycled material." S. 2266, 92d Cong., 1st Sess. § 1(b) (1971). To eliminate any use of mill broke in this definition, the legislation specified that only post-consumer solid waste was to be used. *Id.* § 1(b)(3).

S. 2267 proposed that the *Congressional Record* be printed on paper containing not less than 50% recycled fiber. S. 2267, 92d Cong., 1st Sess. § 1(a) (1971). This legislation was

fore the Senate Committee on Rules and Administration in August 1971 produced overwhelming evidence of the need for congressional use of recycled paper and virtually unanimous support for the legislation,<sup>114</sup> none of the measures was reported out by the end of the 92d Congress.

In the House in early 1971, Representative Dow of New York, along with twenty-three co-sponsors, introduced a bill which sought to authorize and direct the Secretary of Defense and the Administrator of the General Services Administration to "insure the procurement and use by the Federal Government of products manufactured from recycled materials."<sup>115</sup> In addition, Representative Dow introduced legislation which would have authorized and directed the use of recycled paper throughout the entire federal establishment, including the District of Columbia's municipal government.<sup>116</sup> Both bills were referred to the Committee on Government Operations where they died a quiet death.

Meanwhile, Senators Javits, Humphrey, Kennedy, and Proxmire sought another solution to the federal procurement problem. In an effort to obtain early hearings on procurement legislation, Senator Javits introduced more than twenty recycling bills, each directed at a specific federal agency.<sup>117</sup> Because of negative testimony from the EPA and NASA, which supported the legislation's objectives but opposed its specific approach, the Javits legislation languished in committee.<sup>118</sup>

The federal example of using recycled paper was scrutinized

introduced, in the words of Senator Moss, because "the *Congressional Record* uses 10 million pounds of paper per year" and because it would "serve as an example to businesses and offices around the country, and, not incidentally, to agencies of the Federal Government." *Hearing, supra* note 102, at 9.

A host of new bills covering this subject has been introduced in the 93d Congress. *See, e.g.*, H.R. 1811, 93d Cong., 1st Sess. (1973).

<sup>114</sup> *See Hearing, supra* note 102, at 44-45.

<sup>115</sup> H.R. 8005, 92d Cong., 1st Sess. (1971).

<sup>116</sup> H.R. 8007, 92d Cong., 1st Sess. (1971).

<sup>117</sup> *See* S. 2111- S. 2123, 92d Cong., 1st Sess. (1972). These bills, however, all had common language which directed that the agency concerned "shall require that any contract, invitation for bids, or purchase order issued or executed for the procurement or production of . . . materials or products shall provide for such percentages of recycled materials as are required by the . . . Secretary." S. 2111, 92d Cong., 1st Sess. § 1(a) (1972).

<sup>118</sup> In the words of Arsen J. Darnay, Director of the Resource Recovery Division of the EPA, who testified on this legislation: "The objective of introducing increased amounts of recycled materials into government procurements can be accomplished with much less dislocation and redtape than is proposed by S. 2190—and it can be done under existing legislation." *Hearings on the Use of Recycled Materials by NASA Before the Senate Comm. on Aeronautics and Space Sciences*, 92d Cong., 2d Sess. 26 (1972) (statement of A. Darnay, Director, Resource Recovery Division Office of Solid Waste Management Programs, EPA).

by many cities and states. In November 1971, Purchase Commissioner Gersten of New York City announced: "Very soon, we plan that virtually all paper products purchased by the city will contain some recycled materials."<sup>119</sup>

Further steps must be taken by federal, state, and local governments to encourage markets for recycled materials of all types. Use of recycled materials generally is declining, and only increased demand for them will reverse this ominous trend.<sup>120</sup> Although the growing depletion of our national resource base may strengthen the demand for recycled materials, procurement regulations, unless changed, will block their use.

