

# Vt Green Tax Shift Working Paper

## Executive Summary

*Prepared by:* Gary Flomenhoft,  
Research Associate/Lecturer, Community Development and Applied Economics/MPA Program  
and Gund Institute, University of Vermont  
For more information contact:  
802-656-2996  
gary.flo@uvm.edu  
see: <http://www.uvm.edu/~gflomenh/GRN-TAX-VT-PA395/>

*Research by:*  
Melissa Bailey-property taxes  
Thomas A. Benoit Sr.-solid and hazardous waste  
Amanda Dow Davis-water  
John Demeter-total revenue and offsetting taxes  
Cheryl L. Diersch-chemicals  
Peter M. Freeman-alternative fuel vehicles  
Andrew Jope-energy taxes  
John Mejia-air emissions  
Rachel Marie Weston-Rail transportation/energy

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***“There is nothing more difficult to carry out, more doubtful of success, nor more dangerous to handle, than to initiate a new order of things. For those who would institute change have enemies in all those who profit by the old order, and they have only lukewarm defenders in all those who would profit by the new order.”***

***---Nicolo Machiavelli, 1490***

## **Introduction**

The Green Tax plan proposed here was developed as a supplement to the Vermont Fair Tax Coalition booklet: Tax Reform that Agrees with Vermont, recently revised in 2005. This publication outlines Green tax theory and provides general recommendations and alternatives. In 2004 a class of graduate students in the UVM Master of Public Administration program developed a green tax plan for Vermont. Our project took the general recommendations of the Fair Tax Coalition, and turned them into a detailed and viable green tax plan for the state.

There are many different ways to apply green tax principles. The plan outlined here is just one possibility among many. We outlined an initial tax shift to approximately 50% Green taxes, and a more ambitious plan which generates 100% of state revenue from a Green tax shift. We combined information from numerous revenue-collecting agencies of state government. All of the research and original data can be found on our course website at: <http://www.uvm.edu/~gflomenh/GRN-TAX-VT-PA395/> As far as we know this is the only consolidated data source for most of the taxes and fees generated in the state of Vermont. We hope it is useful. Please use this information as a starting point for developing these ideas further.

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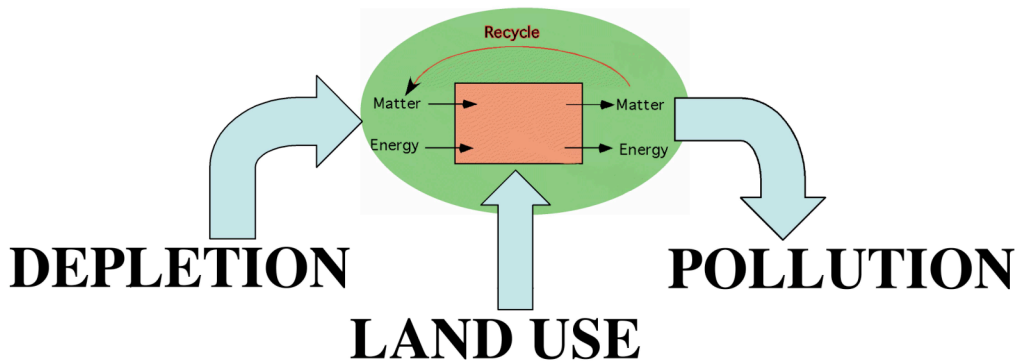
# Overview

## Economic Efficiency

Taxes on income and capital, are generally considered inefficient for several reasons. “The most obvious cost is that Americans are left with less money to meet their needs for food, clothing, housing, and other items, and businesses are left with fewer funds to invest and build the economy. In addition, the tax system imposes large compliance burdens and “deadweight losses” on the economy. *Compliance burdens* are the time and administrative costs of dealing with the tax system’s rules and paperwork. *Deadweight losses* are created by taxes distorting the market economy by changing relative prices and altering the behavior of workers, investors, businesses, and entrepreneurs.” (Cato handbook on Policy 6<sup>th</sup> edition) Taxes on income and wages also increase the cost of labor to business, thereby decreasing the supply of jobs. This is true of income taxes, payroll taxes, and workers compensation payments.

