The Monthly UnEconomist

Tax and Subsidy Barriers to Recycling and Sustainability in Washington State

by
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Taxes and subsidies have long been used to influence human behavior. Placing a tax on an item or action may dissuade people from using that item or performing that action; granting a subsidy to an item or action may encourage the use of that item or the performance of that action. A new approach has been proposed by some economists that would reform the current tax system by integrating the long-term goals of sound economic growth, environmental quality and fairness. Some economists believe that by "shifting" the tax burden from "goods" to "bads," and reducing or doing away with subsidies (whether direct or indirect) for the use of virgin materials, we can move towards our goals for a more sustainable economy.

This paper briefly looks at what exists in the current literature regarding the federal, state and local level tax and subsidy policies that impact recycling and the desire for a more sustainable economy, and then discusses some of the changes that have been proposed, such as the growing international trend to shift the burden of taxation away from productive activities and onto pollutants. This trend is rooted in the recognition that taxes not only raise necessary revenue for governments, but also, as mentioned above, discourage the taxed activity. When levied on productive activities, taxes place an extra burden on the economy, whereas when levied on pollution, taxes help to control it.[1]

Federal Level

At the federal level, there exist many programs that provide significant tax breaks and other subsidies for the use of virgin materials – creating an uneven playing field for recycling and reuse businesses that must compete against these subsidized competitors.[2] Favoritism for the virgin materials industries dates back to the 19th century when the subsidies were intended to encourage the development of the West and to spur the national transition from an agrarian to an industrial society. Unfortunately, once ingrained into our societal fabric, such subsidies have been hard to remove.

In "*Welfare for Waste – How Federal Taxpayer Subsidies Waste Resources and Discourage Recycling*," April 1999[3], fifteen direct subsidies were identified that negatively affect the use of recycled materials, and thus, create barriers to creating a more sustainable economy. The fifteen federal taxpayer subsidies identified as undermining recycling and reuse include:

A. Timber Direct Subsidies

Capital Gains Status for Timber Sales – instead of treating the sale of timber as ordinary income and taxing it accordingly, private timber

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[1] *Ecological Tax Reform* (article originated in a workshop on ecological tax reform held March 18-19, 1996, in College Park, MD), by Stephen Bernow, Robert Costanza, Herman Daly, Ralph DeGennaro, Dawn Erlandson, Deeohn Ferris, Paul Hawken, J. Andrew Hoerner, Jill Lancelot, Thomas Marx, Douglas Norland, Irene Peters, David Roodman, Claudine Schneider, Priya Shyamsundar and John Woodwell, 3/1996.

[2] *Federal Disincentives: A Study of Federal Tax Subsidies and Other Programs Affecting Virgin Industries and Recycling,* USEPA, EPA 230-R-94-005, 8/1994.

[3] *Welfare for Waste – How Federal Taxpayer Subsidies Waste Resources and Discourage Recycling, GrassRoots Recycling Network, Taxpayers for Common Sense, Friends of the Earth and Materials Efficiency Project, 4/1999.* For a response to concerns raised about this report, please see The Monthly UnEconomist for March 2002 *"Response to Concerns Raised by use of 'Welfare for Waste'."*

owners are able to claim capital gains status for much of their capital or lasting assets, which include timber sales; thus, paying a significantly lower rate.

Below-Cost Forest Service Sales – U.S. Forest Service "commodity" timber sales program sells trees to companies at pricing below the costs of preparing sales and administering harvests; thus, timber is commonly sold below sustainable market value.

Forest Roads Construction – U.S. Forest Service reimburses logging companies' road-building costs through credits towards additional timber and sale prices reduced below the already low price.

Forest Service Salvage Fund – Insect-infested, dead, damaged or downed timber is sold by the U.S. Forest Service for a fraction of the cost of commercial-quality wood, with higher-value timber often mixed in to make the sale more attractive. The Forest Service retains the funds from salvage sales in the Salvage Sale Fund, creating an incentive to promote salvage sales since the funds are not returned to the U.S. Treasury.