### B. *Psychological and Technological Aspects*

As expanding technology allows a wider range of lower grade solid wastes to be recycled, the possibility of contamination from harmful substances in recycled products necessarily increases. Converting envelope cuttings into paper cups is neither difficult nor dangerous given current recycling technology; turning insecticide containers into paper cups, however, may be another matter. In some areas of recycling, therefore, the growing problem of consumer and market rejection of recycled products is directly tied to difficult technical problems.<sup>121</sup> Yet, much might be done to har-

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<sup>119</sup> N.Y. Times, Nov. 15, 1971, § 1, at 27, col. 1.

<sup>120</sup> Perhaps the best statement regarding the importance of markets for recycled materials was recently made by Mr. Samuel J. Hale, Deputy Assistant Administrator for Solid Waste of the EPA, when he stated bluntly at a 1972 Eco-Technic Conference in New York City: "It's silly to spend a lot of money developing the technology [for solid waste] until you solve the market problem." N.Y. Times, Oct. 8, 1972, § 1, at 60, col. 1.

<sup>121</sup> One prominent case study of such consumer rejection is found in the polychlorinated biphenyl scare. Polychlorinated biphenyls (PCB's) are highly stable toxic substances which have been produced since 1929. They are employed in wide-ranging industrial uses including transformer fluids and "carbonless" carbon paper.

In March of 1972, the Food and Drug Administration (FDA), convinced that PCB's "should be significantly reduced or eliminated so as to minimize the overall long-term human exposure," announced proposed rulemaking which would deal with known PCB problem areas. HEW Press Release No. 72-27 (March 17, 1972).

The FDA found that PCB's were produced domestically by only one manufacturer, the Monsanto Corporation. Monsanto in turn sold PCB's to many companies, including the National Cash Register Company which produced "carbonless" carbon paper. Under the FDA's proposed regulations, a temporary interim tolerance for many foodboard packaging materials was set at five parts per million (ppm) of PCB's. Unfortunately, some industry technicians found that as little as two ounces of "carbonless" carbon paper in one ton of mixed waste paper would cause that paper to exceed FDA's tolerance of five ppm. Thus, the foodboard packaging industry and their paper stock dealer suppliers were placed in a very difficult position. If recycling were to be maximized, every possible incentive would be needed to provide markets for lower grade waste paper, the largest single component of

monize these two worthy goals—prevention of food contamination and the encouragement of recycling.

First, legislation to eliminate contaminants before they are disseminated is essential. Currently, the FDA claims to have no authority to seize certain toxic materials at the source and eliminate them. The proposed Toxic Substances Control Act of 1973<sup>122</sup> appears to be one effective solution to this problem. This legislation would require premarket screening of new chemical substances when deemed necessary by the Administrator of the Environmental Protection Agency.<sup>123</sup> In addition, this legislation would confer broad powers on the Administrator in the case of "imminent hazards" to public health.<sup>124</sup>

Second, federal, state, and local agencies must exercise increased sensitivity in dealing with problems affecting recycling.

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municipal solid waste. But if this paper contained PCB's, the giant foodboard industry would be afraid to purchase it. In short, one environmental goal, recycling, might be sacrificed upon the altar of another environmental goal, public health.

To make matters worse, in the public's mind, all recycled paper became suspect. One large paper producer which had just started a recycling campaign by distributing labels to its customers indicating that its products contained recycled materials found the labels abruptly returned because customers wanted nothing to do with recycled paper. Again, the ghost of inferiority haunted recycled paper.

This fear spread. In April of 1970, legislation was introduced in the New Jersey Assembly which flatly prohibited the "manufacture, sale or distribution of any food-packaging materials made from recycled paper" and provided penalties of up to \$50,000 for violation of the statute. Assy. Int. No. 1048 (April 14, 1972) (Mr. Bassano). In short, in the public's mind, with or without PCB's, recycled paper was bad.