Since “investment flees taxation” taxes on labor or capital also discourage innovation, job creation, and risk-taking. Taxes generally add to production costs, thereby raising prices and reducing consumption of the item taxed. For example, taxes on cigarettes, gasoline, or housing decrease consumption of these items by raising their price. While higher environmental taxes are often promoted by liberals for environmental reasons, conservatives often recommend lower income taxes. Many of the plans to reduce income taxes are combined with the suggestion to replace them with higher sales taxes. While this would decrease consumption, it is highly regressive, and only indirectly addresses resource consumption downstream. We feel that green taxes are a better alternative to replace income or payroll taxes, and address resource consumption directly. A green tax shift can stimulate the economy and protect the environment at the same time, the holy grail of sustainable development

## THROUGHPUT



## Taxing Throughput

A Green tax is a tax on throughput. Throughput is the flow of resources and energy through the economy resulting in products as well as pollution and waste. Resource depletion, land use, and pollution are external costs which are not accounted for in market transactions. Standard economic indicators such as GDP, stock market level, housing starts, business profits, etc. provide no indication of social and environmental externalities. GDP, for example, measures the total dollar value of goods and services in the economy. Maximizing GDP therefore also maximizes throughput. Wouldn't it make more sense to maximize GDP per unit of throughput? This would be an efficient economy rather than a wasteful one; smart growth instead of dumb growth. Failure to account for external costs in prices also violates the “polluter pays principle”. A green tax shift can begin to internalize some of these external costs and help make polluters pay. With green taxes resources will be conserved, land will be used more efficiently, pollution will be reduced, and production will be more efficient.

## **Green Tax Shift Criteria**

Each of the existing Vermont taxes and proposed changes was subjected to scrutiny on the following basis.

### **1. Economic Efficiency**

Does the tax encourage or discourage enterprise, growth in productivity, and job creation? Specifically does the tax cause what economists call a deadweight loss": a loss of economics output caused by distorted incentives created by the tax? Taxes on wages, for example, discourage people from working. Taxes on investment discourage people from investing. Both reduce economic output and efficiency.

### **2. Distributive equity**

Does the tax fall on people in proportion to their ability to pay? Progressive taxation attempts to equalize sacrifice instead of simple percentages by taking a larger proportion of income from higher-income households than from poorer ones. Regressive taxes by contrast, take a larger share from middle-class and poor households than from affluent ones. Because the cost of some taxes is passed on from the initial taxpayer to others, assessing fairness requires paying attention to who ultimately feels the tax bite.

### **3. Environmental protection**

Does the tax encourage or discourage resource conservation and pollution prevention? Does the tax correct the failure of the market to reflect environmental costs, such as pollution's effects on human health?

### **4. Ease of administration**

Is the tax easy to administer and enforce? Is it easy for taxpayers to comply with the the tax? Is it easy to evade?

