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Energy Taxes and Financial Flows

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Acknowledgements

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TAXES=THIRD RAIL OF POLITICS
WHOSE OX WILL YOU GORE?
OR WILL IT GORE YOU?
Always cheaper to do the wrong thing.
SUMMARY—make prices tell the truth

GREEN TAX SHIFT: “TAX BADS, NOT GOODS”

COMMON ASSETS: "PAY FOR WHAT YOU TAKE, NOT FOR WHAT YOU MAKE"

SUBSIDY REFORM: “STOP SENDING GOOD MONEY AFTER BADS”
ECONOMY = Physical THROUGHPUT

The purpose is to maximize throughput = DUMB GROWTH!
ECONOMY = Physical THROUGHPUT

Purpose: max value added (well-being)/ minimum throughput = SMART GROWTH!

DEPLETION

POLLUTION

LAND USE

Recycle

(Value added)

Matter

Energy

ECONOMY (By K & L)

Matter

Energy
1999 VERMONT TAXES

VT Taxes 1999

- Personal Income
- Estate Tax
- Sales & Use
- Meals & Rooms
- Telephone Property
- Telecommunications
- Corporate Income
- Bank Franchise
- Insurance
- Captive Insurance
- Beverage
- Cigarette
- TOTAL WASTE
- TOTAL AIR AND WATER
- TOTAL ENERGY
- TOTAL PROPERTY
2000 VERMONT TAXES

VT taxes 2000

- TOTAL PROPERTY
- TOTAL ENERGY
- TOTAL AIR AND WATER
- TOTAL WASTE
- Personal Income
- Estate Tax
- Sales & Use
- Meals & Rooms
- Corporate Income
- Telecommunications
- Insurance
- Beverage
- Cigarette
- Bank Franchise
- Telephone Company
- Telephone Property
- Captive Insurance
2004 VERMONT TAXES

VT taxes-2004

TOTAL PROPERTY: 38%
- Personal Income: 21%
- Estate Tax: 1%
- Bank Franchise: 1%
- Telephone Company: 0%
- Telecommunications: 1%
- Meals & Rooms: 5%
- Sales & Use: 12%
- Corporate Income: 3%
- Insurance: 3%
- Captive Insurance: 1%
- Beverage: 0%
- Cigarette: 2%
- TOTAL ENERGY: 13%
- TOTAL AIR AND WATER: 0%
- TOTAL WASTE: 0%
- TOTAL CHEMICALS: 0%
2008 VERMONT TAXES

- **Sales & Use**: 14%
- **Personal Income**: Cigarette fees
- **Cigarettes**: 14%
- **Personal Income**: 3%
- **Corporate Income**: 3%
- **Sales & Use**: 14%
- **Estate Tax**: 1%
- **Captive Insurance**: 1%
- **Lottery**: 1%
- **TOTAL PROPERTY**: 34%
- **TOTAL ENERGY**: 11%
2004 VERMONT TAXES

- Personal Income: 21%
- Estate Tax: 1%
- Sales & Use: 12%
- Meals & Rooms: 5%
- Corporate Income: 3%
- Total Energy: 13%
- Total Air and Water: 0%
- Total Waste: 0%
- Total Chemicals: 0%
- Cigarette: 2%
- Bank Franchise: 0%
- Telephone Company: 0%
- Telecommunications: 1%
- Captive Insurance: 1%
- Tobacco: 0%
- Insurance: 1%
- Meas & Rooms: 5%
- Total Property: 38%
- VT taxes-2004
GREEN TAX CRITERIA

1. ECONOMIC EFFICIENCY
2. DISTRIBUTIVE EQUITY
3. ENVIRONMENTAL PROTECTION
4. EASE OF ADMINISTRATION
## Green Tax New Revenue