B. Hard Rock Mining Direct Subsidies

1872 Mining Law – minerals worth billions of dollars are taken from public lands by miners who pay no royalties for the minerals, only $2.50 - $5.00 per acre to obtain title from the federal government. Anyone may explore open public lands for hard rock minerals, including gold, silver, iron, copper, zinc and lead. Anyone filing a claim has an automatic right to extract minerals found there. Title to these public lands may be valuable for development purposes, too. Taxpayers are left with any clean-up expenses.

Mining Percentage Depletion Allowance – permits mining firms to deduct a fixed percentage, usually 5 – 22%, from their gross annual income, instead of depreciating their actual costs at the rates required for other businesses. Overall deductions are not limited to the initial cost of the investment; thus, total deductions frequently exceed original investment costs.

Expensing Exploration and Development Costs – costs of exploration and development for locating valuable mineral deposits are deductible in the year the costs are incurred rather than over time.

Inadequate Bonding Requirements – since abandoned mines must be cleaned up at taxpayers' expense, the federal government has begun requiring mining companies to carry insurance bonding to cover potential cleanup costs; however, the bonding requirements are still not sufficient to cover clean-up costs and are poorly enforced.

C. Energy Direct Subsidies

Percentage Depletion Allowance – a special percentage depletion write-off is granted independent oil companies not substantially involved in retailing or refining activities. They can deduct 15% of their gross income to reflect the declining value of the wells as they become unproductive. Combined with other subsidies for the oil and gas industry, the percentage depletion allowance subsidy often exceeds 100% of the actual value of the energy produced, encouraging the draining of domestic energy resources while discouraging the development of renewable energy and energy efficiency.

Intangible Drilling Costs (IDCs) – Oil and gas producers may deduct 70% of intangible drilling costs in the year they are incurred rather than as capital assets wear out or the oil is depleted.

Passive Loss Tax Shelter – allows investors in gas and oil production to use losses, deductions and credits to offset other income.

Alternative Fuel Production Credit – provides a tax credit for the production of alternative fuels extracted from such sources as slate and tar sands, as well as for synthetic fuels made from coal and gas from geo-pressurized brine. Most of the credit has gone to develop drilling and production technologies needed for hard-to-tap oil and gas reserves. This is not a credit for sustainable alternative fuels such as solar, wind and geothermal.

Enhanced Oil Recovery – oil companies investing in tertiary enhanced oil recovery operations are allowed a tax credit equal to 15% of their costs. Tertiary recovery methods include the use of chemical or thermal fluids, steam or alkaline flooding to extract otherwise inaccessible oil.

Bonneville Power Administration (BPA) Electric Power Subsidies for Aluminum Smelters – BPA sells subsidized electricity from a network of 29 federally owned dams and one nuclear power plant. Its low power rates have attracted over 30% of U.S. aluminum production to its service area. It sells the subsidized electricity at preferential rates to aluminum smelters and others.

D. Waste Facilities

Private Activity Bonds (PABs) – 70% of all bonds used to finance solid waste facilities are PABs, but most recycling facilities do not qualify for the bonds since the bonds are targeted towards capital-intensive projects. Income earned on PABs is tax-exempt. PABs often subsidize the financing of landfills and incinerators.

Welfare for Waste also identified indirect subsidies that accrue to the virgin materials industry, and are, by their nature, harder to document and quantify. These include:

1. Energy – lower prices due to security and environmental costs not being paid by energy producers (e.g., nuclear power), which result in cheaper virgin feedstocks due the higher energy intensity of virgin- versus recycled feedstocks.
2. Water – replacement for higher-priced energy; below or no cost water and wastewater treatment.
3. Transportation – building and maintenance of remote and major highways, inland waterways, port maintenance, marine safety and navigation programs.
4. Tax – bias towards capital-intensive investments as opposed to labor-intensive projects.
5. International – multilateral promotion of extraction industries, trade and aid favoritism, transfer pricing.
6. Unfunded External Costs – avoidance of pollution clean-ups, environmental damage, failure to incorporate cost of disposal.