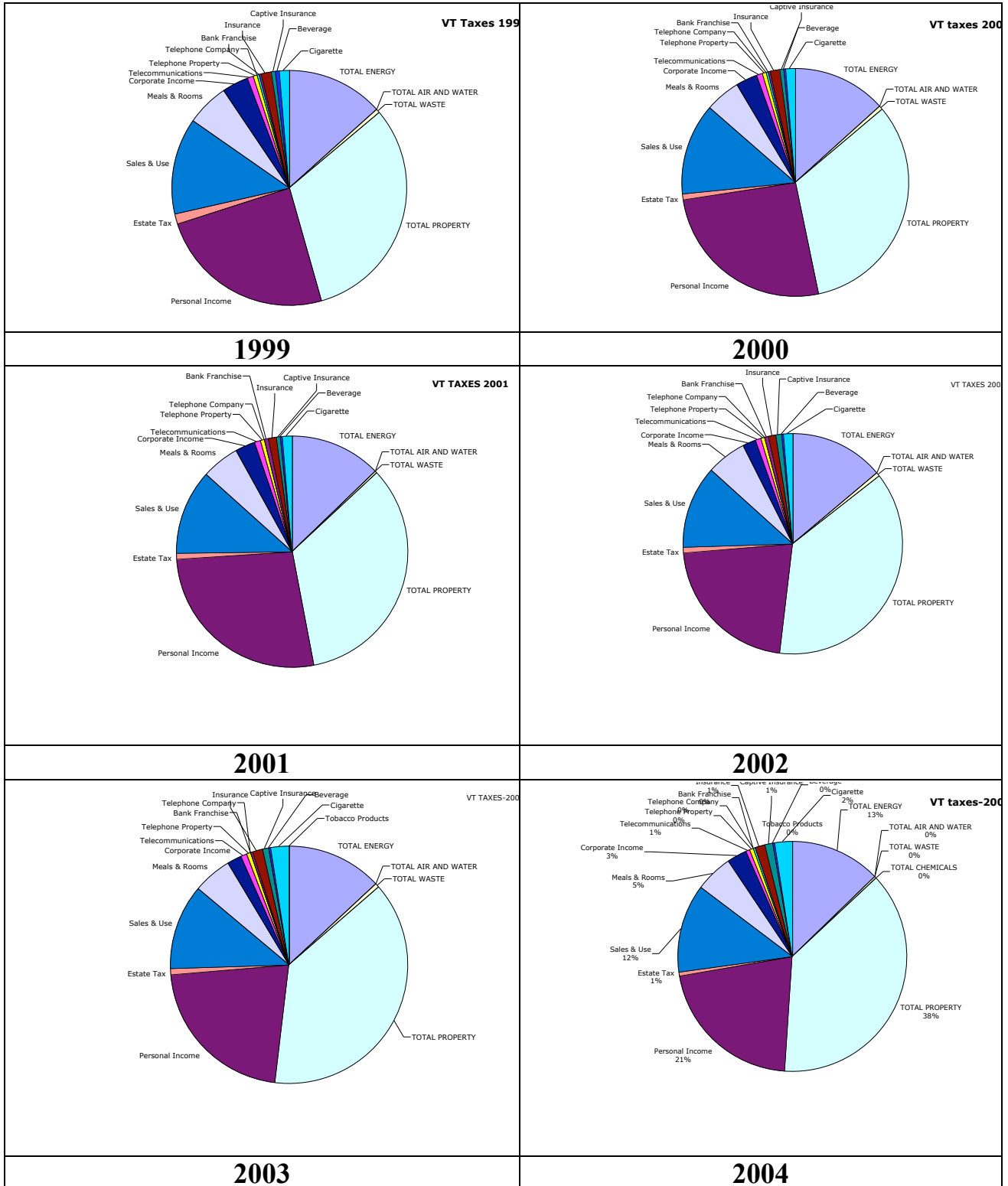
(From: Durning and Bauman. Tax Shift, How to help the Economy, Improve the Environment, and Get the Tax Man Off our Backs. Northwest Environmental Watch, April 1998.)

Analysis can be found in Paper #2 and #3 at:

<http://www.uvm.edu/~gflomenh/GRN-TAX-VT-PA395/papers.html>

# Current Vermont Revenue from 1999-2004

## NOTHING NEW HERE OR “IF IT AIN’T BROKE, DON’T FIX IT?”



The history of Vermont tax revenue for 1999-2004 shows that revenue sources haven't changed much. There are two ways to look at this: "If it ain't broke don't fix it." Or perhaps "Why should we expect a different outcome with the same method?" In our view, the state is not maximizing the opportunity of the tax structure to provide positive incentives for economic efficiency and environmental protection.

# Existing Vermont Sources of Revenue

The 2004 Vermont Budget was about \$3.574 billion of which \$2.117 billion was generated from in state revenue.

<b>Federal Funds</b>	<b>\$1.083 Billion</b>
<b>Tax Dept. Revenue</b>	<b>\$1.063 Billion</b>
<b>Property taxes</b>	<b>\$741.6 Million</b>
<b>Other fees/taxes</b>	<b><u>\$677 Million</u></b>
<b>TOTAL</b>	<b>\$3.56 Billion</b>

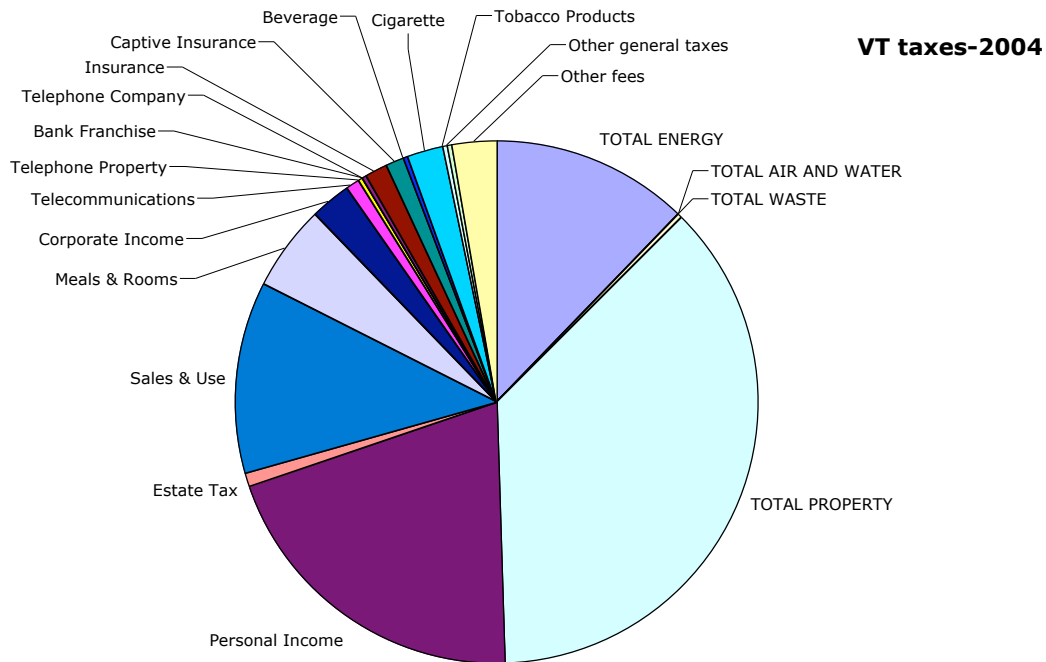
## What does "other" include?