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

<table>
<thead>
<tr>
<th>Energy Tax</th>
<th>Rate</th>
<th>'04 Revenue</th>
<th>New Rate</th>
<th>'04 Revised Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline tax</td>
<td>$.19 / gal</td>
<td>$71,400,000</td>
<td>0.02</td>
<td>$7,200,000</td>
</tr>
<tr>
<td>Diesel Tax</td>
<td>$.17-.26 / gal</td>
<td>$18,000,000</td>
<td>0.02</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>Sales Tax on Commercial Energy use</td>
<td>5% * (with exceptions)</td>
<td>$15,000,000</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Utilities Gross Receipts Tax</td>
<td>.3-.5% of gross operating revenue</td>
<td>$5,669,316</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Fuel Gross Receipts Tax</td>
<td>.5% on retail sales</td>
<td>$5,532,603</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Electric Energy Tax</td>
<td>2.75% of appraised value</td>
<td>$2,767,228</td>
<td>0</td>
<td>$0</td>
</tr>
<tr>
<td>Petroleum distributor license fee</td>
<td>Part of gasoline tax (.01)</td>
<td>($3,600,000)</td>
<td>0.02</td>
<td>$7,200,000</td>
</tr>
<tr>
<td>Carbon tax</td>
<td>none</td>
<td>0</td>
<td>100/ton</td>
<td>$216,200,000</td>
</tr>
<tr>
<td>Nuclear and large hydro tax</td>
<td>none</td>
<td>0</td>
<td>0.0084</td>
<td>$148,300,000</td>
</tr>
<tr>
<td>Total Motor Vehicle Purchase and use tax</td>
<td>6% of purchase price of motor vehicle</td>
<td>$86,200,000</td>
<td>same</td>
<td>$86,200,000</td>
</tr>
<tr>
<td>Motor vehicle registration fees</td>
<td>based on type, size, weight, and purpose of vehicle</td>
<td>$54,700,000</td>
<td>same</td>
<td>$54,700,000</td>
</tr>
</tbody>
</table>

**Total Energy Taxes**  
$259,269,147  
$521,540,000
VT Energy Taxes

Vermont 2004 Energy Taxes

- Motor Vehicle Registration Fees: 21%
- Fuel Gross Receipts Tax: 2%
- Utilities Gross Receipts Tax: 2%
- Electric Energy Tax: 1%
- Est. Revenue from Sales Tax on Commercial Energy Use: 6%
- Diesel Tax: 7%
- Total Motor Vehicle Purchase and Use: 21%
- Total Gasoline Taxes: 28%
VT Energy Taxes

2004 Revised Energy Taxes

- Diesel Tax: 0.3%
- Total Gasoline Taxes: 1.4%
- Carbon Tax: 42.0%
- Motor Vehicle Registration Fees: 10.5%
- Total Motor Vehicle Purchase and Use Tax: 16.8%
- Nuclear and Large Hydro Tax: 28.8%
• Offset Individual income tax - $429.5M
• Offset Corporate/business income tax - $55.5M
• Offset Telecommunications tax - $15M
Energy taxes in Germany increased by 55 percent, additional increase in 2005 through truck toll

FINANCIAL EFFECTS OF 1999 ETR IN GERMANY (IN BILLION EURO)

- Energy taxes 1998: 18.7 bn €
- Energy taxes 2003/2005: 22.8 bn €

18.7 bn € = 55% increase

ETR

Road toll for trucks

- Electricity (0 → 2.1 cents/kWh): 6.5 bn €
- Natural gas (0.2 → 0.6 cents/kWh): 5.0 bn €
- Fuel oil (4.1 → 6.2 cents/l): 3.0 bn €
- Diesel (31.7 → 47.2 cents/l): 16.0 bn €
- Petrol (50.1 → 65.6 cents/l): 22.8 bn €

Road Toll (0 → 9-14 cents/km): 3.0 bn €

Total green taxes almost 90 Bn (incl. tobacco, land etc.)
Almost 90 Percent was recycled to citizens in order to reduce labour cost.