There is evidence that the FDA overreacted to congressional pressure when it issued the PCB regulations. In announcing PCB regulations, FDA Administrator, Dr. Charles C. Edwards, stated: "We do not believe that current food levels present a hazard to public health." HEW Press Release, *supra*. There apparently have been no cases of PCB poisoning reported in the United States, and a single case of PCB poisoning in Japan which received great publicity, was caused by a variety of PCB which has not been produced or used in the United States.

There are certain aspects to the PCB scare which indicate that recycling may have suffered unnecessarily. First, the five ppm tolerance level was placed just at the point that affected recycled paper rather than virgin fiber, which was found to possess a slightly lower contamination level. Second, because there is no on-line testing procedure for PCB's which can be used by a paper mill when it is making paper, a paper company has no effective way to test for PCB's until the product has been manufactured and printed. Third, the tolerance level of a maximum of five ppm for food packaging materials would be most difficult for the recycling industry to police. Any testing procedure for PCB's at such low levels has as much as a 100% error factor, and this would make it very difficult for an industry to know whether it were violating FDA regulations.

<sup>122</sup> S. 426, 93d Cong., 1st Sess. (1973).

<sup>123</sup> *Id.* § 5.

<sup>124</sup> *Id.* § 8. Wherever such hazards are found to exist, the Administrator or the Attorney General may file an in rem action in the United States district court to seize such substance or product. *Id.* § 9.

Balancing the twin environmental interests of public health and solid waste disposal is a difficult task. But an effort must be made to do so before prohibitive regulations are issued, or the resultant psychological damage will be irreparable and fragile markets will be destroyed.

Finally, research and development funds are sorely needed to help industry identify and remove contaminants in recyclable materials so that the broadest possible range of products may be recycled.

### C. *Labelling Aspects*

Aside from the procurement and psychological aspects of marketing recycled materials, there is a third important concern—labelling.

Recently, there has been an effort to transform a negative public attitude toward secondary materials, junk and reprocessed or reused materials, into a positive one by labelling such materials “recycled.” This effort to provide consumer product identification for recycled materials must be an integral part of any comprehensive recycling incentive program.

Many industries, such as the aluminum industry, the paper industry, and the beverage industry, are finding that advertising programs which direct consumers toward recycled products pay dividends. One recycling trade association has developed a new consumer symbol entitled “Contains Recycled Materials” which can be displayed by manufacturers on all commodities which meet published standards of recycled content.

There is, however, a negative side to product labelling which can be seen in the labelling of textile products. Under the Wool Products Labeling Act of 1939,<sup>125</sup> recycled fibers must be labelled with either of the derogatory terms “reused” or “reprocessed.” On the other side of the coin, the widespread marketing success of the “virgin wool” label is well known.

Legislation would be required to change the pejorative labelling of recycled textiles.<sup>126</sup> Although it is difficult to assess what, if

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<sup>125</sup> 15 U.S.C. § 68 (1970).

<sup>126</sup> Such legislation might read as follows:

(a) The term “recycled wool” means the resulting fiber when wool has been woven or felted into a wool product which, without ever having been utilized in any way by the ultimate consumer, subsequently has been made into a fibrous state; or the resulting fiber when wool or recycled wool has been spun, woven, knitted, or felted into a wool product, which, after having been used in any way by the ultimate consumer, subsequently has been made into a fibrous state.

any, difference labelling might make among consumers, an attempt to change such labelling certainly seems justified. Two approaches might be used. One would merely replace the words "reused" and "reprocessed" wherever they appear in the Wool Products Labeling Act with the word "recycled." A more farreaching approach would be to require that all textile labelling, regardless of whether it were wool or some other fiber, state what percentage of the labelled product was made from recycled fibers. Recycling incentive labelling might be used for other products as well.

#### IV

#### PACKAGING AND DISPOSAL CHARGES—ELIMINATION OF SOLID WASTE AT THE SOURCE

Another suggested solution to the growing solid waste crisis is to discourage excess packaging by providing for penalties or taxes on such packaging.