- Motor vehicle fees
- Certain gas and fuel taxes
- Licensing and permitting fees by the Agency of Natural Resources, Secretary of state, Judiciary, and others

## Vermont Instate Revenue 2004-\$2.117B

The tax department has 37 line items in revenue account reports, each with their own set of rules and regulations, not including property taxes. There are hundreds if not thousands of fees administered and collected by various agencies. One-third of updated fees are reviewed annually by the Joint Fiscal office. No single source of this information was available. We contacted dozens of agencies to assemble the entire Vermont revenue picture shown below. Of total instate revenue the largest items were:

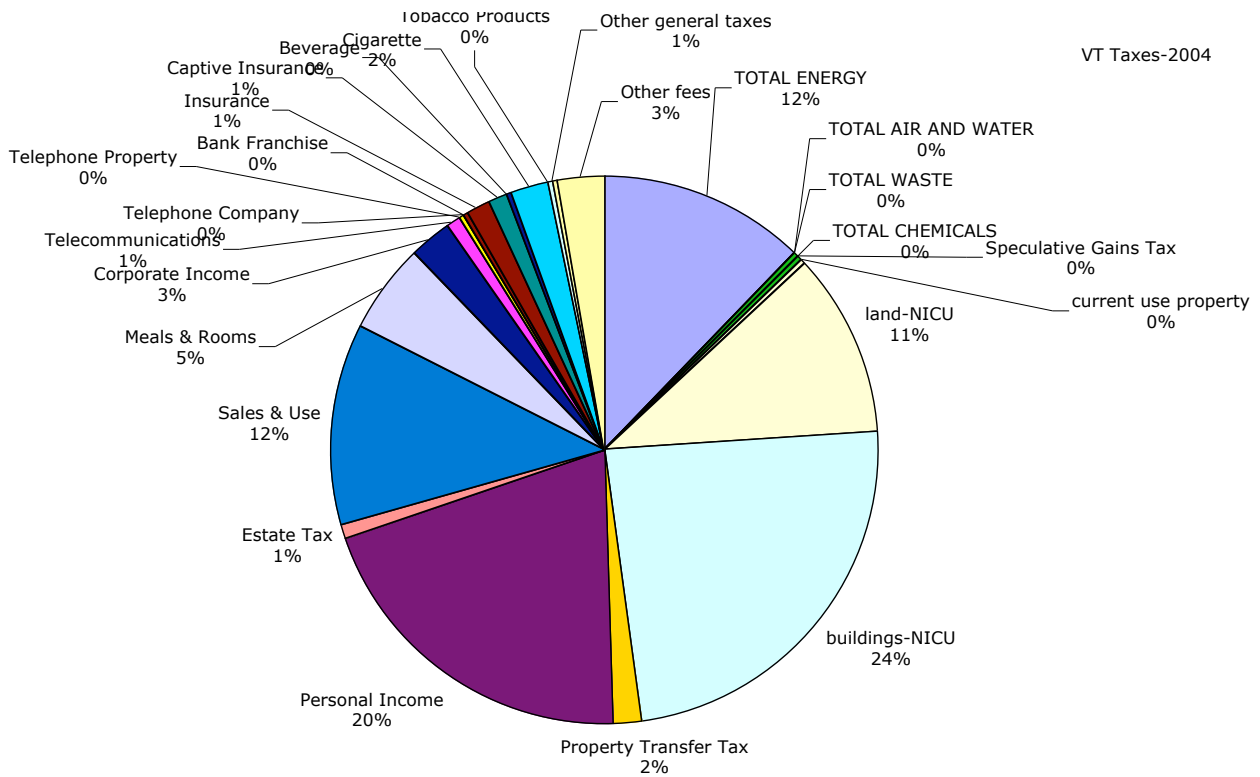
Property taxes comprising	35%
Personal income	20%
Sales and use	12%
Energy taxes	12%