Environment Projects
- Renewable Energies
- Less CO$_2$ in buildings
- Tax break bio-fuels

Decrease in pension costs = 16 Bn relief for employers, employees and pensioners

Budget use

Pension system

Our Comment:
- Great idea, in principle
- Less than perfect execution
First Results of Ecological Tax Reform

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**More**
- Tax share of Nature
- Car sharing (+70%)
- Public transport (+5%)
- Energy saving technologies
- Energy efficiency
- Gas-powered cars (x10)
- Bio-fuelled cars (x2)
- Job creation (∼250,000)
- Renewable energies

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**Less**
- Fuel consumption (-16%)
- CO₂-emissions (2-2.5%)
- Pension costs (-16 bn)
- Costs for industry (-1 bn)
- Empty truck travel
- Imported fossil fuels (-13%)
- Overall tax burden (-4 %)
More jobs in RENs than in our heavily subsidized problem energies

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>renewables</td>
<td>150,000</td>
</tr>
<tr>
<td>renewable energy</td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>6000</td>
</tr>
<tr>
<td>geothermal power</td>
<td>10000</td>
</tr>
<tr>
<td>solar</td>
<td>20,000</td>
</tr>
<tr>
<td>bioenergy</td>
<td>50,000</td>
</tr>
<tr>
<td>windpower</td>
<td>64,000</td>
</tr>
<tr>
<td>coal</td>
<td>44,000</td>
</tr>
<tr>
<td>nuclear power</td>
<td>38,000</td>
</tr>
<tr>
<td>lignite</td>
<td>25,000</td>
</tr>
</tbody>
</table>

Source: BEE 2005
## PAYROLL vs INCOME TAX

<table>
<thead>
<tr>
<th>Income employee</th>
<th>VT income tax</th>
<th>FICA employee</th>
<th>FICA employer</th>
<th>Self-employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10-$15K</td>
<td>0</td>
<td>$956</td>
<td>$956</td>
<td>$1912</td>
</tr>
<tr>
<td>$15-$20K</td>
<td>$79</td>
<td>$1340</td>
<td>$1340</td>
<td>2680</td>
</tr>
<tr>
<td>$25-$30K</td>
<td>$633</td>
<td>$2486</td>
<td>$2486</td>
<td>$4972</td>
</tr>
</tbody>
</table>

PAYROLL TAX MUCH MORE REGRESSIVE!
GREEN TAX SHIFT OPTION 2

VT Taxes+FPT 2004 REVISED

- $500M Payroll tax < $35K income and pro-rate above
Or cash refund
## 100% Green shift-OPTION 3

### Costs and Waste

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost/Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>$300/ton</td>
</tr>
<tr>
<td>Land</td>
<td>9.6%</td>
</tr>
<tr>
<td>Waste</td>
<td>$2/bag</td>
</tr>
<tr>
<td>Water</td>
<td>1c/gal</td>
</tr>
<tr>
<td></td>
<td>&gt;100gals</td>
</tr>
<tr>
<td>Chem product fee</td>
<td>$300 on pesticides</td>
</tr>
</tbody>
</table>

### Revenue

$2.6B revenue

### Percentage of Total

- **Total Energy**: 36.0%
- **Total Water and Chemicals**: 3.5%
- **Total Waste**: 5.9%
- **Total Chemicals**: 0.1%
- **Land**: 54.5%
Why should we?

Transportation sector energy use 2004 (quadrillion BTU)