In March 1972, the Subcommittee on the Environment of the Senate Commerce Committee held hearings on three measures designed to reduce excess packaging wastes.<sup>127</sup> The first of these measures would have banned "no return" containers sold in interstate commerce.<sup>128</sup> The second measure would have provided for national packaging charges on all packaging.<sup>129</sup> Additionally, this proposal provided that the penalties collected as a result of these charges would be returned to local government agencies for the planning, improvement and construction of resource recovery and solid waste disposal systems. Finally, the proposed legislation called for national packaging standards to encourage recycling and eliminate excessive solid waste. The third legislative proposal, the

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(b) The term "wool product" means any product, or any portion of a product, which contains, purports to contain, or in any way is represented as containing wool or recycled wool.

(c) The percentage of the total fiber weight of the wool product, exclusive of ornamentation not exceeding 5 per centum of said total fiber weight, of (1) wool; (2) recycled wool; (3) each fiber other than wool if said percentage by weight of such fiber is 5 per centum or more; and (4) the aggregate of all other fibers.

<sup>127</sup> See generally *Hearings on S. 1377 Before the Subcomm. on the Environment of the Senate Comm. on Commerce*, 92d Cong., 2d Sess., ser. 92-60 (1972).

<sup>128</sup> S. 1377, 92d Cong., 1st Sess. § 2 (1971).

<sup>129</sup> Amend. 861 to S. 1377, 92d Cong., 2d Sess. § 4 (1972). These charges would be scheduled according to various factors such as: (1) the amount of virgin and secondary materials contained in the packaging, (2) the quantity of solid wastes which would result from such packaging in terms of weight and volume, (3) the burden on solid waste disposal systems, (4) the disposability of such packaging, and (5) the toxicity and health effects of the disposal of such packaging. *Id.*

“penny-a-pound” legislation, would have imposed a penny-a-pound tax on all packaging, with the revenues obtained being used to encourage state and local recycling and solid waste disposal efforts.<sup>130</sup>

Reaction to these three proposals by trade associations and others was predictable. The virgin-oriented associations and packaging manufacturers opposed them. The Environmental Protection Agency favored the principle of discouraging excess solid waste, but was opposed to the legislation for administrative reasons. The recycling industry supported the legislation, but worried about competition from government recycling efforts.

A penalty approach to recycling might be very effective. Certainly, the thought of federal penalties for failure to use recycled materials would be most efficacious in forcing more industries to use these materials in packaging.<sup>131</sup> Some packaging companies would suffer, but each commodity must be prepared to bear its share of the consequences if its production substantially impedes the nation's solid waste effort.<sup>132</sup>

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<sup>130</sup> S. 3058, 92d Cong., 2d Sess. (1972).

<sup>131</sup> But would a penalty approach be more effective than an incentive approach? The EPA, in a thoughtful analysis, pointed out some general principles which might be helpful in evaluating packaging legislation.

(1) The environmental, economic and social benefits of any policy should be equal to or greater than the environmental, economic and social costs of the policy, if implemented.

(2) The effects of proposed policy should be reasonably predictable.

(3) The generator of solid wastes should pay full cost of collecting and disposing of his wastes without damage to the environment.

(4) Policies with financing aspects should impact on solid waste systems in a positive, beneficial manner.

(5) Policies selected should be administratively simple to implement.

(6) A policy is to be preferred if the success of its operation depends on natural economic and social incentives rather than on administrative judgment and action.

(7) Broad market approaches to behavior alteration are to be preferred to narrow product-by-product approaches.

*Hearings, supra* note 127, at 221-27. Applying these principles to the packaging legislation, the EPA pointed out that a ban on all disposable beverage containers would cost more in terms of lost jobs and profits than it would save by reducing solid waste; in addition, such a ban would not clean up presently discarded containers.