## Vermont Instate Revenue 2004-another look at Property tax

If we further divide property taxes into land and buildings (NICU=not in current use program) we find that 24% of instate revenue is coming from taxes on buildings. This is due to the fact that the average property in Vermont has 2.3 times as much value in the buildings and other improvements compared to the land itself. (Data from Vt. Grand list compiled by B. Batt, PhD, 2003) Since assessed value of property consists of the land value and building value combined together, this results in 2/3 of the property tax burden falling on buildings. It is worth considering if this negative incentive structure is worth keeping in a state where there is a severe lack of affordable housing, and large wage gap between income and housing costs. Revised tax summary:

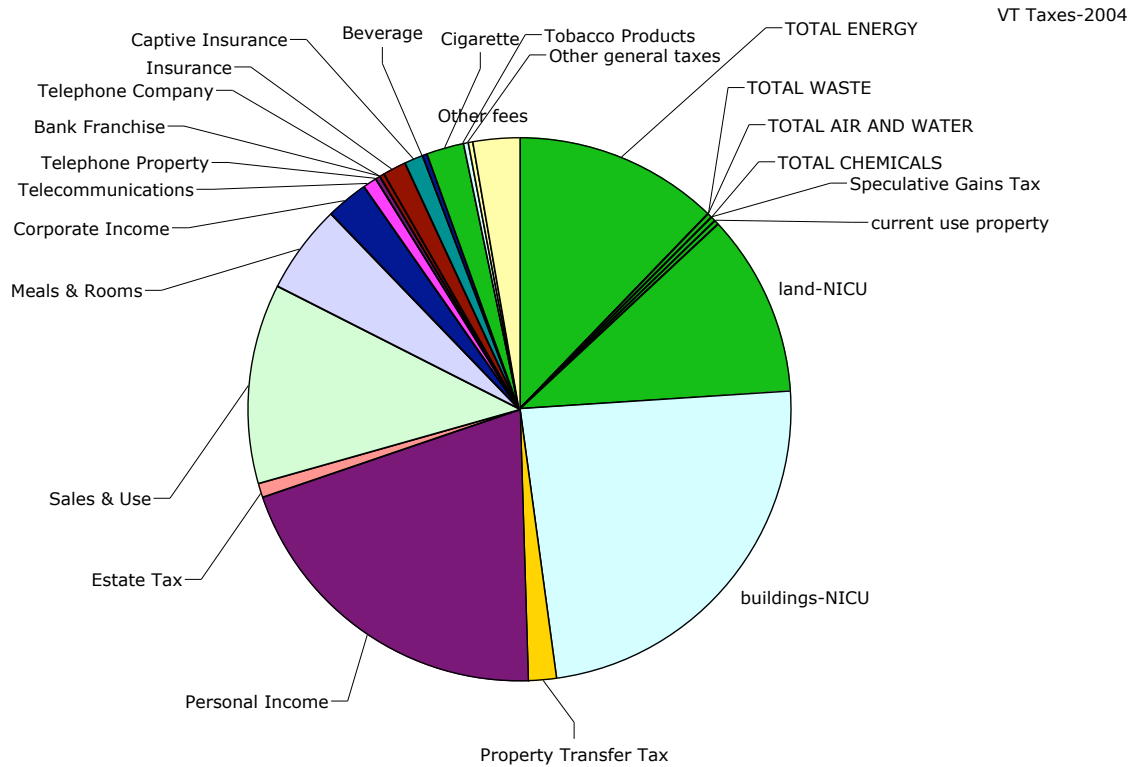
Buildings	24%
Personal income	20%
Sales and use	12%
Energy taxes	12%
Land	11%





## Existing Green Taxes in Vermont

If we define green taxes as taxes on throughput: either resource depletion, land use, or pollution we find that approximately 25% of current Vermont instate revenue comes from Green taxes. These taxes and fees include energy taxes such as gasoline and diesel fuel, fees on solid and hazardous waste, chemicals such as pesticides, air and water emissions including cigarettes, and the land portion of the property tax. Sales tax is colored light green due to the fact that sales taxes do tax consumption, but they tax the labor and capital value-added portion in addition to the resource portion. We feel that taxing resource use directly is more effective and doesn't provide a disincentive to labor and capital as a sales tax does.