By providing subsidies to extract virgin resources, taxpayers end up:

1. Losing money on undervalued, taxpayer-owned resources;
2. Providing welfare for private corporations;
3. Cleaning up pollution, eroded land, silted rivers, damaged ecosystems and hazardous waste sites in an even larger number than might have been created if subsidies had not encouraged more extraction;
4. Paying for disposal of companies' products when they're discarded;
5. Encouraging substitution of capital-intensive processes that extract materials instead of more labor-intensive industries that conserve them; and,
6. Paying more for recycling that could have been competitive with or even less expensive than fairly priced virgin materials production.

State Level

When the Washington State Solid Waste Management Plan was written in 1990 it acknowledged that legislation should be designed to influence a change in the individual waste management behavior of every citizen. However, it noted that existing legislation would not ensure that all solid waste was managed in the most environmentally sound manner that protects human health and is consistent with the highest priority method under the State SWMP. The statutes, as written at the time and which have not changed much in ten years, either did not mandate action in all cases or grant environmental considerations equality with economic considerations. Yet the mission statement called for solid waste to be

managed in the most environmentally sound matter.[4]

One of the goals identified in *"Washington State Solid Waste Management Plan – Issue Paper No. 3, Solid Waste Legislative Review"* was: "Goal B: Solid waste financing functions on a stable basis and reflects the true costs of waste management. Costs include clean-up of past facilities, current operations (i.e., collection, recycling, separation of mixed wastes and monitoring) and future closure and post-closure activities." However, the Issue Paper stated that: "Providing stable financing that reflects the true costs of solid waste management is quite problematical. It is difficult to determine what the "true costs" of waste management really are. Thus, this goal will be among the more difficult to realize. Legislation, however, is in place that will serve as a foundation for achieving it."

The Issue Paper went on to identify the need for stable markets for recyclable materials, with an emphasis on in-state markets. (Markets were dealt with in detail in Issue Paper No. 7 of the 1990 State SWMP.)

Goal F addressed the desire for no waste to be disposed of, and for the minimal amount of waste generated to be either used or reused. It was acknowledged that in today's "throw-away" society this was an ambitious goal, and that legislation alone would not ensure its achievement. People's behavior would have to change, manufacturing processes would have to be overhauled, and products and packaging would have to be redesigned. RCW 82.08.0282, which exempts the sale of returnable containers for beverages and food from retail sales tax, and RCW 82.12.0276, which exempts the use of returnable containers for beverages and food from a use tax, were identified as useful provisions to help achieve this goal. But in reality little has changed in the State in the last ten years, and in fact we have backtracked in the State's support of markets for recycled content products.

According to "T*ax Shift – How to Help the Economy, Improve the Environment, and Get the Tax Man off Our Back,"* by Alan Thein Durning and Yoram Bauman, Washington State taxes businesses' gross receipts, with special tax rules favoring mining, logging and other high resource impact activities. Washington's tax rate for service industries is three times the rate for manufacturers, and Washington has the most regressive tax system in North America.

Only a limited number of market development strategies are available in Washington State due to case law interpretation of the lending of credit prohibition provision in the State's constitution. Additionally, most market development strategies have been directed at the promotion of economic development in distressed areas, not at the promotion of recycling. To qualify for most of the existing programs in the State, a recycling business has to demonstrate economic development benefits. Market development tools include tax credits that target growing manufacturing, computer service or R&D companies in distressed areas, deferrals of sales tax on capital investments by manufacturing, computer service or R&D companies, and federal Industrial Development Bonds tax exempt bond financing that is limited to manufacturing and processing facilities.[5]

The *Washington State "Future of Recycling" Study* documented a substantial decline in the funding base for State action on recycling. Funding sources that were dedicated to this purpose were allowed to sunset and competition for remaining funds has increased. With no legislative action in the future, funds could be severely reduced for recycling programs at the state level,[6] making achieving our recycling goals and

[4] *Washington State Solid Waste Management Plan – Issue Paper No. 3, Solid Waste Legislative Review*, WADOE, Olympia, WA, 7/1990.

[5] *Washington State Solid Waste Management Plan – Issue Paper No. 7, Markets for Recyclable Materials*, WADOE, Olympia, WA, 7/1990.

[6] *Washington State "Future of Recycling" Study*, The Future of Recycling Task Force, 11/1996.

a more sustainable economy that much more difficult.