- Petroleum: 96.100%
- Natural gas: 2.534%
- Renewable-alcohol: 1.064%
- Electricity system losses: 0.209%
- Electricity: 0.093%
- Coal: 0.000%
### Revised summary of Green Tax shift measures:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>New Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon tax $20/ton</td>
<td>$168,800,000</td>
</tr>
<tr>
<td>Pay as you Throw Solid Waste $2/bag</td>
<td>$149,103,672</td>
</tr>
<tr>
<td>Bottlers-groundwater rent</td>
<td>$80,546,400</td>
</tr>
<tr>
<td>Property shift: 2/3 land, 1/3 buildings</td>
<td>0</td>
</tr>
<tr>
<td>Chemicals</td>
<td>$2,215,900</td>
</tr>
<tr>
<td>Other new revenue</td>
<td>$50,304,643.10</td>
</tr>
<tr>
<td>TOTAL NEW REVENUE</td>
<td>$448,756,931</td>
</tr>
<tr>
<td>Carbon tax rebate</td>
<td>$168,800,000</td>
</tr>
<tr>
<td>Payroll tax rebate</td>
<td>$279,956,931</td>
</tr>
</tbody>
</table>
Tax Commission

2004-2009rev-w/offsets

- TOTAL ENERGY: 18%
- TOTAL WASTE: 6%
- TOTAL CHEMICALS: 0%
- Current use property: 0%
- Current Use Penalty Tax: 0%
- Speculative Gains Tax: 0%
- Land-NICU: 20%
- Buildings-NICU: 9%
- Other fees: 2%
- Other general taxes: 0%
- TOTAL WATER: 3%
- Other general fees: 0%
- Corporate Income: 2%
- Telephone Property: 0%
- Telephone Company: 0%
- Bank Franchise: 0%
- Insurance: 1%
- Captive Insurance: 1%
- Cigarette: 2%
- Beverage: 0%
- Sales & Use: 10%
- Meals & Rooms: 4%
- Estate Tax: 1%
- Personal Income: 17%
- Other general fees: 0%
- eee property tax (PROP68): 0%
- Property Transfer Tax: 1%
$20/ton carbon tax rebate: $168,800,000 = $271 each

Fed Payroll tax rebate $280,000,000
FINANCIAL THROUGHPUT

NEGATIVE PIGS
(Claims on future pigs)

TOP 1%
34.6%

TOP 1-10%
38.5%

BOTTOM 90%
26.9%

15% CAPITAL GAINS TAX
Up to 35% NET REVENUE TAX
1-2.5% REAL ESTATE TAX
Up to 35% CROSS REVENUE TAX
Up to 35% NET REVENUE TAX

RULES
CAPITAL GAINS
FIRE

POSITIVE PIGS
(Actual pigs)

ECONOMY = THROUGHPUT

Recycle

Matter (Value added)

Energy

ECONOMY (By K & L)

POLLUTION

LAND USE

BIOSPHERE

GOVERNMENT
Fiscally-challenged politics
RULE #1: capital gains

- “FIRE” sector (Finance, Insurance, Real Estate) will get 20% of national income. Taxed at 15% or less. When they collapse the economy, they will be bailed out with federal reserve and taxpayer funds. No one will be indicted or held accountable for massive fraud and malfeasance.
RULE #2: interest

Top 10% will gain on interest. Bottom 90% will lose. Almost all money is created as interest bearing loans, so the entire money supply is a source of transfer of wealth from bottom 90% to top 10%.
Socially created land values will accrue to landowners. Most of real estate equity is held by banks. Landowners pay minimal land tax of 2-2.5%. Land rent absorbs most of social surplus driving wages to subsistence. Median income will be much less than needed for median house mortgage payment or median rent in many places.
Rule #4: wages

Labor will get nothing from increased productivity after 1975. Real Wages will remain constant from 1975 on. Productivity gains will all go to rent, interest, and profit.
Indexes of Output and Real Wage per Hour, Manufacturing, 1890 to 2007, Index 1890=100

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Minimum Wage</th>
<th>Real Wage (inflation-adjusted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>$1.60</td>
<td>$10.42</td>
</tr>
<tr>
<td>2001</td>
<td>$7.25</td>
<td>$7.25</td>
</tr>
</tbody>
</table>

Average CEO Pay vs. Average Worker Pay

CEO (185 times bigger)

2009 data. Source: Economic Policy Institute
Remember back in the ’50s, we looked forward to the days when machines would be doing all the work?

And here they are!

I know. Now remind me why we thought we’d still be getting paid.