Topic	Main Features	2004 Revenue
<b>Energy</b>	varies	\$259,269,147
<b>Property</b>	2/3 on buildings, 1/3 on land	\$782,118,363
<b>Waste</b>	\$6/ton on haulers	5,901,672
<b>Air and Water</b>	\$1170 impervious surfaces	1,201,769
<b>Chemicals</b>	\$100 pesticides fee	932,100
<b>General</b>	varies	\$1,012,614,704
<b>Other fees</b>	varies	\$56,585,608
<b>TOTAL</b>		<b>\$2,118,623,363</b>

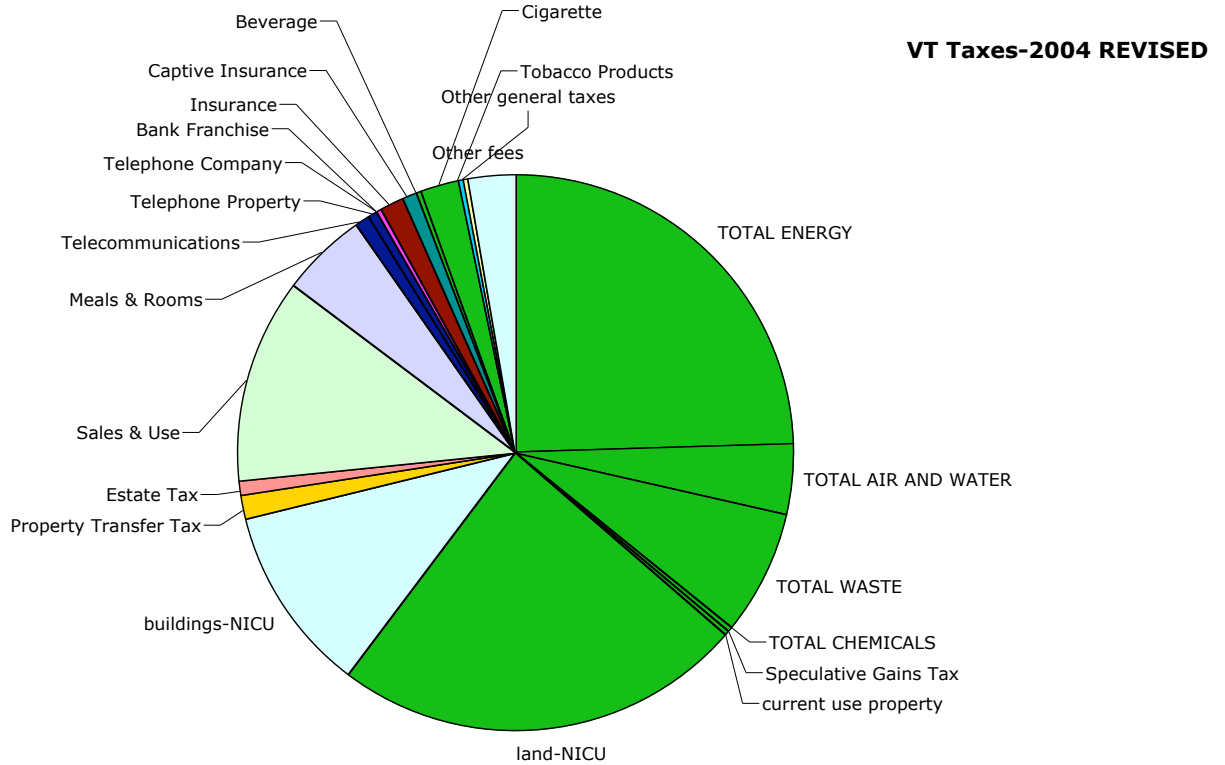


# Green Tax Shift Options

## 2004 Green tax shift Option 1 (not recommended by UVM PA395)-\$2.1 Billion revenue

Eliminate personal income: 2004-\$429,488,824  
 Eliminate corporate income: 2004-\$55,497,257  
 Reduce/eliminate telecommunication: \$15,000,000  
 Increase Green Taxes \$500 million