Local Level

At the local level there are few opportunities in tax policy, but that need not stop local governments from implementing "tax shifts" – as described below - on their own. Washington cities have the ability to tax parking lots, and Washington counties may, with voter approval, put slim taxes on gasoline. Since Washington law is ambiguous about how cities can tax businesses, they could tax businesses based on their pollution emissions, their solid waste bill or their number of parking spaces.[7]

Local jurisdictions face an unstable funding base that undermines the effectiveness of their recycling programs. This is particularly acute for counties that rely on the solid waste tipping fee as the primary mechanism to fund their activities.[8]

Proposed Alternatives[9]

Some economists have proposed "shifting" the tax burden from "goods" to "bads." The general belief behind "tax shift" proposals is that taxes should be used to influence the conservation of natural resources, and that "bads" – actions and uses that deplete natural resources – should be taxed, not "goods" – labor, profits, investments and capital. By taxing resource use, market economies can better recognize environmental costs. To tell a "good" tax from a "bad" tax with respect to the environment, it is helpful to consider whether the tax encourages or discourages resource conservation and pollution prevention, and whether the tax helps the market better reflect environmental costs, such as pollution's effects on human health.

Current labor and capital taxes include: payroll taxes, personal income taxes, corporate income and other business taxes, and sales and property taxes. Property taxes that fall on the land portion would be considered a "Resource Tax." The gas tax would also be considered a "Resource Tax." Other "Resource Taxes" include health-oriented taxes on alcohol and tobacco, small energy taxes, pollution taxes and motor vehicle fees.

An example of taxing "goods" is the income tax that to some extent discourages additional work and increases the cost of labor to businesses. As a result, the income tax tends to encourage businesses to focus on conserving labor rather than on conserving resources.

Proponents of a tax shift argue that it would provide a least-cost approach to reducing pollution, congestion, waste and the long-term threat of climate change.[10] Proposed new taxes generally fall into four categories: 1) taxes on energy consumption, of which taxes on emissions of carbon dioxide and on gasoline are the most prominent; 2) taxes on pollutants; 3) taxes on virgin materials; and 4) higher user fees for the use of public resources.

Also, shifting the tax system is designed to be revenue- and distributionally-neutral -- i.e., current taxes on "goods" would be reduced to offset the new revenue from taxes on "bads." This would help maintain a separation between decisions about how to spend public tax dollars from decisions about methods used to raise the revenue.

In "A Conceptual Framework to Compare Environmental Tax Shift Policies, Working Paper Series on Environmental Tax Shifting," by Don Fullerton, Redefining Progress, June 1998,

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[7] *Tax Shift – How to Help the Economy, Improve the Environment, and Get the Tax Man off Our Back, by Alan Thein Durning and Yoram Bauman, Northwest Environment Watch, Seattle, WA, 4/1998.*

[8] *Washington State "Future of Recycling" Study*, The Future of Recycling Task Force, 11/1996.

[9] Much of the following discussion is based on - *Tax Shift – How to Help the Economy, Improve the Environment, and Get the Tax Man off Our Back, by Alan Thein Durning and Yoram Bauman, Northwest Environment Watch, Seattle, WA, April 1998.*

[10] *"Tax Waste, Not Work – How Changing What We Tax Can Lean to a Stronger Economy and a Cleaner Environment," by M. Jeff Hamond, Stephen J. DeCanio, Peggy Duxbury, Alan H. Sanstad, Christopher H. Stinson, Redefining Progress, San Francisco, CA, 4/1997.*

the author describes the current emission or technology restrictions as "command and control instruments," that might sometimes be necessary for political or administrative reasons. But he argues that "incentive instruments" such as taxes, subsidies or permits can replace these command and control instruments. Pollution problems can be better addressed by a) taxes on pollution, or b) subsidies to abatement. Permits could be handed out to existing firms in proportion to past emissions or sold at auction by the government. Furthermore, he cites that much of the environmental economics literature finds that the use of incentives is more cost-effective than command and control restrictions.