Regarding S. 3058, 92d Cong., 2d Sess. (1972), the EPA felt that there was no necessary relation between the difficulties of disposal of solid waste and its weight and pointed out that there are many lightweight materials which defy economic disposal. *Id.* Regarding the Proxmire amendment to S. 1377, the EPA felt that it was difficult to measure the recycled content in many materials and expressed concern that disposal charges would reward some communities and penalize others depending on whether the community disposed of materials by burial or incineration. Finally the EPA noted the unknown impact of such legislation and the administrative difficulties it presented. *Id.*

<sup>132</sup> Despite the suggestion by some testifying at the Commerce Committee hearing that packaging legislation should be studied still further, there simply is no reason to delay the

The federal method of providing penalties for excessive packaging has been copied in several municipalities.<sup>133</sup> This approach is tempting to legislators who are eager to "do something" to encourage recycling. But any such legislation must be carefully designed to encourage recycling by the private sector.

## V

### INADEQUATE RECYCLING RESEARCH AND DEVELOPMENT

For many years there have been difficult technological problems inherent in recycling. Recently, it has become fashionable to say that there are few technological barriers to recycling but many marketing, economic, and regulatory difficulties. Even now, however, there are areas in which research and development efforts are needed to spur recycling. For example, new technology is required to deal with the lowest value mixed wastes found in municipal refuse. We have not yet developed a low-cost system which can efficiently segregate low-value municipal wastes so that each waste component may be recycled to its highest and best use.

Federal financial assistance is necessary to promote further research and development by private industry. Recycling firms sorely need such aid to enable them to solve very important technical problems. The textile industry, for instance, has such low

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establishment of national packaging standards to maximize the utilization of post-consumer solid wastes.

To insure that federal grant money collected under any such legislation would not directly compete with and drive private recycling firms out of business, language should be added to any legislation enacted to provide that public funds would not be used to construct facilities which directly compete with the private sector. This appears to be the wisest route for tax dollars to follow. A "TVA" approach to recycling is not appropriate when the private sector, given the proper economic incentives in the marketplace, can accomplish much of the job without federal expenditures. Such noncompetitive language would be directly in line with the intent of the authors of the Resource Recovery Act. When that legislation was on the House floor, the floor manager, Representative Rogers, made it clear that although the sponsors of the legislation favored federal grants to municipalities to finance the construction of solid waste disposal facilities, they did not intend to authorize any grant which would allow a municipality to build a disposal facility that would duplicate and directly compete with an existing, privately owned and operated facility. "It is, however, not the intention of the committee that grants be used to duplicate techniques which private industry has already developed and is operating in a reasonable and feasible manner." 116 CONG. REC. 20,887 (1970) (remarks of Representative Rogers).

Thus when the EPA issued its grant regulations, they provided: "No grant shall be made . . . (3) for a project which will duplicate a resource recovery system which has already been developed and is operating in an effective manner. . . ." 42 C.F.R. § 464.4(a)(3) (1972). *But see* S. 2753, 93d Cong., 1st Sess. §§ 501-11 (1973).

<sup>133</sup> See *Hearings on Recycling* 97.

profit margins (estimated between one percent and three percent) that it cannot afford substantial research to develop ways of recycling mixed blends and synthetic textiles. Generally, only natural fibers can be recycled; synthetics cannot. Because the production of natural fibers continues to lag behind synthetics, the textile recycling industry is mired in an ever-deepening economic rut.

Government research and development funds, however, could and should be used to finance the necessary technology, so that mixed textiles, like other materials, could easily be recycled. In view of the millions of pounds of textiles that must be burned or buried annually at government expense because they cannot be recycled, such funding should pay for itself.

## VI

### STATE AND LOCAL DISINCENTIVES TO RECYCLING

There are many areas in which state and local policies have a negative impact on recycling. First, many of the federal legislative and regulatory impediments are reflected in state codes and local ordinances.<sup>134</sup> Some states, for instance, have mineral depletion allowances which favor virgin materials over recycled materials. Fortunately, some of these states have begun to offset such allowances with similar allowances for recycled products.<sup>135</sup> Second, most states have regulatory bodies similar to the Interstate Commerce Commission which regulate intrastate freight rates and charges, and often the pattern of freight rate discrimination against recycled materials found at the national level is reflected at the state level. Third, most states have not yet begun to use their procurement powers to encourage the purchasing of recycled materials.