Total reduction ~\$500 million



Topic	New Revenue Main Features	New 2004 Revenue	Old 2004 Revenue	Change
Energy	Carbon @ \$100/ton	\$521,540,000	\$259,269,147	+\$262,270,853
Property	2/3 on land, 1/3 on buildings	\$782,118,363	\$782,118,363	\$0
Waste	\$2/bag	\$155,005,344	5,901,672	+\$149,103,672
Air and Water	1c/gal >100gals	\$91,053,285	1,201,769	+\$89,851,516
Chemicals	\$300 pesticides fee	\$3,148,000	932,100	+\$2,215,900
General	same	\$1,012,614,704	\$1,012,614,704	\$0
Other fees	same	\$56,585,608	\$56,585,608	\$0
<b>Total</b>		<b>\$2,622,065,304</b>	<b>\$2,118,623,363</b>	<b>+\$503,441,941</b>

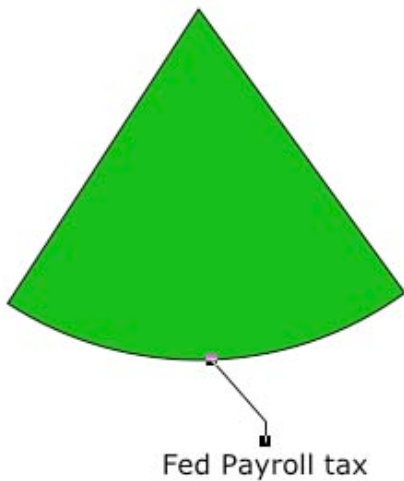
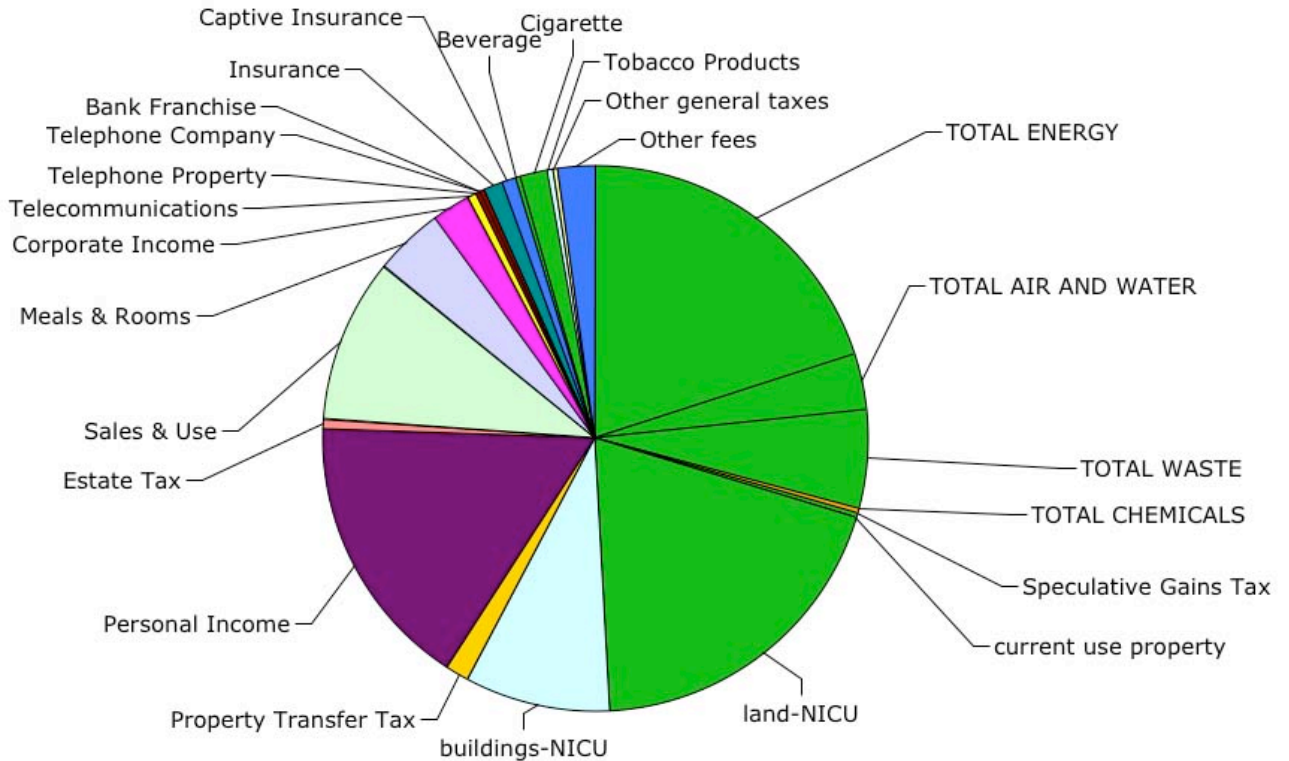
**Analysis:** State income tax is already progressive so lowest income filers have little or no liability. Offsetting income tax may not help compensate for higher fuel costs. Current work was being done to change corporate taxation requiring unitary combined reporting to crack down on income-shifting. Suggest Corporate taxation be left as is during this revision.