When considering a policy, we must consider whether it is a revenue raiser or not. In "A Conceptual Framework to Compare Environmental Tax Shift Policies, Working Paper Series on Environmental Tax Shifting," the following criteria are identified for evaluating potential policies:

1. Economic Efficiency;
2. Administrative Efficiency;
3. Monitoring and Enforcement Capability;
4. Information Requirements and the Effects of Uncertainty;
5. Political and Ethical Considerations;
6. Effects on Prices that Might Shift the Distribution Among Cohorts or Demographic Groups;
7. Other Distortions such as Taxes, Imperfect Competition or Trade Barriers; and,
8. Flexibility in the Regulations to Deal with Transitions.

Adopting a new approach to our tax and subsidy system will result in a new allocation of resources – both financial and environmental.

Potential Solutions

A four-stage process suggested in "*Welfare for Waste*" for eliminating subsidies for virgin materials and wasting resources is that:

1. Congress should cut the direct federal subsidies listed above.
2. Federal, state and local agencies should investigate state and local subsidies and recommend reforms to save taxpayer money while promoting materials efficiency.
3. Congress and the executive branch should examine indirect federal subsidies, such as those for energy and transportation, and others that negatively affect materials efficiency, and identify opportunities for future cuts.
4. Government should sponsor a public review to determine policies to develop a materials-efficient economy that requires less taxpayer subsidies.

In "*Tax Shift,*" the authors propose the use of the following taxes on "bads":

1. Carbon taxes (a tax on fuels in proportion to the carbon dioxide they emit) and similar taxes on other Greenhouse Gases.
2. Pollution taxes, especially those that could be charged at "point sources." Current environmental regulations provide ready-made tools for taxing point sources. Managers of point sources must already monitor and report their emissions of many pollutants, and most governments in the NW already levy small fees based on these reports. Gradually increasing the pollution taxes until they approximate the true costs of the polluting would add economic teeth to the regulatory approach of pollution control agencies. Pollution taxes could be levied on: point sources; motor vehicles; farm chemicals.
3. Pollution permits (like EPA's program for sulfur dioxide emissions allowance permits that allows for trading of those permits).
4. Land-value taxes.
5. Environmental taxes.
6. Natural Resource taxes, which could be levied on: water use; hydropower use; timber; fish and game; minerals.
7. Resource windfall taxes.
8. Resource consumption taxes - taxing the extraction of natural resources tells everyone to conserve them, encouraging recycling, efficiency and frugality.

9. Traffic congestion taxes.

While taxes are powerful tools, they have their limitations. First, there must be something to tax. This can be challenging in cases where it's impossible to measure what one wants to tax or where measurement is expensive or intrusive.

Second, taxes cannot clean up existing messes. In these cases, regulations and other strategies are still necessary.

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About The Monthly UnEconomist

This monthly online newsletter available at www.ZeroWaste.com (or www.SoundResource.com) intends to provide insight and analysis on the everyday economics of recycling and the unpriced or underpriced environmental benefits of reducing waste disposal and replacing virgin-content products with products manufactured from recycled materials. In addition to *The Monthly UnEconomist*, Sound Resource Management's website ZeroWaste.com also offers recycling markets price history graphs, reports on a variety of topics including the economic and environmental benefits of recycling, and GarboMetrics - elegant, yet not mysterious tools and spreadsheet models for solid waste and recycling.

These materials are all available for no charge at www.ZeroWaste.com. User feedback is encouraged via info@ZeroWaste.com, and substantive comments will be published in our newsletter whenever they add to our understanding of recycling.

As an example of newsletter content, some issues of the *UnEconomist* analyze northwestern and northeastern U.S recycling market prices for nine recycled materials (mixed paper, ONP, OCC, glass containers, tin cans, UBC, PET bottles, HDPE natural bottles, and HDPE colored bottles). These prices are tracked by online graphs updated quarterly.

In addition, some issues of the *UnEconomist* are devoted to GarboMetrics, economic models for managing and analyzing solid waste and recycling. These newsletter issues explain the structure and use of GarboMetric models provided at ZeroWaste.com for such purposes as designing garbage customer rate structures and correctly comparing garbage rates in different communities. GarboMetric models and corresponding issues of *The Monthly UnEconomist*

can be downloaded at no charge from www.ZeroWaste.com.