How else would we all be able to buy our own personal airplanes?
Rule #5: Income tax

- Business will be taxed on NET income, while individuals are taxed on GROSS income. Many corporations offshore their income, pay no taxes, or get a refund.

- Both are persons: Equal protection violation?
MK Hubbert’s Third Prophecy: Cultural Crisis

Figure 5.9
Three types of growth (Hubbert, 1974b, fig. 1).
Fiscal and Monetary Policy for a Steady-State Economy
100% reserve requirements
Speculation taxes
Land rent
Common asset payments
Etc.

Please join us!
.25% Financial speculation tax

(A NO BRAINER)

Credit default swaps
Mortgage backed securities
Currency
Hedges options
Derivatives
Land bubble

$269 Million

95% Speculation

Exemptions
IPOs, new stock
Venture Capital
Angel Investors
Small business loans
Etc.
<table>
<thead>
<tr>
<th>ASSET</th>
<th>CURRENT REVENUE</th>
<th>NEW REVENUE</th>
<th>INCREASE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MILLION $</td>
<td>MILLION $</td>
<td>MILLION $</td>
<td></td>
</tr>
<tr>
<td>Air/transport</td>
<td>209</td>
<td>7-153</td>
<td>7-153</td>
<td>carbon permits</td>
</tr>
<tr>
<td>Air/heating</td>
<td>17</td>
<td>4-93.6</td>
<td>4-93.6</td>
<td>carbon permits</td>
</tr>
<tr>
<td>Air (total)</td>
<td></td>
<td>25.9</td>
<td>25.9</td>
<td>carbon permits</td>
</tr>
<tr>
<td>Fish and wildlife</td>
<td>14.7</td>
<td>10.4</td>
<td>10.4</td>
<td>fees</td>
</tr>
<tr>
<td>Forests</td>
<td>Net loss</td>
<td>3.2</td>
<td>3.2</td>
<td>depletion fees</td>
</tr>
<tr>
<td>Ground water</td>
<td>~0</td>
<td>107.9</td>
<td>107.9</td>
<td>bottlers</td>
</tr>
<tr>
<td>Internet</td>
<td>~0</td>
<td>30</td>
<td>30</td>
<td>ISPs &amp; domains</td>
</tr>
<tr>
<td>Spectrum</td>
<td>~0</td>
<td>375</td>
<td>375</td>
<td>Auction</td>
</tr>
<tr>
<td>Minerals</td>
<td>3.7</td>
<td>9.7</td>
<td>6</td>
<td>Royalties</td>
</tr>
<tr>
<td>Surface Water</td>
<td>~0</td>
<td>31.2</td>
<td>31.2</td>
<td>user fee</td>
</tr>
<tr>
<td>Land</td>
<td>741</td>
<td>1071</td>
<td>330</td>
<td>land rent</td>
</tr>
<tr>
<td>Wind</td>
<td>0.75</td>
<td>5.5</td>
<td>4.75</td>
<td>progressive rent</td>
</tr>
<tr>
<td>Speculation *</td>
<td>(capital gains?)</td>
<td>269</td>
<td>269</td>
<td>.25% Tobin tax</td>
</tr>
<tr>
<td>Seignorage *</td>
<td>~0</td>
<td>35.7</td>
<td>35.7</td>
<td>1% of loans</td>
</tr>
<tr>
<td>Total new revenue</td>
<td></td>
<td></td>
<td>$1.229 billion/year</td>
<td></td>
</tr>
<tr>
<td>Per capita Dividend</td>
<td></td>
<td></td>
<td>$1973 each/year</td>
<td></td>
</tr>
</tbody>
</table>

Common Assets (depletion fees)
VERMONT COMMON ASSETS TRUST FUND

Pay to the order of: Every Vermont Citizen $1,972.00

One thousand, nine hundred seventy-two and 00/100 Dollars

For: Payment for use of common assets  Treasurer of Common Asset Fund

Date: 2009