**2004 Green tax shift option 2-(Recommended by UVM PA395): \$2.6 Billion revenue**

Decrease federal payroll tax by \$500 million starting with lowest wage earners

Increase Green Taxes by \$500 million

**VT Taxes+FPT  
2004 REVISED**

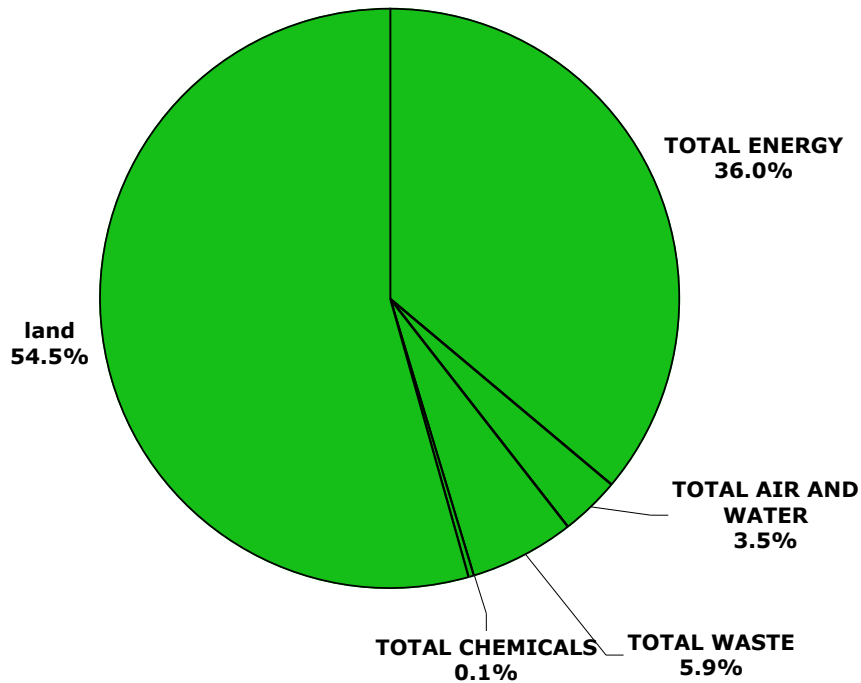


**Analysis:** Same Green tax plan as above. Payroll tax burden is much higher for low-income taxpayers and business as shown below. Reduction of payroll tax is therefore much more progressive and better for business who pay half. This amounts to a 7.5% tax break for employers of these individuals.

Employee income	VT income tax	FICA employee	FICA employer	Self-employed
\$10-\$15K	0	\$956	\$956	\$1912
\$15-\$20K	\$79	\$1340	\$1340	2680
\$25-\$30K	\$633	\$2486	\$2486	\$4972

**2004 Green tax shift Option 3-Let's go all the way-100% Green tax shift-\$2.6B revenue**

**2004-100% GREEN**



Topic	Main features	Revenue
Energy	Carbon @ \$300/ton	\$946,800,000
Property	Land @ 9.6%	\$1,433,117,922
Waste	\$2/bag	\$155,005,344
Air and Water	1c/gal >100gals	\$91,053,285
Chemicals	\$300 product fee on pesticides	\$3,486,000
<b>TOTAL</b>	<b>100% Green</b>	<b>\$2,629,462,551</b>

**Analysis:** A 100% Green tax shift is feasible, and could simplify taxation and revenue generation enormously by shifting to a few broad-based green taxes.

**Summary:** A green tax shift can generate the required revenue for the state of Vermont. It could have beneficial results by reducing taxes on labor and capital, and increasing them on throughput. The recommendations in this report provide some ideas on how to proceed. Further analysis of the effects of targeted tax cuts and green tax increases would be useful to develop a politically viable plan. For further information please contact Gary Flomenhoft, [gary.flo@uvm.edu](mailto:gary.flo@uvm.edu) 802-656-2996.

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