Fourth, discriminatory local zoning ordinances preclude some

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<sup>134</sup> Many mining states have depletion allowances for minerals. *E.g.*, CAL. REV. & TAX CODE §§ 17681-89.5 (West 1970). Many states also have regulatory bodies which control intrastate freight rates. *E.g.*, N.Y. TRANSP. LAW §§ 95-112 (McKinney 1971).

<sup>135</sup> California, for instance, has considered such legislation. *See* Assembly Science and Technology Advisory Council, *The Technology of Solid Waste Management—Implications for State Policy*, A Report to the Assembly General Research Committee, California Legislature 15 (July 1971). *But see* N.Y. Times, April 20, 1973, § 1, at 18, col. 1 (Oregon's bottle disposal bill discussed).

The California Solid Waste Management and Resource Recovery Incentives Act allows a tax deduction for purchasers of resources to be recycled, provides for state procurement specifications which promote the use of recycled materials, and directs that nondiscriminatory freight rates be established. CAL. GOV'T CODE § 66719 (West Supp. 1973).

recyclers from operating within economically feasible distances of their sources of supply or markets.<sup>136</sup> The location of a recycling plant is crucial to its operation, and when the plant is moved too far either from its source of solid waste supply, or from its markets, freight rates for low-value solid waste will make the cost of recycling prohibitive. Because zoning has been jealously guarded as a local function, it is most difficult to solve this problem. One approach suggested by the Council on State Governments in a model state recycling statute would require that zoning laws having a substantial environmental impact be reviewed by a state body, through a state "mini-NEPA" procedure.<sup>137</sup> Another approach might be for the EPA to develop model zoning statutes which would provide for at least some consideration of environmental factors in zoning recycling operations.

Unreasonable and administratively burdensome business licensing and record-keeping requirements constitute a final state and local barrier to recycling. Some states unnecessarily require that scrap metal dealers keep records of all scrap moving in and out of their yards and report periodically to the state.<sup>138</sup>

In 1972, the Council on State Governments adopted suggested state legislation which seeks to eliminate state and local disincentives to recycling and provide incentives in their place. This legislation is currently being recommended to state legislatures for enactment, and the Council's leadership may help break down some of the state and local barriers to recycling.<sup>139</sup>

## CONCLUSION

Recycling is a theoretically simple concept. The transformation of this concept into reality, however, could yield revolutionary changes. Removing economic, legislative, and regulatory impediments to recycling will require technological skills we do not yet have, economic disruption we will grimace to face, attitudinal

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<sup>136</sup> For a further discussion of zoning policies which have impeded recycling, see National Ass'n of Secondary Material Industries, *Studies of Dislocation Factors II*, at 4 (1968) (on file at the *Cornell Law Review*). See also H.R. 35, 93d Cong., 1st Sess. (1973) (proposing establishment of state and regional environmental centers). For a compendium of local solid waste ordinances see, U.S. ENVIRONMENTAL PROTECTION AGENCY, *DIGEST OF SELECTED LOCAL SOLID WASTE MANAGEMENT ORDINANCES* (1972).

<sup>137</sup> See COUNCIL ON STATE GOVERNMENTS, *supra* note 1, at 65.

<sup>138</sup> National Ass'n of Secondary Material Industries, *supra* note 136, at 1, 2.

<sup>139</sup> See COUNCIL ON STATE GOVERNMENTS, *supra* note 1, at 65.

changes we have not yet made, and bold legislation. But as long as virgin natural resources are dwindling and pollution levels keep rising, recycling incentives will come, for there may be no other reasonable alternative.